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Dr Kerry Schott AO
Independent Chair
Energy Security Board (ESB)
Email: info@esb.org.au

NATIONAL ENERGY GUARANTEE (NEG) DRAFT DETAILED DESIGN CONSULTATION PAPER

Dear Dr Schott

Gas Energy Australia (GEA) welcomes the opportunity to comment on the ESB's NEG Draft Detailed Design Consultation Paper and thanks you for making the time to meet with me on 23 May 2018. As discussed, GEA is keen to engage with the ESB and assist where it can. As you are aware, 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 and transporters, vehicle and equipment manufacturers and vehicle converters.

Overview

GEA reiterates its in-principle support for the NEG and congratulates the ESB for its work in developing the proposal in quick time.

GEA understands this Consultation Paper's focus on the design and operation of the NEG, along with its integration into the National Electricity Rules (NERs) that govern the National Electricity Market (NEM). Nevertheless, this submission addresses a number of broader issues which will affect the ability of the the NEG and the NERs to deliver the ESB's goals. It also addresses the Commonwealth Government's emissions reduction elements of the NEG.

GEA considers the NEG needs to be an energy guarantee as its name states, not just an electricity guarantee. In line with this position, 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.

Fuel technology neutrality and gaseous fuels

GEA supports the technology-neutral approach embodied in the NEG and notes the 2015 Energy White Paper highlighted the risks and higher costs of prematurely forcing new technologies in the energy market through policy interventions.

GEA 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 NEG is to achieve its affordability goal.

In its June 2018 Retail Electricity Pricing Inquiry Final Report, the Australian Competition and Consumer Commission (ACCC) concluded that renewable energy only schemes designed to reduce carbon emissions were a significant contributor to the decline in energy affordability over the last decade. The technology-neutral approach embodied in the NEG should help reduce the costs of reducing emissions.

Gaseous fuels have an important role to play if the NEG is to achieve its affordability and emissions reduction goals. For example, 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 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.

Further, when used in power generation, gaseous fuels result in negligible emissions of sulphur dioxide, nitrogen oxides, mercury and particulates compared with other fuels, offering a significant contribution to improved local air quality and public health. And when compared to diesel used in remote power generation, gaseous fuels offer lower noise and elimination of the risk of contamination of soils and groundwater.

The flexibility of gaseous fuels also strengthens energy resilience. 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, 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.

Moreover, the ability afforded by distributed energy resources for some regional communities to go off-grid would reduce the number 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.

Accordingly, it is critical that low emission gaseous fuels are part of future emissions reduction strategies if energy costs are to be contained, reliability increased and environmental outcomes improved.

LNG power generation is already being used in many locations in rural and remote parts of Australia with high energy needs such as mine sites. In early 2018, GEA member EVOL LNG entered into a long-term agreement for the supply of LNG to the Dalgarranga gold project in Western Australia. The mine will use LNG to fuel both Zenith Energy's 15MW gas-fired power station and the 2.5Mtpa gold processing facility. The project demonstrates that trucked LNG can support a gas-powered microgrid at a remote mine site without the need for full diesel redundancy, along with fuel efficiency better than diesel generation that also delivers the required load-acceptance capability.

In June 2018, the World LPG Association convened a workshop in Sydney jointly hosted by Elgas and Origin Energy highlighting the capabilities of LPG as a fuel for power generation. During the workshop, an Origin Energy representative outlined the company's plans to modify its Quarantine Power Station in

South Australia to run on LPG in addition to the natural gas it currently uses. Ships would transport locally produced LPG from Port Bonython to a floating storage barge adjacent to the power station and built to store 3 kilotonnes of LPG. This amount of stored LPG is equivalent to 13,000 MWh of electricity or 4.5 days of baseload generation given the power station's 128MW capacity. As a result, the modification would significantly enhance South Australia's energy security.

Consequently, it is critical that the ESB acknowledges the energy security and environmental benefits of gaseous fuels and that it recommends the NEG and associated changes to the NERs actively encourage, and certainly not exclude, gaseous fuels as a power generation source.

Distribution technology neutrality and gaseous fuels

The ACCC's Retail Electricity Pricing Inquiry Final Report referred to above, concluded that the main cause of the significant decline in energy affordability over the last decade was the significant increase in network costs, the so called 'gold plating' of the electricity network's poles and wires. To help address this problem, GEA welcomes the ESB's previous assurances that the NEG will not favour centralised generation over decentralised generation and that decentralised energy resources will be part of the mix of solutions to help meet reliability and emissions guarantee in the future.

GEA acknowledges that changes have been, and continue to be made to the regulatory framework, in particular the NERs governing the NEM, to reduce incentives to over-invest in infrastructure. But while these regulatory changes have increased opportunities for non-network providers and distributed energy, the rules and regulations remain very complicated and represent a barrier for potential new suppliers.

