

5 February 2016

Mr Michael Brennan
Deputy Secretary
Fiscal Group
Department of the Treasury
Langton Crescent
PARKES ACT 2600
Via email prebudgetsubs@treasury.gov.au

Dear Mr Brennan

2016-17 Budget Submission

Gas Energy Australia is pleased to provide the enclosed submission for the 2016-17 Budget on behalf of its members and associates in the downstream gaseous fuels industry.

Our submission highlights an opportunity for the Government to improve Australia's economic, environmental and health outcomes. The measures proposed in it would reduce the budget deficit if implemented together. They would also support other key Government agendas, including contributing to lower emissions through direct action, encouraging innovation and offering niche Australian job and industry opportunities by building on our natural advantages and supporting our strategically important export industries.

While other countries are pushing ahead with gaseous fuels, a range of barriers are holding back their use here and stopping Australians from enjoying the benefits that would flow from their greater use. Australia needs to act now to ensure that gaseous fuels are treated the same as other low emission energy sources so we can secure our energy future, take care of the environment and help our economy to grow.

Gas Energy Australia's members and associates are keen to work with the Government to take the necessary steps to ensure gaseous fuels are a key part of Australia's energy mix and deliver better economic and environmental outcomes for Australia.

This submission draws on our broader *2030 Vision for Natural Gas Fuels* that can be found at www.cleanercheaperfuels.com.au.

Yours sincerely

A handwritten signature in black ink, appearing to read "John Griffiths", with a long horizontal flourish extending to the right.

John Griffiths
Chief Executive Officer
Executive Summary

CLEANER, CHEAPER, AUSTRALIAN FUELS

2016-17 FEDERAL BUDGET SUBMISSION



EXECUTIVE SUMMARY

Australian gaseous fuels are Australia's natural advantage. They are cleaner, and cheaper supporting cleaner air and more control over Australia's economic future. With Australia's abundant supplies of gaseous fuels, it makes no sense for Australia to be fully dependent on imported, dirtier and more expensive oil-based fuels (i.e. petrol and diesel) for transport energy and off-grid power generation.

There are strong economic, environmental and health benefits to be gained from removing barriers to the use of Australia's cleaner, cheaper and healthier gas supplies as an alternative fuel to imported, higher emitting and higher polluting diesel. In conjunction with other lower emitting energy sources, gaseous fuels can provide both a more independent and cleaner future for Australia.

The World Health Organisation has concluded that diesel particulates are cancer causing and that there is no safe level of airborne particulates – which are estimated to be

causing up to 3,000 deaths a year in Australia.¹ Prudent budget action can take inexpensive and complementary steps to support the parallel regulatory framework being gradually implemented through the National Clean Air Agreement, the Ministerial Forum to review vehicle emissions and other related agendas.

Not to mention that every 10% reduction in the amount of imported diesel saves the balance of payments \$870 million, while encouraging Australian expertise and innovation in gas fuels creates Australian based jobs.

In this submission, we call on the Government to:

- 1** Reform government policies and programs to ensure low emitting gaseous fuels are treated the same as other low emission energy sources.
- 2** Support innovation in the development of lower emitting and more efficient gas engine technologies, including large truck engines and gas vehicle conversion technologies, along with the provision of accelerated depreciation for the upfront costs of converting trucks to run on gas.
- 3** Ensure the tax burden on gaseous transport fuels is not greater than 50% of that on diesel on an energy equivalent basis as has been promised by both major parties.
- 4** Avoid costly and wasteful government subsidies for fixed pipeline infrastructure where 'virtual pipelines' are already in place or might provide a more cost effective alternative.

If implemented together, the short-term direct impact of these measures would be to reduce the budget deficit. Taking account of the higher Australian content and greater number of Australian jobs associated with gas projects, the longer-term indirect impact of these measures would be to further reduce the budget deficit.

