30 September 2019

Dr Kerry Schott AO
Independent Chair
Energy Security Board (ESB)

Sent via email: info@esb.org.au

GEA RESPONSE TO THE POST 2025 MARKET DESIGN ISSUES CONSULTATION PAPER

Dear Dr Schott

Gas Energy Australia (GEA) welcomes the opportunity to provide comments in response to the ESB's *Post 2025 Market Design* Issues paper (Issues paper).

As you may be aware, GEA is the national peak body which represents the bulk of the downstream alternative gas 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 gas fuels supply chain including producers, refiners, distributors, transporters, retailers, vehicle manufacturers, equipment manufacturers and suppliers, installers, educators and consultants.

GEA welcomes this consultation on a fit-for-purpose market framework post-2025 and options to deliver the services required to facilitate a secure, reliable, lower emissions electricity system at the lowest customer cost.

GEA supports a whole-of-market approach to meeting Australia's energy needs that takes into account all energy sources not just electricity from the NEM.

GEA regards the best approach to improving the reliability of Australia's energy supply is to diversify supply and increase the range and capacity of low emission energy sources produced and readily available in Australia. Government policy regarding energy should be about ensuring that the best lower emitting and lower polluting technology is available for each particular job. Indeed, the most cost-effective solutions to increasing the security of the National Electricity Market (NEM) may lie outside the NEM.

As stated in the Issues paper, the basic framework for the NEM has remained unchanged since the 1990s. However, in this time there has been significant change in the mix of generation technologies, patterns of energy use and government energy policies.

GEA considers there to be significant opportunities in recognising the role gas fuels can play in improving reliability and reducing emissions cost effectively. In particular, through the use of distributed energy resources (DER) and direct use of gas in stationary energy applications.

A diversified range of energy sources, including gas, can contribute to increased reliability in a cost-effective way. In particular, increased use of various forms of distributed energy resources by households and businesses would help to reduce disruptions and pressure on the NEM.

General comments

There has recently been a growing shift to distributed energy which will continue to impact the Australian energy market in the future, with more consumers looking for options to reduce their energy costs while maintaining reliability, including reducing reliance on the NEM.

In developing a market framework for Australia's energy system post-2025, the ESB must consider options to increase NEM security such as distributed energy resources, including gas fuels, that lie outside the NEM and not lock itself into particular NEM-based solutions. Moreover, it should develop policies that actively encourage the provision of distributed energy solutions by third parties to reduce network demand, as well as increase competition and innovation.

The increased use of distributed energy such as gas fuels as a stationary energy source can also 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.

Improving reliability

GEA considers gas fuels have an important role to play in achieving reliability and affordability goals while achieving cost effective emission reductions. For example, a 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 alternative fuels out to 2050. And when combusted, gaseous fuels release up to 50% less CO2 than coal and up to 25% less CO2 than oil-based fuels[1].

Increasing the use of gaseous fuels for both domestic and commercial consumers particularly those on the edge of the grid, would greatly reduce the strain on the grid and significantly decrease the need to expand or upgrade it. Currently there are almost 2 million households using LPG in their homes, especially in rural and remote areas. This is in addition to the 5 million households using natural gas delivered from the gas network. Outside the transport sector, natural gas is the largest provider of energy (total final consumption) in Australia, providing 911 petajoules in 2016-17, which was more than the 820 petajoules provided by electricity[2]. This energy provided by gas helps to ensure diversity of supply and reliability.

Nevertheless, the push towards greater electrification continues to intensify as highlighted by the ACT Climate Change Strategy released last week which seeks to phase-out the use of gas fuels. GEA supports a technology-neutral approach and considers equal treatment of all technology options to be essential in ensuring that timely and cost-effective investment occurs in the electricity sector and critical if the post-2025 project is to deliver increased reliability, more affordable energy and satisfied energy consumers.

[1] Australian Energy Technology Assessment 2013 Model Update, Australian Government, Bureau of Resources and Energy Economics

[2] Australian Energy Update 2018, Office of the Chief Economist, Department of Industry and Science

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Distributed energy resources

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 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.

The increased use of various forms of distributed energy resources by households and businesses would help to reduce disruptions and pressure on the NEM. Not only would 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, in response to natural disasters, gaseous fuels can be delivered long before poles, wires and pipelines can be repaired.

And LNG has been used to restore natural gas supplies to regional centres where pipeline gas supplies have been disrupted. The flexibility of gas fuels can also strengthen energy resilience, as gas fuels can be transported by tanker to essentially create virtual pipelines of energy without the capital expense of fixed energy infrastructure.

Electrification and use of zero emissions gas for stationary energy applications have promise but given the time needed to establish these technologies, they are unlikely to offer major abatement before 2030. GEA considers that continuing and increasing the use of gas in Australia for transport and stationary energy applications can significantly contribute to reduced carbon emissions today using existing technology which supports an Australian workforce.

Decarbonisation of gas

As this Issues paper is looking at market design post-2025, it is important to consider the role of zero emission and renewable gases such as biogas (biomethane and biopropane) and hydrogen. GEA considers that gas fuels have an important role to play in improving reliability and reducing emissions. Gas Vision 2050 reflects the ambitions of key organisations which represent the gas industry and shows gas fuels have a pivotal role to play in Australia's low carbon future out to 2050. I have attached a copy of this document.

Conclusion

GEA considers that gas offers significant opportunities to increase the reliability of the NEM now and through the use of renewable and zero emission gases into the future. And DERs which lie outside of

the NEM, must be considered for their ability to contribute to improved reliability, reduced costs and improved consumer choice when developing a post-2025 market design.

Should you have any questions relating to this submission please do not hesitate to contact Melissa Dimovski at mdimovski@gasenergyaustralia.asn.au.

For your consideration.

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