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Mr Jet Shoon Chong  
Assistant Manager  
Emissions Avoidance Methods  
Clean Energy Regulator

Via the consultation hub

## **GEA RESPONSE TO THE BIOMETHANE METHOD PACKAGE**

Dear Mr Chong

Gas Energy Australia (GEA) welcomes the opportunity to respond to the *Biomethane method package: Draft method guide*.

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), 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 strongly supports the development of an Emission Reduction Fund (ERF) method which allows projects to earn Australian Carbon Credit Units (ACCUs) for activities that reduce or store emissions.

GEA considers that incentives to reduce greenhouse gas (GHG) emissions through the greater use of renewable gases to be vital in ensuring Australia's stationary energy and transport sectors are encouraged to reduce emissions in an affordable manner utilising best practice technology to do so.

GEA considers there to be two main areas where the biomethane method could be improved to allow for the greater utilisation of renewable gases through the ERF. These include:

1. Expansion of the method to credit for the use of bioLNG and bioCNG as a substitute for fossil fuel based LNG and CNG.
2. Displacement of fossil fuel based LPG with biomethane.

These areas are detailed below.

## **Expansion of the method to recognise the use of bioLNG or bioCNG as a substitute for LNG or CNG**

In the same way that natural gas can be liquified or compressed and used as LNG or CNG in transport and stationary energy applications, biomethane can also be compressed or liquefied to power road vehicles, marine vessels and remote area electricity generation. GEA considers there are significant opportunities for biomethane to substantially reduce emissions and increase sustainability in the stationary energy and transport sectors, especially in remote and regional Australia. As such, the inclusion of bioLNG and bioCNG in the biomethane method for displacement abatement would help to expand the use of the method and forms of abatement.

The method could utilise the current calculations of abatement where projects are credited for the net abatement they deliver, which will be given by the total abatement created minus emissions associated with the running of the project. The emissions associated with compressing or liquefying biomethane will be the same as those associated with compressing or liquefying natural gas.

If the use of bioLNG or bioCNG is included in the biomethane method under displacement abatement, GEA considers that the methodology would be improved if LNG, CNG, bioLNG and bioCNG were measured by mass instead of volume. GEA notes it is standard practice to measure LNG and CNG in terms of mass and not volume. For example, the Australian Taxation Office measures LNG and CNG for excise purposes in kilograms.

As noted in the consultation paper, under the current biomethane method in development, the use of biomethane to displace the use of natural gas can be credited with ACCUs for combustion of biomethane as a natural gas substitute, *“for example, when biomethane is injected into the gas network or burned for heat or power, displaces an equal volume of natural gas consumption”*.

GEA considers that it is vital that transport applications, particularly heavy vehicles and marine applications are easily able to claim ACCUs for abatement associated with the displacement of natural gas with biomethane.

The use of biogas as a transport fuel is steadily increasing internationally, with countries such as Sweden setting a goal of a fossil-fuel free transport sector by 2030, and biomethane is a key way of achieving this ambition. In Australia, the SeaRoad Mersey 2 ferry that travels between Victoria and Tasmania is currently reducing emissions by using LNG instead of oil based fuels. With the ability to utilise existing infrastructure, bioLNG can significantly contribute to large emissions reductions in the marine sector. The ability to claim ACCUs for these applications would encourage shipowners to look to low and zero emission fuels as a means to reduce carbon emissions.

BioLNG also provides an opportunity for industrial and commercial customers to achieve net zero emissions, while retaining existing plant and equipment. In Australia, GEA member

BOC, recently announced a new memorandum of understanding agreement with Optimal Group to explore the development of Australia's first bioLNG facility. The companies will investigate the potential for Optimal's subsidiary, Optimal Renewable Gas to build a \$55 million, 2.4 TJ/day waste to biogas plant adjacent to BOC's micro-LNG plant in Westbury, Tasmania. The biogas plant would provide biomethane to BOC's micro-LNG plant, which would then be processed into bioLNG and distributed to BOC and Elgas customers in agriculture, food processing and other industries. More information on this project can be found at <https://prwire.com.au/pr/100567/boc-and-optimal-group-sign-agreement-to-focus-on-development-of-australias-first-biolng-facility>

### **Displacement of LPG with biomethane**

Currently the biomethane method allows for the claiming of ACCUs for displacing the use of natural gas with biomethane. GEA considers that the method could be improved by expanding it to include displacing the use of fossil fuel based LPG with biomethane.

Many edge and off grid areas rely on the use of LPG for power generation and end use consumption in home and businesses. This is particularly so where the natural gas grid does not extend. Enabling the claiming of ACCUs under the biomethane method for LPG displacement would help incentivise the greater uptake of biomethane and provide significant benefits for remote and regional communities.

GEA considers that the current method could easily incorporate the displacement of LPG. The below displacement calculation example is taken from page 22 of the "*Draft Simple Method Guide for Biomethane Projects*" and substitutes LPG for natural gas.

#### Displacement calculation example

A wastewater facility produces and injects 100 terajoules (TJ) of biomethane in a year into the LPG gas network.

- The NGER (Measurement) Determination emissions factor for LPG gas is 60.2 kg CO<sub>2</sub>-e/GJ
- Therefore gross displaced gas emissions = (100,000)\*( 60.2 )/1000 = 6,020 tCO<sub>2</sub>-e
- All biogas upgraded into biomethane is produced at the wastewater facility, so the eligible abatement fraction is 1.
- Emissions from energy used in the biogas to biomethane upgrading process comes to 100 tCO<sub>2</sub>-e.

$$\text{Net displacement abatement} = 6,020 * 1 - 100 = \mathbf{5,920 \text{ tCO}_2\text{-e}}$$

As demonstrated above, there is minimal amendments to the methodology required to incorporate the displacement of LPG as a means to claim ACCUs, which can help to incentivise the use of renewable gases and investment in new technologies.

An example of the potential of biomethane to displace LPG to reduce carbon emissions is in Western Australia where ATCO Australia has entered into an agreement with the Great Southern Development Commission to undertake a feasibility study into opportunities for renewable natural gas (RNG) in Albany. This study will assess the viability of injecting RNG into the Albany LPG network, providing a low emission energy source for the people of Albany.

## Conclusion

In conclusion, GEA supports the CER's proposed biomethane method. And expanding the method to incorporate the two suggestions above would enable the ERF to encourage greater utilisation of renewable gases and more abatement.

GEA also considers the method could be made more general in terms of accommodating the use of renewable gases other than biomethane eg, renewable LPG or renewable dimethyl ether. This would enable even greater utilisation of the method's approach and further contribute to the Federal Government's whole-of-economy 'Long-Term Emissions Reduction Plan' to achieve net zero emissions by 2050.

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](mailto: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