Australian Government

COVER SHEET FOR SUBMISSIONS

EMISSIONS REDUCTION FUND GREEN PAPER

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Australian Government

SUBMISSION TEMPLATE

EMISSIONS REDUCTION FUND GREEN PAPER

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Submission responses

1. Introduction

Gas Energy Australia welcomes the opportunity to make a submission responding to the Federal Government's Emissions Reduction Fund (ERF) Green Paper, dated December 2013.

In keeping with Gas Energy Australia's mission "to optimise the value of gaseous fuels for the benefit of the national interest and the community…leading to improved energy security, carbon reduction, lower energy costs and the development and growth of the industry", this submission will principally address what needs to be done to ensure greater use of gaseous fuels can contribute to achieving the ERF's goals.

Gas Energy Australia is the national peak body which represents the bulk of the downstream alternative 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 alternative gaseous fuels supply chain; refiners, fuel marketers, equipment manufacturers, LPG and CNG vehicle converters, LNG vehicle manufacturers, consultants and other providers of services to the industry.

Gas Energy Australia offers the following responses to the issues raised in the ERF Green Paper most relevant to its members and associates.

2. Design principles and sources of emissions reductions

Issue… views are sought on opportunities for large-scale, low-cost emissions reductions, including estimates of potential reductions

A key finding of Gas Energy Australia's 2013-14 Budget Submission is that increased use of gaseous fuels provides a least cost pathway to realisation of greenhouse gas (GHG) emissions reductions from transport and non-transport energy use. The research undertaken by Rare Consulting (a division of engineering and economic consultancy firm Pitt & Sherry) that underpinned the Submission concluded that while gaseous fuels do not necessarily provide the greatest level of abatement, they do provide significant GHG reductions for a low cost relative to alternatives such as electric vehicles in transportation or photovoltaics for residential energy consumption.

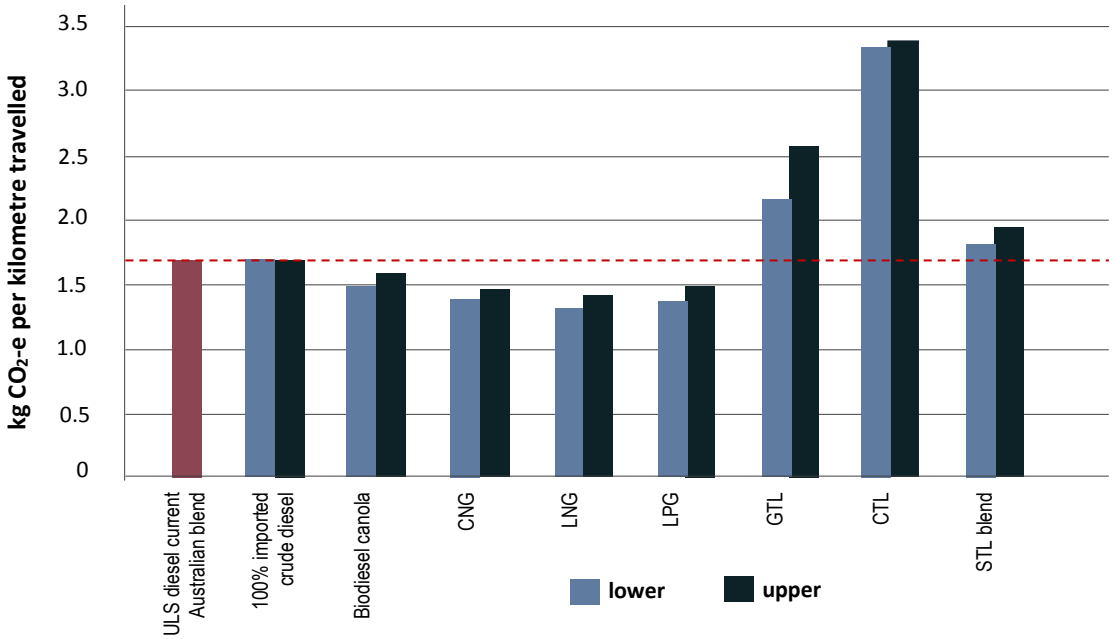
The principal means by which greater use of alternative gaseous fuels reduces GHG and other emissions is fuel switching – converting existing vehicles and appliances to run on gas or purchasing new vehicles and

appliances that run on gas. This stems from the fact that the combustion of gas produces significantly lower emissions than the dominant fuel sources in the transport and non-transport sectors which are petrol and diesel, and coal respectively.

