



21 April 2017

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NSW Energy Security Taskforce
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NSW ENERGY SECURITY TASKFORCE SUBMISSION

Dear Professor O'Kane

Gas Energy Australia (GEA) welcomes the opportunity to provide a submission to the NSW Energy Security Taskforce.

As the peak industry body for downstream gaseous fuels, GEA is keen to contribute to the NSW Government's examination of how the State manages energy security and resilience, including readiness, planning, preparation, and response capability to extreme events such as weather. By way of background, GEA is the national peak industry body for the bulk of the downstream gaseous fuels industry, including Liquefied Petroleum Gas (LPG), Liquefied Natural Gas (LNG) and Compressed Natural Gas (CNG). Our members include a range of businesses in the gaseous fuel supply chain from major companies to small businesses that are refiners and suppliers, fuel marketers, vehicle and equipment manufacturers and vehicle converters.

Gaseous fuels are available everywhere all of the time. With its availability and diverse applications, in the transport and stationary energy sectors, the industry is equipped to immediately contribute to a safe and sustainable energy solution whenever and wherever the need arises.

As an alternative energy source, gaseous fuels are playing an important role in shaping Australia's future energy policy and lowering our carbon footprint. Gaseous fuels are a significant contributor to the Australian economy both in exports and providing access to an easily transported and safe low carbon energy source for Australians everywhere.

With greater use of gaseous fuels there are significant flow-on benefits to the Australian economy in terms of increased energy security, reduced greenhouse gas emissions, improved air quality and health outcomes, lower energy costs for households and businesses, creating more local jobs and reversing the Australian economy's growing dependency on fuel imports.

Gaseous fuels in New South Wales

At present, LPG is the main gaseous fuel used in New South Wales and it makes a significant contribution to meeting the State's energy needs as a stationary energy source, including cooking, space and water heating, recreational activities (BBQs) and it supplies many commercial and industrial enterprises with power generation and heating, as well as a transport fuel.

- The gaseous fuels industry in New South Wales is the largest market for LPG indoors in Australia, with more than 500,000 household consumers.

- The industry is also a large employer, employing more than 900 people, with a significant number of these being in regional and remote areas.
- New South Wales has the highest level of investment in the industry at more than \$16 billion¹, including the 65,000 tonne capacity underground Elgas 'Cavern' at Port Botany which is the largest LPG storage facility in the Southern Hemisphere.

CNG and LNG are produced by increasing the energy density of natural gas by compression and liquefaction respectively so that both fuels can be stored and transported by road, rail and ship as a 'virtual' pipeline, eliminating the expense of constructing costly pipelines. While not as well established as LPG, on the back of recent substantial infrastructure investments, the use of CNG and LNG has the potential to expand in a variety of both stationary energy and transport applications, particularly power generation, heavy trucks, buses and marine transport.

- The NSW State Transit Authority has been operating CNG powered buses and CNG refuelling facilities at its Sydney bus depots for many years.
- Bauer Australia designs and manufactures CNG vehicle refuelling stations in Weatherill Park.
- In 2015, AGL began operating a \$300 million LNG storage facility in Tomago to service domestic demand and BOC has an LNG refuelling station in Tarcutta.

Similar to LPG, the portability of LNG and CNG enable these gaseous fuels to be used in many different locations, including remote rural areas. Again, similar to LPG, the stationary energy use of LNG and CNG can reduce the costs of running the electricity network.

Gaseous fuels and New South Wales energy security

GEA regards the best approach to securing New South Wales's, and indeed Australia's, energy security is to diversify supply and increase the capacity of the range of the lower emitting energy sources produced and readily available in Australia. Government policy regarding energy security should be about ensuring that the best lower emitting and lower polluting technology is available for each job. Indeed, the most cost-effective solutions to increasing energy security may lie outside the traditional energy sources. For example, it may be advantageous to look for solutions outside of the National Electricity Market (NEM).

GEA notes the contribution a diversified range of energy sources, including gas, can make to securing New South Wales's future energy security in a cost-effective way. Increased use of various forms of distributed energy resources by households and businesses will help to reduce disruptions and relieve pressure on the NEM.

In contrast to centralised electricity generating facilities such as coal and gas fired power stations, hydroelectric dams and large-scale wind farms, all of which typically require electricity to be transmitted

¹ 2016 GEA Member Survey.

over long distances, distributed energy is decentralised, modular and located close to the energy need it meets. Examples of distributed energy resources include roof top solar water heaters and photo-voltaic panels, off-grid diesel and gas electricity generators and gas, both natural gas and LPG used in homes or businesses to heat water, cook or provide warmth.