¹ Australian and New Zealand Journal of Public Health, October 2014, It's safe to say there's no safe level of air pollution, Dr Adrian Barnett.

Current government policies often prescribe expensive renewable technologies even when they aren't the best energy source for the job. For example, the Australian Renewable Energy Agency (ARENA) will fund a higher emitting and polluting diesel-solar hybrid generator for off-grid generation but won't support lower emitting gas generation – even in locations where solar is not ideal. Similarly, the Small-scale Renewable Energy Scheme subsidises solar-electric hot water systems that draw on higher emitting coal generated electricity but won't support lower polluting and otherwise more economical gas hot water systems.

Current government programs artificially deny lower emitting technology access to a range of “green schemes” even when gas would be better for particular applications (e.g. some off-grid power generation and many transport applications) than solar or wind power. The Government has also allowed the relative tax burden on gaseous fuels to rise above the level promised by it and the Labor Party. Imported diesel used for heavy transport is also quarantined from excise

increases – further entrenching the current policy and market dysfunction that supports a dirtier fuel.

This submission is not about gaseous fuels or renewables or gaseous fuels instead of renewables. Nor does it seek radical changes to the treatment of diesel. Its suggested policy settings would help harness the best of Australia's natural advantages to reduce pollution and other emissions, create Australian jobs and ensure the best technology for each job gets the same level of support from the various 'green schemes'. That's good for the environment and more effectively uses taxpayer funds.

In this submission, Gas Energy Australia draws on the conclusions and policy recommendations in its recently released 2030 Vision for Natural Gas Fuels and its soon to be released Vision for Stationary Energy LPG. Both Visions advocate removing barriers to greater use of cleaner, cheaper Australian fuels to ensure Australia takes more control over its cleaner energy and economic future.

More information about Gas Energy Australia's 2030 Vision for Natural Gas Fuels can be found at www.cleanercheaperfuels.com.au.

INTERESTING GASEOUS FUELS FACTS

- Displacing **10%** of diesel used on heavy on-road transport could reduce imported diesel by **1,018 million** litres per annum reducing CO₂ emissions by up to **597,000** tonnes.
- There are around **167,000** truck drivers in Australia whose jobs depend on cost-effective transport.
- Every **10%** substitution of imported diesel by Australian gaseous fuels would save **\$870 million** in import costs.
- Transport related greenhouse gas emissions are predicted to grow by **37%** between 2005 and 2025 – unless we support cleaner fuel options.
- LPG already contributes more than **\$3.5 billion** a year to the national economy and other gaseous fuels add to this contribution.
- LNG and CNG natural gas fuels can reduce carbon emissions by up to **25%** and virtually eliminates particulates along with NO_x and SO₂.
- There are **400,000** Australians and thousands of businesses in regional Australia that are not on the electricity grid – many of which run on dirtier, more expensive and often subsidised diesel generation.

1 REFORM GOVERNMENT POLICIES AND PROGRAMS TO ENSURE GASEOUS FUELS HAVE THE SAME ACCESS TO LOW EMISSIONS PROGRAMS AS OTHER LOW EMISSION ENERGY TECHNOLOGIES

The Government could fulfil its Energy White Paper commitment to energy technology neutrality by ensuring its policies don't favour one technology or energy source over another. This could be done by including gaseous fuels in 'green schemes' such as the Renewable Energy Target, Small-scale Renewable Energy Scheme and those administered by ARENA.

Even though they are one of the cleanest energy sources available, gaseous fuels aren't included in some green schemes, which often prescribe solar or wind power rather than supporting lower emissions more broadly.

Gaseous fuels should also be given better access to schemes such as the Emissions Reduction Fund and the Clean Energy Finance Corporation. And State Governments should be encouraged to provide assistance to low income families consuming gaseous fuels as they do for those consuming electricity and natural gas.

All low emission fuels should have equal access to green schemes.