There are costs associated with converting existing vehicles and appliances to run on gas and gas powered new vehicles and appliances often cost more than those powered by the dominant fuel source. But the cost of gaseous fuels is frequently less than that of the dominant fuel, especially in the transport sector, which offsets higher capital costs. As a result, switching to gas powered vehicles and appliances can be a very cost effective form of abatement.

Figure 1

Carbon intensity of an Australian articulated truck (43 t gross weight)



Source: Rare Consulting (2009)

Transport sector

When used in transportation, and depending upon the sophistication of the combustion technology used, LPG powered vehicles can deliver GHG emissions benefits in the order of 10 to 16 per cent. Similarly, and subject to the same caveat in terms of the nature of the combustion technology used, natural gas–powered vehicles (CNG and LNG) can deliver benefits in the order of 8 to 25 per cent (Figures 1 and 2).

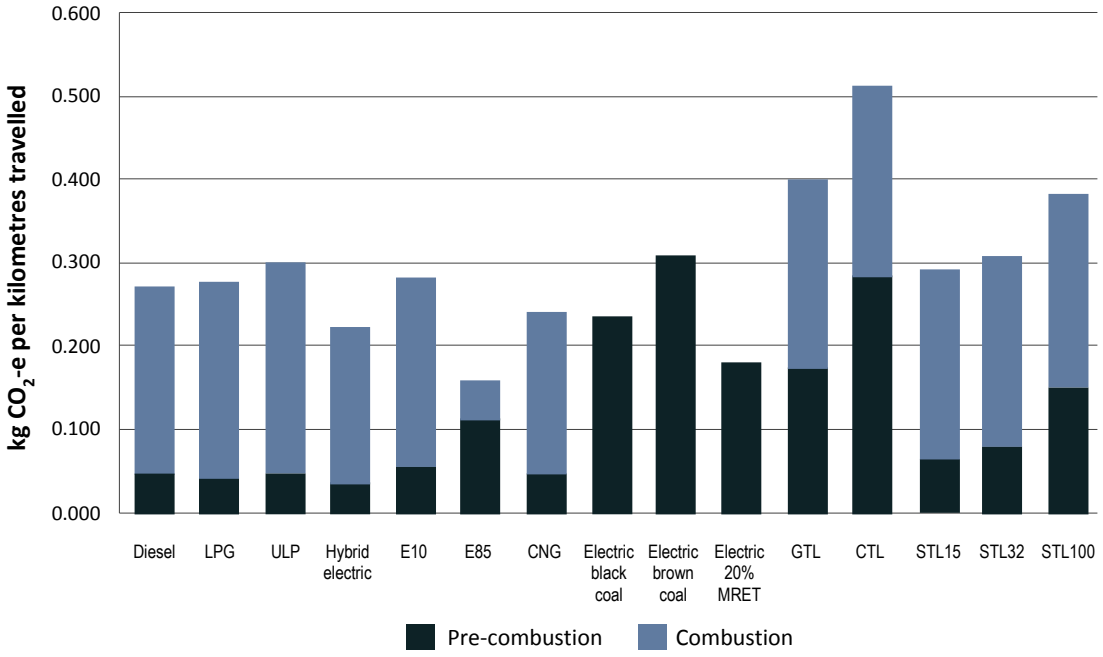
In addition, economic modelling by Rare Consulting suggested the Submission's initiatives would deliver:

a. a diversion of transport energy demand from liquid fuels to gas of 139.9 petajoules (PJ) by 2020, and nearly 1965 PJ by 2030 (equal to about 57.5 billion litres of petrol); and

b. a resulting saving in GHG emissions exceeding 0.2 million tonnes (Mt) of CO2 over the next four years, and a cumulative emissions saving exceeding 1.7 Mt of CO2 by 2020.