Increased use of distributed energy such as gaseous fuels as a stationary energy source can delay or postpone indefinitely the significant costs of expanding or upgrading electricity and natural gas grids as well as reduce the strain on the electricity grid during peak load periods.

Moreover, gaseous fuels are up to 25 per cent cleaner than other high emitting fuels, keeping with the national commitment to reduce carbon emissions and a recent report by the Bureau of Resources and Energy Economics noted that gaseous fuels have one of the lower long term costs of production of all the alternative fuels out to 2050. Accordingly, it is important that gaseous fuels are part of any future energy mix.

We would also like to reinforce the flexibility of gaseous fuels. Gaseous fuels can be transported by tanker to essentially create virtual pipelines of energy without the capital expense of fixed energy infrastructure which has been the main driver of the significant increases in electricity prices over recent years. Not only will any increase in the use of gaseous fuels for distributed energy reduce the pressure on the electricity grid, but the backup systems for gaseous fuels production provides for flexible emergency responses to short-term energy shortages. For example, if New South Wales were to experience an incident where the traditional sources of energy were compromised due to a significant event such as a bushfire, gaseous fuels are readily available to provide emergency energy. Gaseous fuels can also assist in ensuring that the impact of such an event is minimised.

New South Wales (and the ACT) have around 30,000km of Single Wire Earth Return (SWER). It would be advantageous to replace much of the energy demand this meets with gaseous fuels. Gaseous fuels deliver energy onsite thereby eliminating issues with supply such as voltage fluctuations and transients like lightning strikes. Also, gaseous fuels reduce the bushfire risks inherent in the SWER powerlines which are well known. Consequently, GEA considers that it is a priority to review the placement of powerlines that cross bushfire prone areas. This would reduce the incidence of power lines starting bushfires as well as increase the security of energy supply to regional areas.

Gas Energy Australia has prepared our *Vision for LPG Stationary Energy Liquefied Petroleum Gas* http://www.cleanercheaperfuels.com.au/ccf-content/uploads/2014/10/GEA_LPG2030Vision_LR.pdf and *A 2030 Vision for Natural Gas Fuels – CNG and LNG* http://www.cleanercheaperfuels.com.au/ccf-content/uploads/2014/10/GEA_NGF2030VisionUpdate_V1.pdf. Both Visions include a 10 Point Plan and outline the many ways that Australian governments and industry can work together to provide all Australians with cleaner and cheaper sources of energy. Our Visions also note the energy security problem we are facing and that diversification across a range of cleaner Australian fuels is the key to addressing the problem.

Policy conclusions

As discussed above, GEA considers that the most optimal solution to ensuring energy security for New South Wales may indeed lie outside of the NEM. And by limiting energy options to those covered by the

renewables energy target scheme, the NSW Government is limiting its own contribution to enhancing energy security and Australia's climate change goals.

Several government policies discriminate against gaseous fuels, in particular the Commonwealth Government's Renewables Energy Target and other programs administered by the Australian Renewables Energy Agency. GEA has concerns with the continued focus on renewables. We consider that a broader greenhouse abatement policy would be more beneficial for New South Wales. Climate policy should be genuinely technology neutral whereby the aim is to reduce greenhouse gas emissions thereby achieving the best environmental outcome. Gaseous fuels should be included as they are cleaner, cheaper and readily available.

In fact, limiting the discussion to renewables may result in the creation of barriers to the uptake of other more cost effective and affordable low emission energy sources which would weaken competitive pressures in energy markets and impose extra costs on consumers and taxpayers.

It is also important that the NSW Government's energy efficiency and climate change policies do not prevent gaseous fuels from contributing to increased energy security and carbon abatement in NSW. GEA is working with industry and the Department to provide greater access and functionality to ensure consumers can benefit from the Energy Savings Scheme. GEA welcomes the recent statements from the Hon Josh Frydenberg, MP, Minister for Energy and the Environment, about the need to unlock gas reserves and lift state moratoriums. As Minister Frydenberg has said, the answer to rising energy prices is "a truly national approach that involves the states and territories unlocking their abundant gas reserves as a means of driving down prices and creating jobs while enhancing energy security".

GEA considers exploration and development of natural gas resources should be subject to the same evidence based regulatory processes as other mineral resources, not arbitrary bans or moratoriums. As you concluded in the *Final Report of the Independent Review of Coal Seam Gas Activities in NSW* (September 2014), the coal seam gas industry "is not significantly more likely to be more damaging or dangerous than other extractive industries."

New South Wales can lead other states in adopting cleaner, cheaper and readily available Australian gaseous fuels as part of its energy mix into the future while at the same time see significant reductions in emissions.

We would be more than happy to discuss our submission with you in more detail.

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