Given the significant environmental benefits of gaseous fuels as well as their ability to be easily accessed in rural and regional communities, these fuels should be provided the same support by governments as other competing technologies, and procurement policies should include gaseous fuels among their preferred fuel types.

The Federal Government, through COAG, should show leadership by calling on and supporting State and Territory Governments to make a strong commitment to adopt lower emitting gaseous fuel technologies for major bus, ferry and train services and ensure that their procurement rules and policies don't hinder the inclusion of gaseous fuels.

In addition to the initial steps in the National Clean Air Agreement, governments at state and federal level should take a leadership role by ensuring their own procurement of buses, trains and ferries considers and supports lower polluting fuels like gaseous fuels.

It is critical that Australian Governments promote the need for lower polluting technologies by taking tangible actions that demonstrate that policy objective. For example, governments can help protect Sydney's iconic harbour not just by tightening diesel fuel standards on cruise ships, but also by adopting the much cleaner emission



standards operating in Europe and North America which are being met by ships and ferries switching to gaseous fuels. Indeed, Sydney Ferries is currently procuring new conventional diesel powered ferries from Tasmanian based builder Incat, which has built a next generation LNG fuelled ferry for an overseas operator.

It is also critical that Australian Governments do not introduce policies and programs supporting other alternative fuels, technologies and appliances that have the 'unintended consequence' of disadvantaging gaseous fuels. A market-based level playing field that is technology neutral is more likely to deliver affordable energy than one favouring higher cost options.

Because these programs already have a capped cost associated with them, this is a budget neutral measure and arguably a potential savings measure, with gas being a cheaper form of abatement than most renewable technologies. Indeed, a recent Productivity Commission research report Carbon Emission Policies in Key Economies found that the cost of abatement using gas switching incentives ranged from 16 to 49% of the cost of using renewable energy incentives. Even if the \$216.2 million of total grants provided by ARENA were discounted by only 10%, this would yield a budget saving of almost \$22 million.

2 BETTER SUPPORT FOR INNOVATION IN THE DEVELOPMENT AND DEPLOYMENT OF LOW EMISSION GAS TECHNOLOGIES

In line with its agenda to support innovation, the Federal Government should be supporting innovation, R&D and manufacturing jobs in the development of specific gas technologies that Australia has a natural advantage in and specific need for.

Australia is one of the largest gas producers in the world. At the same time, it has 10% of the world's mining activity and some 400,000 Australians and businesses dependent on off-grid generation – both still largely dependent on higher polluting and imported diesel, along with up to 30% of our energy used for transport. It is also little known to most Australians that we operate some of the largest truck engines in the world. Ironically, because the rest of the world does not run things like road trains to the same extent as Australia, there is little demand elsewhere for things like a 15 litre truck engine which are no longer being made overseas. However, Australia still needs such large engines because of our heavy freight applications which are an ideal platform for lower emitting gaseous fuels where renewables are not a feasible alternative.

Australia must retain the skills and knowledge from its automotive manufacturing sector and capture and develop the expertise and skills from the recent capital phase of the growing export gas sector. Supportive innovation and R&D policy settings can help do this and build and promote a leading role for Australia in developing gas related technologies.



This would mean we aren't just exporting another resource commodity but also harnessing the downstream environmental benefits and the niche design, manufacturing and production jobs right here in Australia. As one of the world's largest gas producers, Australia is also in the box seat to be a technology leader in gaseous fuels in areas with direct relevance to our economic needs and advantages.