Figure 2

Carbon intensity of Australian passenger vehicles



Source: Rare Consulting (2010)

Further, the United States Department of Energy (US DOE) has concluded that natural gas burns cleaner than conventional gasoline (petrol) or diesel due to its lower carbon content and that switching from oil-based fuels to natural gas can result in substantial reductions of hydrocarbon, carbon monoxide and oxides of nitrogen, as well as greenhouse gas emissions. It also noted that because natural gas is non-toxic, it isn't harmful to soil or water.

In particular, in studies of heavy-duty vehicles, US DOE's review found that the use of CNG and LNG, when compared to diesel, reduces life cycle particulate matter from 85 per cent to near 100 per cent (ie, undetectable levels), emissions of nitrogen oxides by 17 to 80 per cent and emissions of GHGs by at least 16 to 23 per cent.

There is also potential for LNG to be used in Australia to fuel marine vessels and locomotives. There are close to 50 LNG marine vessels operating in Scandinavia, including one ferry fabricated by Incat in Tasmania. Some LNG locomotives are currently operating in the United States.

Non-transport sector

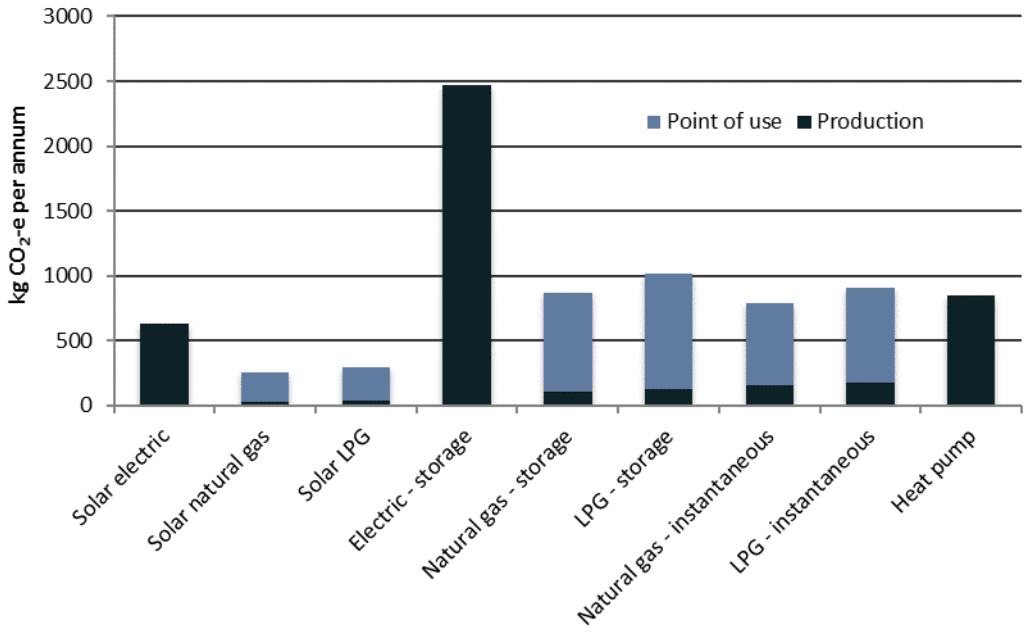
Similarly, the use of gaseous fuels in lieu of electricity provides a significant opportunity to realise low cost abatement from domestic and industrial energy consumption. This can include actions such as switching from solid fuel fired boilers to gas fired ones, substituting diesel fuelled off-grid power generation with gas or

converting diesel powered off-road mine haul vehicles to run on gas. The deployment of gas heat pumps and gas fired air conditioning represent opportunities for further abatement and information on these technologies can be obtained from Gas Energy Australia.

