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ACCU Review Secretariat  
Department of Climate Change,  
Energy, the Environment and Water  
GPO Box 3090  
Canberra ACT 2601

## **GEA RESPONSE TO THE INDEPENDENT REVIEW OF AUSTRALIAN CARBON CREDIT UNITS**

Dear ACCU Review Secretariat

Gas Energy Australia (GEA) welcomes the opportunity to respond to the Independent Review of Australian Carbon Credit Units Consultation Paper.

By way of background, GEA is the national peak body representing the downstream gas fuels industry, encompassing Liquefied Petroleum Gas (LPG), Liquefied Natural Gas (LNG), Compressed Natural Gas (CNG), Hydrogen (H<sub>2</sub>) and, increasingly, a raft of new renewable gases. The industry comprises major companies, medium and small businesses across the gas fuels supply chain including refiners, fuel marketers, equipment manufacturers, gas transporters, consultants and service providers.

GEA considers incentives to reduce carbon emissions, such as those provided by the Emissions Reduction Fund (ERF) and its successor the Climate Solutions Fund (CSF), to be vital if Australia's industrial and transport sectors are to play a greater role in helping to meet our international commitments to reduce carbon emissions.

But before the ERF or CSF can successfully do this, they need to be able to cost effectively target GHG abatement in sectors other than agriculture.

To date, the ERF has not delivered significant volumes of abatement in the industrial and transport sectors.

There are three main areas where the Government can incentivise investment in low emissions technologies that minimise the costs to the Australian economy through the increased use of gas fuels.

1. Arrangements to amend current methods and introduce new methods
2. Improvements to the Land and Sea Transport Method.
3. Inclusion of other renewable gases as a means to displace fossil fuel use.

### **Arrangements to amend current methods and introduce new methods**

There is significant scope to increase abatement through effective reviews of the different methodologies under the ERF and CSF, to target abatement in sectors other than agriculture, particularly transport and industrial. GEA proposes a number of areas (see below) where changes to particular ERF methods could significantly improve abatement opportunities for hard to abate sectors within Australia. However, the process for introducing new methods or reviewing and implementing changes to current methods is often slow moving.

The 2019 expert panel report examining additional sources of low-cost abatement recommended providing industry greater opportunity to support the development of new methods to encourage innovation and new method development. Expediting these recommendations to enable the ERF to better allow for the crediting of emissions reduced by fuel switching, is essential to realising new opportunities for emissions abatement.

### **Improvements to the Land and Sea Transport Method**

There are currently significant conceptual and practical problems with the ERF Land and Sea Transport methodology, which compares calculations using the International Maritime Organisation's (IMO's) Energy Efficiency Design Index (EEDI) with its Energy Efficiency Operational Indicator (EEOI) to measure GHG abatement.

The EEDI measures the theoretical emissions performance of a newbuild ship and provides an estimate of average CO<sub>2</sub> emissions per ton-nautical mile (CO<sub>2</sub>/tnm) based on the ship's specifications and assumed operating conditions, including speed and cargo. On the other hand, the EEOI measures the actual emissions performance of a ship and provides an estimate of CO<sub>2</sub>/tnm based on the ship's historical operations, including actual speeds travelled and cargo carried.

The EEDI was developed by the IMO to be used as a benchmark for the design emissions performance of newbuild ships. GEA maintains it is unrealistic to compare a ship's design EEDI with its operational EEOI to determine GHG abatement.

At present, a vessel's EEOI must be lower than the baseline set by its target EEDI to demonstrate abatement and, subsequently, claim Australian Carbon Credit Units (ACCUs) under the ERF methodology.

GEA considers this approach makes it almost impossible for marine vessels, particularly Roll-on Roll-off (RoRo) vessels, to claim ACCUs even after switching to a lower emission fuel, such as LNG that cuts CO<sub>2</sub> emissions by around 25% compared to using MDO.

For example, if a dual fuel (DF) vessel built to run on MDO and LNG, was operating on LNG, the method would use the lower of the required EEDI numbers for MDO and LNG as the baseline emissions performance compared to the EEOI for the ship running on LNG to calculate possible abatement. This means marine vessels, especially RoRo vessels, are unlikely to be able to demonstrate any abatement as the EEOI of a ship is likely to be much higher than the target EEDI and, thus, the vessel is unable to claim ACCUs despite operating on a lower emission fuel.

A true comparison of a technology's capacity to reduce emissions would be to compare a vessel with and without the new technology using the same theoretical measure (i.e. the EEDI) or the same actual operating conditions (i.e. the EEOI). Moreover, in the case of a new build DF ship, able to use a low emission fuel, as well as Marine Diesel Oil (MDO), the ERF methodology incorporates the low emission fuel in the Business-as-Usual baseline calculation, therefore, assuming away the abatement from fuel switching.

Therefore, the ERF provides no incentive to invest in new technologies that enable ships to switch to lower emission fuels today, that will pave the way for renewable, net zero gases to be used in future on these same vessels.

Currently, ERF methodology effectively prevents many marine vessels from claiming ACCUs despite the enormous potential for vessels have to deliver significant transport emissions abatement through the use of lower emission fuels such as LNG, CNG or LPG and their renewable counterparts in future.

GEA considers there are two ways the current methodology for marine vessels could be modified to encourage the greater uptake of the method and make it more usable and applicable for future domestic transport operations. In particular, the methodology should compare 'like' operating conditions to correctly measure actual abatement.

**GEA proposed EEDI abatement measurement methodology:** taking the target EEDI number for the X (example ship) using MDO and subtracting the target EEDI number for the X using a lower emission fuel, such as LNG, to calculate abatement from switching to a lower emission fuel.

For example, if the X's IMO target EEDI number for MDO is 15gCO<sub>2</sub>/tnm and its IMO target EEDI number for LNG is 11gCo<sub>2</sub>/tnm, the difference between the two numbers indicates the abatement that is likely to occur ie 4gCO<sub>2</sub>/tnm – almost 27%. This is the magnitude of abatement one would expect from switching from MDO to LNG.

**GEA proposed EEOI abatement measurement methodology:** use the EEOI formula to measure the actual emissions performance of a ship in operation and use the variation between the EEOI for MDO and LNG as the measurement of abatement.

For example, if the X's historical EEOI for the ship using MDO shows the lowest attained was 30g Co<sub>2</sub>/tnm and the attained EEOI from subsequently running on LNG was 20gCo<sub>2</sub>/tnm, the operator should be able to claim ACCUs for 10gCO<sub>2</sub>/tnm of abatement.

### **Inclusion of other renewable gases as a means to displace fossil fuel use**

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 fossil gas with renewable gases.

#### **BioLNG and bioCNG**

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 liquified to power road vehicles, marine vessels and remote area electricity generation. 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.

### Renewable LPG

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 bio or renewable LPG or di methyl ether (DME). 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 the case where the natural gas grid does not extend, most notably regional, rural and remote areas. Enabling the claiming of ACCUs under the ERF for LPG displacement would help incentivise the greater uptake of renewable gases and provide significant benefits for remote and regional communities. GEA considers that the current Biomethane method could easily be expanded to a "Renewable Gas Method" to incorporate the displacement of LPG.

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 Manager – Policy & Research Melissa Dimovski at [mdimovski@gasenergyaus.au](mailto:mdimovski@gasenergyaus.au).

For your consideration

Kind regards,

A handwritten signature in black ink, appearing to read "Brett Heffernan". The signature is fluid and cursive, with a long horizontal stroke at the end.

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