Examples of existing innovation in this field include:

- Australia designs, manufactures and exports innovative leading edge LPG refuelling equipment to countries in Europe, Asia and North America. This equipment includes Batchen autogas bowsers, GasGuard autogas refuelling nozzles, and Ebsray positive displacement and regenerative turbine LPG pumps.
- Cryoquip at Dandenong designs and manufactures technical equipment and plant for gas installations.
- BOC's micro LNG plants in Dandenong Victoria, Westbury Tasmania and Chinchilla Queensland were designed in Australia.
- Australian engineers at Ford Australia who developed liquid phase LPG fuel injection for the Falcon and at General Motors Holden who developed a new aluminium LPG fuel tank and associated fuelling system for the Commodore won awards from the Society of Automotive Engineers – Australasia.
- Bauer Kompressoren Australia (BKA) in Sydney are pioneers in refuelling system technology, developing a robust 'drop and go' innovative containerised system.
- Gas Energy Australia, the Victorian Automobile Chamber of Commerce (VACC) and the Victorian Government are examining the feasibility of establishing an autogas engineering design centre, with associated manufacturing facilities for the development of next generation LPG vehicles.

- Innovative thinking and collaborative effort from AGL, APA Group, BOC and Clean Energy Fuels Australia to transport LNG from Dandenong in Victoria to Whyalla in South Australia and inject gas below the breach of a ruptured pipeline while it was repaired to maintain the local community’s natural gas supply. A “virtual pipeline” and our LNG know-how in action.
- The design and development of innovative LPG diesel gas technology for heavy duty vehicles through collaboration between industry and government, including regulators. The adjacent image shows road testing of the technology in Victoria using a portable emissions measurement system of the sort that uncovered VW’s attempt to understate emissions from some of its diesel vehicles.



Australia can add to this list of gas technology innovations by giving gaseous fuels the same access to low emission technology programs such as that administered by ARENA as other low emission energy technologies. It can also do this by introducing incentives to reduce the inevitable upfront costs of the development of cleaner gaseous fuel engines for large trucks, trains, ships and ferries and mining vehicles.

The Budget should provide an appropriate incentive such as accelerated depreciation for the higher upfront costs of new or converted trucks using cleaner, cheaper, gaseous fuel fuels. This would reduce the average age of heavy-duty vehicles in Australia from 13.7 years, compared to 7.8 in the UK, and 6.7 in the USA.

Increasing the uptake of gas engine technologies has the additional benefit of providing a low cost incentive to fuel

diversification. This would not only support innovation but would also help address the challenge of Australia’s failure to meet its international oil reserve obligations – but at a far lower cost than trying to do it by building a strategic reserve which the Government’s Energy White Paper Issues Paper estimated would cost \$6.8 billion.

The tax system can be used to help reduce the inevitable upfront costs of first movers in the infant gaseous fuel transport sector so it can achieve economies of scale and overcome the entrenched policy advantages enjoyed by existing fuels.

Because any resultant growth in CNG and LNG trucks would be starting from a low base, Gas Energy Australia estimates that the cost of allowing accelerated depreciation of the higher upfront costs of new or converted trucks would be less than \$2.5 million per annum.

AUSTRALIAN INNOVATION IN GASEOUS FUELS

CASE STUDY



Together with their partners, Australian company Intelligas has developed technology to retro fit a range of mine vehicles including trucks, dozers and shovels with a “plug in plug out” tank and High Density Compressed Natural Gas (HDCNG) fuel system.

Fitting these vehicles with a HDCNG engine not only reduces carbon emissions by up to 25% but it also improves the life of the engine and reduces engine noise.

3 RESTORE THE RATE OF TAXATION ON GASEOUS FUELS TO THE PROMISED LEVEL

As outlined in the Federal Government’s Strategic Framework for Alternative Transport Fuels, the economic benefits of gaseous fuels cannot be realised without addressing barriers to entry.²

The Coalition originally opposed the introduction of the *Taxation of Alternative Fuels Legislation Amendment Act*, which applied excise to gaseous fuels for the first time. In government, it has endorsed the previous Labor Government’s commitment that the tax on gaseous fuels should *not be more than 50%* of the rate on diesel/petrol on an energy equivalent basis given its environmental, energy security and regional development benefits. For LNG and CNG used in heavy transport, it is currently well over 70% and should be reduced.