In the case of electricity consumption by households, the replacement of electric storage hot water heaters with gas hot water heaters is estimated to deliver a 60 per cent reduction (Figure 3) for a relatively small cost compared with solar alternatives. Gas Energy Australia estimates that if every home without a natural gas connection or not using solar or LPG water heating was to switch from an electric hot water system to one powered by LPG, around 6.2Mt million tonnes of CO2 could be saved each year.

Figure 3

GHG emissions from residential hot water systems



Source: Rare Consulting (2011)

Issue… the ERF will be designed to achieve lowest-cost emissions reductions as its primary objective

Lowest-cost emissions reductions

As discussed above, greater use of gaseous fuels represents a cost effective means to achieve the ERF's goals in both the transport and non-transport sectors. However, the decision to convert existing vehicles and appliances to run on gas or purchase new vehicles and appliances that run on gas utilises a variety of technologies, depends on the actions of numerous industry participants and often ends up being made by individual vehicle operators, small businesses or households.

Consequently, it is critical that the ERF's design is sufficiently flexible to accommodate the disaggregated supply chain that characterises the gaseous fuels industry.

Gas Energy Australia welcomes the fact that the ERF is not solely focussed on renewable energy (e.g., solar, wind and geothermal) or so called renewable energy (e.g., electric heat pumps). The experience of the Renewable Energy Target (RET) scheme demonstrates that selectively picking certain technologies results in energy prices being higher than they would be if all technologies were allowed to compete objectively on the basis of abatement performance and cost.

As noted above, greater use of alternative gaseous fuels represents a cost effective means to achieve the ERF's goals. That said, Gas Energy Australia is not advocating that the ERF favour alternative gaseous fuels and considers the ERF should be technology neutral.

Consequently, while Gas Energy Australia supports the ERF's key design principles that emissions reductions must be genuine and low cost and that the Fund's administration be simple and cost effective, it wishes to see technology neutrality added to these principles. This would represent a considerable advance on the many federal, state and territory government policies and programs implemented over recent years focussed solely on renewable energy and so called 'renewable' energy. These policies and programs have often excluded the lower cost abatement that could be achieved through switching to gaseous fuels to the disadvantage of energy consumers and taxpayers.

A key challenge for the ERF in maintaining technology neutrality will be to ensure that it covers full fuel-cycle GHG emissions (which includes both scope 1 direct emissions and scope 2 indirect emissions such as electricity use) rather than just end-use scope 1 GHG emissions.

Gas Energy Australia also urges the Government to be vigilant that the design of the ERF does not inadvertently exclude gaseous fuels as a result of the greater familiarity of advisers and experts helping design the ERF with renewable energy policies and programs and their ability to draw on these policies and programs to develop the ERF.

Genuine emissions reductions

Gas Energy Australia shares the concerns noted in the Green Paper about the high costs that would be imposed on project proponents and regulators by 'financial additionality' type tests of the genuineness of emissions reductions. Gas Energy Australia supports adoption of a tiered-type approach to additionality that would credit emissions reductions from new activities that go 'beyond common practice', ensure actions go beyond regulated levels, and calculating emissions reductions relative to emissions in the absence of the project as currently used in the Carbon Farming Initiative.

Gas Energy Australia also considers the ERF should make use of deeming to measure abatement in situations where abatement levels are unlikely to vary much and constant monitoring would not be feasible or overly costly. Such situations might include actions to improve household energy efficiency or replacing electric powered water heaters with gas powered ones. Gas Energy Australia notes that deeming is used in existing energy efficiency and emissions reduction schemes such as the Small Renewable Energy Scheme (SRES). Gas Energy Australia suggests that the ERF utilise as much as possible the established methodologies employed by these schemes.

In situations where abatement levels are more likely to vary, as much use as possible should be made of existing reporting mechanisms. For example, the Australian Taxation Office's fuel excise system accurately monitors the quantities of transport fuels such as LPG, LNG and CNG purchased.

In addition, relevant information concerning validation of carbon abatement obtained from the use of gas powered heavy vehicles in relation to Westport's Carbon Trading Project as well as the "Carbon Emissions Reduction Transfer Agreement" can be found at:

http://www.westport.com/is/sustainability/carbon-trading

Issue… the Government will conduct a review of the Emissions Reduction Fund towards the end of 2015 to provide certainty about the policy and design post-2020. Views are sought on the timing and conduct of a review

Gas Energy Australia suggests that given the uncertainty about the outcome of the initial ERF auction rounds, it is important that there is sufficient flexibility to respond to events (eg, low uptake) which might require changes to be made to the ERF's policies and design before the end of 2015.

Key recommendations:

The Government acknowledge that increased use of gaseous fuels provides a least cost pathway to realisation of GHG emissions reductions from transport and non-transport energy use.

The ERF's design should be sufficiently flexible to accommodate the disaggregated supply chain that characterises the gaseous fuels industry as well as be technology neutral and cover full fuel-cycle GHG emissions not just end-use GHG emissions.

The ERF adopt a tiered-type approach to determining additionality as well as make as much use as possible of deeming and existing reporting mechanisms.

The ERF be subject to ongoing review, especially initially, and there be sufficient flexibility to respond to events which might require changes to be made to the ERF's policies and design.

3. Crediting emissions reductions

Issue… emissions reduction methods will be developed to calculate genuine and additional emissions reductions from new actions that are not mandatory and have not been paid for under another program. Views are sought on how best to ensure that emissions reductions are genuine

Given the disaggregated nature of switching to gaseous fuels, Gas Energy Australia supports the provision of activity baselines under the ERF in addition to facility baselines to determine business-as-usual levels of emissions for activities suitable for fuel switching. In the case of fuel switching to gas, this should be relatively straightforward since a new gas supply will come with a definitive start date and precise details of volumes delivered will be known.

Issue… views are sought on how best to develop methods for calculating emissions reductions from priority activities

While the ERF Green Paper does not make clear what might be "priority activities", Gas Energy Australia considers calculating emissions reductions from fuel switching to gas should simply entail looking at gas or fuel usage before and after an investment as measured by deliveries and the emissions factors specified in the National Greenhouse and Energy Reporting Scheme.

Issue… views are sought on how best to facilitate the aggregation of emissions reductions across projects and activities

Given, as highlighted above, the aggregate effect of switching to gaseous fuels in particular industry sectors can be significant, Gas Energy Australia welcomes the ERF Green Paper's undertaking that "simple aggregation methods will be developed so that there will be an opportunity for organisations to act as aggregators and bid into the market as a group". In keeping with this undertaking, Gas Energy Australia considers it critical that the ERF incorporates a framework for aggregation that is sufficiently flexible to accommodate the disaggregated supply chain that characterises the gaseous fuels industry where decisions to switch to gas powered vehicles and appliances often ends up being made by individual vehicle operators,

small businesses or households.

Gas Energy Australia considers the ERF should allow for the assignment of rights to payments under the ERF to an aggregator in the form of a registered agent in exchange for financial benefit such as a discount off the invoiced price of a gas system's purchase and/or installation or the price of fuel much the same as occurs now in relation to small-scale technology certificates (STCs). Registered agents could include appliance and vehicle manufacturers and a low minimum bid size would minimise any potential disadvantage faced by small and medium sized manufacturers.

Issue… views are sought on regulatory reform opportunities that would complement the ERF

Gas Energy Australia notes that the COAG energy market reform agenda has been largely focussed on issues related to Australia's large-scale electricity and natural gas networks and accepts this is understandable given the size of these networks. However, Gas Energy Australia notes that the failure to implement the previously agreed electric hot water phase out across all mainland jurisdictions represents a significant missed opportunity to use natural gas and LPG to reduce Australia's GHG emissions at minimum cost.