Gas Energy Australia estimates that the cost of cutting the rate of fuel excise on CNG and LNG to meet the commitment that the tax on gaseous fuels should not be more than 50% of the rate on diesel on an energy equivalent basis would be about \$16.8 million per annum.

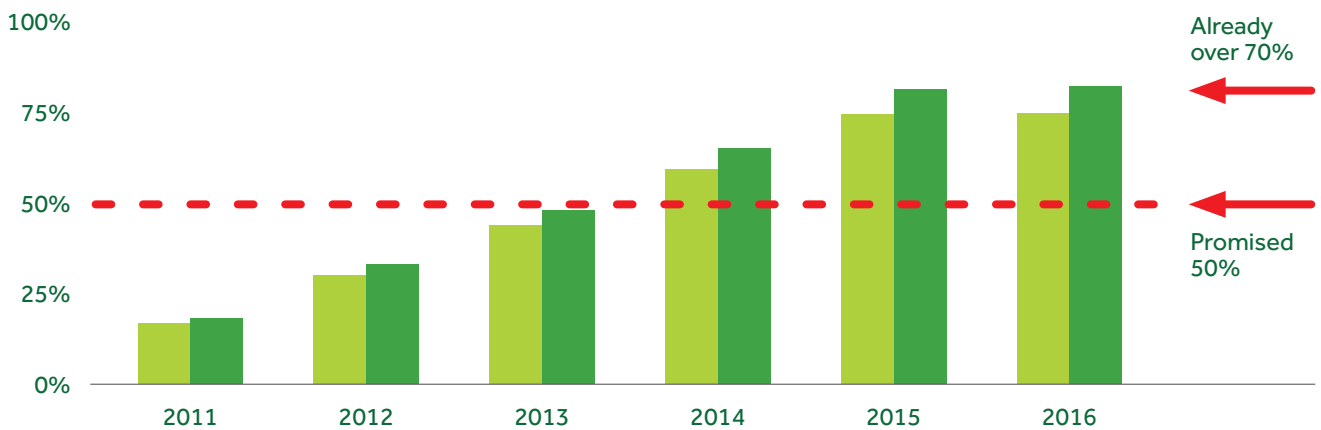
Importantly – this proposed budget measure meets an already promised obligation.



Relative Fuel Tax Burden

Despite promising no more than 50%, it is already over 70%, damaging this emerging industry.

LNG CNG



² Department of Resources, Energy and Tourism, Strategic Framework for Alternative Fuels, December 2011 pp24-5

4 SUPPORT VIRTUAL PIPELINES AND REMOVE CROSS-SUBSIDISATION OF FIXED PIPELINES

Australian Governments should not waste taxpayer dollars on subsidising fixed natural gas pipelines when virtual pipelines can do the job more cheaply and should ensure comprehensive feasibility studies are conducted on the best methods for delivering gas to regional communities.

Virtual pipelines can be built cheaper and faster, saving the community money. Indeed, there are hundreds of thousands of kilometres of existing 'virtual pipelines' providing LPG, CNG and LNG to communities and industry all around Australia. These 'virtual pipelines' can move readily with demand and already create thousands of Australian jobs.

Indeed, in the examples of innovation highlighted above, we pointed out how a virtual pipeline of LNG helped maintain gas to a regional community when older fixed infrastructure suffered a rupture.

However, Federal and State Governments have shown an inclination on a number of occasions to promise significant public funding to support more visible fixed pipelines without testing the impact on existing virtual pipelines and businesses. This has occurred at the state level in Victoria, there have been calls for more pipelines in NSW and even the Federal Government promised \$6 million toward a pipeline in Tasmania that would service just one customer that is already serviced by an existing gas provider and 'virtual pipeline'.

Not only is this a potential misallocation of scarce public funds that has better uses elsewhere, but it also displaces and nullifies private investment.

Regional and rural households and business that aren't on the electricity grid or near a gas pipeline should have access to cleaner, cheaper and secure gas fuels. This includes remote agricultural and mining areas as well as indigenous communities reliant on unregulated diesel generation – which is often subsidised by taxpayers.