Gas Energy Australia suggests a number of regulations applying to the gaseous fuels sector could be added to the COAG energy market reform agenda to reduce energy costs for businesses and consumers. For example, the Federal Government's 2011 Strategic Framework for Alternative Transport Fuels (SFfATF) identified the following regulatory barriers to the uptake of LPG.

a. Inconsistency between State and Territory regulations applicable to the Autogas sector (which for example require different LPG conversion kits to be sold in some jurisdictions);

b. Differences between Australian and international standards for Autogas equipment design and compliance standards;

c. The inability to recognise international standards for Autogas equipment; and

d. The lack of national compliance and certification for persons performing LPG conversions, including compliance standards for equipment and the use of certified kits.

In addition, the SFfATF identified regulations preventing LNG and CNG vehicles from having larger fuel tanks to achieve similar ranges to conventional heavy duty vehicles as a specific barrier discouraging the take-up of these vehicles.

At present, Gas Energy Australia is examining the following gaseous fuels sector regulatory reforms, which are focused on harmonising regulations applying to gas applications in the transport and stationary sectors, which could be added to the COAG energy market reform agenda to reduce energy costs for businesses and consumers.

a. Standardisation of state and territory procedures for issuing a permit to transport gaseous fuels across state and territory borders.

b. Harmonise and standardise the state and territory procedures for registering pressure vessels that hold gaseous fuels.

c. Mutual recognition of approvals granted by Australian States to transport gas cylinder automotive components prior to manufacturing assembly.

d. Recognise testing of LPG under-bonnet kits conducted in comparable jurisdictions (eg, Europe) and obviate the need to retest the kits in Australia.

With regard to gas powered vehicles, Gas Energy Australia is concerned that if a vehicle, or vehicle component, has satisfied international testing and certification standards, there is no obvious benefit from re-testing and re-certifying if the international standard is equivalent or better than the Australian standards. Re-testing and re-certifying imposes costs on the Australian community which include creating a barrier to the adoption of new technology if Australian standards and regulations fail to keep pace with the latest developments overseas.

The additional costs associated with re-testing and re-certifying also increase the price of gas powered vehicles and discourages their take-up, thereby denying the community the environmental and energy security benefits they offer. Moreover, because gas-powered vehicles occupy a much smaller segment of the market than petrol or diesel powered vehicles, these additional costs are shared by fewer vehicles which disproportionately increase the price of gas-powered vehicles.

Another barrier to reducing emissions through the growth of gas-powered vehicles is the progressive imposition of fuel excise on transport LPG, LNG and CNG which commenced in December 2011. The introduction of an excise on transport LNG and CNG at a formative stage in the industry's development has coincided with a stalling of growth in this market. In response, Gas Energy Australia suggests the impact of the progressive imposition of fuel excise on transport LNG and CNG should be reviewed.

With regard to stationary energy, Gas Energy Australia suggests the review of the RET needs to include the Small Renewable Energy Scheme (SRES) and can see no justification why the SRES continues to provide financial assistance to households to buy solar and electric heat pump household water heaters but not natural gas or LPG water heaters. The folly of this policy is highlighted by Figure 3 above.

In addition, Gas Energy Australia notes with significant concern that energy efficiency standards disadvantage natural gas and LPG if focused on end-use efficiency rather than full life-cycle energy efficiency or full life-cycle GHG emissions. Most importantly, by discouraging use of low cost low emission gaseous fuels, such standards disadvantage Australian consumers by pushing up the price of energy.

Key recommendations:

The ERF incorporates activity baselines and utilises the emissions factors specified in the National Greenhouse and Energy Reporting Scheme.

The ERF incorporates a framework for aggregation that is sufficiently flexible to accommodate the disaggregated supply chain that characterises the gaseous fuels industry and allows for the assignment of rights to payments under the ERF.

The Federal Department of the Environment work with other federal and state agencies to reduce a wide range of regulatory barriers to the greater use of gaseous fuels which would complement the ERF.

4. Purchasing emissions reductions

Issue… stakeholder views are sought on how best to facilitate early participation in the ERF

The proposal floated in the ERF Green Paper that initially the Clean Energy Regulator (CER) could run relatively frequent tender rounds to bring forward the delivery of emissions reductions would be most likely to facilitate early participation in the ERF if those rounds were used to quickly gather and publish information on auction results and contracts entered into by the CER. Provided commercially sensitive information is protected, Gas Energy Australia supports the provision of as much as possible indicative information and case studies on what types of submissions work and lead to successful bids along with the funds granted.

Early participation in the ERF will also be facilitated and encouraged by a simple and transparent application process that includes timely assessments and is flexible and able to accommodate and respond to a wide variety of applications.

Issue… stakeholder views are sought on how best to operate an efficient auction process to secure lowest-cost emissions reductions

As noted above, Gas Energy Australia supports the provision of as much as possible bid related information without revealing commercially sensitive information which would improve the functioning of the ERF market. Gas Energy Australia also favours a low minimum bid size which would encourage more bids.

Gas Energy Australia understands the Government's concern that sectoral bidding would increase the short-term cost of abatement. Nevertheless, Gas Energy Australia suggests the Government consider running separate ERF bidding rounds for particular sectors such as transport or manufacturing industry to increase community engagement with the work of the ERF and foster a wider range of abatement technologies which has the potential to reduce the longer term cost of abatement.

Issue… views are sought on how best to provide funding certainty for businesses

Gas Energy Australia suggests consideration be given to extending standard contracts beyond the proposed 5 years. In addition, payment of funds could be made more regular, say quarterly, and possibly an amount could be kept in reserve as a 'bond' until reductions were proven.

Issue… views are sought on how best to provide confidence that projected emissions reductions will be delivered

As noted above, Gas Energy Australia supports a simple, transparent and timely application process which would increase confidence that projected emissions reductions will be delivered.

Gas Energy Australia also supports the ERF Green Paper's proposals to allow for some variation of ERF contracts as well as 'make-good' provisions to ensure the delivery of emissions reductions.

Key recommendations:

The ERF's application process should be simple, transparent and timely, and ultimately provide a degree of certainty to participants.

Without revealing commercially sensitive information, as much as possible bid related information should be provided to potential ERF bidders.

Sectoral bidding, a low minimum bid size, extending standard contracts beyond the proposed 5 years, more regular payments and possibly keeping a 'bond' should be considered.

Some variation of ERF contracts should be allowed as well as 'make-good' provisions.

5. Safeguarding emissions reductions

Issue… a safeguard mechanism will be introduced to provide incentives to reduce emissions above historical business-as-usual levels. Views are sought on the coverage of the mechanism; how baselines could most easily be set to effectively limit increases in historical business-as-usual emissions; the treatment of new entrants and significant expansions, including definitions of best practice; and compliance options in the event that baselines are exceeded

Gas Energy Australia notes that little information has been provided on how the safeguard mechanism might work, including possible penalties, and would be concerned if it penalised entities that had moved early to

reduce emissions or were affected by factors outside their control.

Key recommendations:

More information on how the safeguard mechanism might work needs to be provided and industry needs to be consulted on it.

The safeguard mechanism should not penalise entities that had moved early to reduce emissions or were affected by factors outside their control.

6. *Administration*

Issue… views are sought on the proposed governance arrangements

Gas Energy Australia suggests the administration of the ERF should be transparent, timely and predictable with clear delineation of the roles and responsibilities of the key decision makers to maximise effectiveness and minimise compliance costs. Gas Energy Australia has no reason to doubt that the Clean Energy Regulator is capable of administering the ERF.

Key recommendation:

The administration of the ERF should be transparent, timely and predictable with clear delineation of the roles and responsibilities of the key decision makers to maximise effectiveness and minimise compliance costs.

7. Summary

The ERF represents a significant opportunity for industry and government to work together to address climate change through greater use of gaseous fuels in the transport and non-transport sectors, in a way that minimises costs to the community. Consequently, it is critical that the ERF's design, implementation and administration does not disadvantage the gaseous fuels industry.

8. Recommendations

Gas Energy Australia recommends that the Department of the Environment, in the course of designing, implementing and overseeing the administration of the ERF, develops appropriate policies necessary to implement the recommendations detailed within this Submission.