Of course, government are right to ensure all communities can access the energy sources they need. But instead of providing grants to "winners" to build and operate pipelines, governments should provide rebates directly to households and consumers, giving them more options and more choice of their preferred energy source, including cleaner, cheaper gaseous fuels delivered through virtual pipelines.

This proposed measure is a savings measure.



WHAT OTHERS HAVE SAID ABOUT GASEOUS FUELS

Australia's heavy reliance on imported fuel is a "discussion we have to have". **Professor Ian Chubb, former Chief Scientist of Australia**

"Australia has a natural gas advantage that should translate into a world leading natural gas industry and competitive advantage driving economic growth and local engineering, design and other jobs. Engineers Australia supports the need for a diverse domestic fuel market in Australia ensuring we are not 100% dependent on foreign fuel imports." **Dr Brent Jackson, Engineers Australia**

"This is a great opportunity to use our local expertise and natural resources to meet Australia growing vehicle fleet needs. We know that an over reliance on one fuel source has its limitations so why wouldn't we seek to maximise the use of a fuel that provides great economy for motorists and that also reduces CO₂ emissions compared to petrol?" **Geoff Gwilym, VACC Executive Director**, commenting on the Victorian Government's support for the LPG Vehicle Demand Study

"Australia's fuel self-sufficiency could be increased to 50 to 70% by 2030 through using natural gas as a transport fuel, compared to just 30 to 40% using current fuel sources." **Professor Robert Clark, University of New South Wales**

"Australia should explore and trial the use of CNG passenger cars and LNG in heavy vehicles to increase our utilisation of domestic energy sources". **Chief Executive, Australian Automobile Association**

In its 2014 Australian Liquid Fuels Technology Assessment, the **Bureau of Resources and Energy Economics** found that natural gas fuels offer "the lowest LCOF (levelised cost of fuel) over most of the projection period and they remain cost competitive with the lower cost renewable technologies out to 2050."

"Australian natural gas is a high quality, environmentally friendly fuel, that is cheaper than distillates and supports Australian jobs. In Tasmania, we were proud to be a first mover, designing the world's first high speed LNG ferry. The experience of sourcing and using domestic gas on this world's first vessel, proved to be very satisfactory, as the quality experienced is far greater than is available to our customers in other global markets." **Robert Clifford AM, Chairman, Incat Group of Companies**

CONCLUSION

The triple drivers of cost, environment and the need for an increased proportion of future sustainable, secure and reliable domestic fuel supply mean it is important to take the necessary steps to ensure gaseous fuels are a key part of Australia's energy mix.

Waiting for the market to respond organically will not work with current policy settings which often disadvantage gaseous fuels, favour other technologies and sometimes produce unintended consequences. Australia needs to act now to ensure that gaseous fuels are treated the same as other low emission energy sources so we can secure our energy future, take care of the environment and help our economy to grow.

The measures proposed in this submission would reduce the budget deficit if implemented together.

They would also fit neatly with other key Government agendas, would contribute to lower emissions through direct action, encourage innovation and offer niche Australian job and industry opportunities by building on our natural advantages and supporting our strategically important export industries.

Realisation of these benefits can be achieved by a partnership between a willing and proactive industry, and a committed government that wants to take the steps necessary to deliver better economic and environmental outcomes for Australia.

ABOUT GAS ENERGY AUSTRALIA

Gas Energy Australia is the national peak body that 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, vehicle and equipment manufacturers, vehicle converters, consultants and other providers of services to the industry.

The Association's mission is to optimise the value and benefits of gaseous fuels for the benefit of Australia's

national interest – to achieve energy security and economic prosperity in a lower carbon economy, and the Australian community in providing access to affordable energy.

The Association focuses on advocating the value and benefits of the fuels through engagement with the federal government, state authorities and the community.