For example, while the NERs have been changed to allow non-network participants to compete for contracts, these changes and the NERs in general are difficult to navigate. GEA has also been advised that the infrastructure investment approvals processes still do not require network providers to assess possible cost savings from going off-grid and the initial reports assessing such investments are prepared by incumbent network providers.

As a result, while GEA acknowledges the Rules do not prohibit small suppliers of distributed energy resources from offering innovative cost-effective alternatives to network-based electricity supplies, it is concerned that the Rules' application still restricts their ability to do so.

If energy affordability is to be improved, the NEG and associated changes to the National Electricity Law (NEL) and NERs need to actively encourage the provision of distributed energy solutions by third parties to reduce network demand, as well as increase competition and innovation. In part, this could be done by changing the NERs to reinforce that Regulatory Investment Tests must be carried out on a technology neutral basis. It could also be done by ensuring that future NER rule changes place distributed generation of all types on a level playing field with grid supplied electricity and energy incentive programs do not discriminate between off-grid and network-based solutions.

GEA notes that in relation to stand-alone systems, the ACCC's Retail Electricity Pricing Inquiry Final Report included a recommendation "to identify and implement changes to the NEL and NER.....to allow distributors to develop off-grid supply arrangements for existing customers or new connections where efficient" in a way that would preserve existing customer rights but not reduce competition.

Reducing electricity demand and gaseous fuels

GEA notes that in this Consultation Paper and its previous consultation paper, the ESB's work relating to reducing electricity demand has focused on short-term demand response involving some customers temporarily forgoing power. GEA agrees that short-term demand response has an important role to play in improving affordability by reducing the amount of high-cost generation and electricity network infrastructure required to handle extreme peaks in demand or losses of supply. But GEA considers more needs to be done to encourage permanent reductions in demand.

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. So too can energy efficiency and innovation of the sort being developed as part of COAG Ministers' National Energy Productivity Plan (NEPP)

Consequently, GEA suggests the ESB work with officials developing the NEPP to examine ways to encourage permanent reductions in electricity demand.

Energy innovation

While GEA welcomes the technology-neutral approach embodied in the NEG and adoption of technology neutrality as a key part of the Commonwealth Government's energy policy, many Commonwealth, State, Territory and Local Government energy and climate change policies and programs continue to be renewable energy only and exclude gas.

GEA supports the eligibility of gas and where relevant, options entailing permanent electricity demand reduction, in all government energy and climate change innovation policies, including ARENA funded programs, the NEPP, the Australian Energy Regulator's (AER's) demand management incentive scheme and demand management innovation allowance.

Introducing an environmental objective into the National Electricity Objective

GEA supports adding an environmental objective into the National Electricity Objective and suggests that this might be a necessary action to legislate the NEG.

Including external (emissions) offsets in the NEG

GEA does not support including international offsets in the NEG given the current legal and market uncertainties surrounding international units which would undermine the NEG's objective to increase investment certainty in the electricity sector.

GEA does support the ESB exploring how to include in the NEG domestic offsets resulting from non-network permanent electricity demand reductions that reduce emissions.

Conclusions

It is important that new technologies and energy sources are embraced while transitioning to a low emissions future. This needs to include technologies which exist outside the NEM. All forms of energy, including gaseous fuels, must be examined on an equal footing.

Gaseous fuels have an important role to play in the transition to lower emissions if reliability standards are to be improved, or at least maintained in an affordable manner. It is critical that the NEG and the NERs do not create or preserve artificial regulatory barriers that prevent consumers accessing more affordable energy sources outside the NEM.

Recommendations

When finalising the design of the NEG and preparing associated changes to the NERs, GEA urges the ESB to:

- *acknowledge the energy security and environmental benefits of gaseous fuels;*
- *recommend the NEG and associated changes to the NERs actively encourage, and certainly not exclude, gaseous fuels as a power generation source;*
- *recommend the NEG and associated changes to the NEL and NERs actively encourage the provision of distributed energy solutions by third parties to reduce network demand, as well as increase competition and innovation;*
 - *in part, this could be done by changing the NERs to reinforce that Regulatory Investment Tests must be carried out on a technology neutral basis;*
 - *it could also be done by ensuring that future NER rule changes place distributed generation of all types on a level playing field with grid supplied electricity and energy incentive programs do not discriminate between off-grid and network-based solutions;*
- *work with officials developing the NEPP to examine ways to encourage permanent reductions in electricity demand;*
- *support the eligibility of gas and where relevant, options entailing permanent electricity demand reduction, in all government energy and climate change innovation policies, including ARENA funded programs, the NEPP, the AER's demand management incentive scheme and demand management innovation allowance;*
- *recommend adding an environmental objective into the National Electricity Objective;*
- *not recommend including international emissions offsets in the NEG; and*

- *explore how to include in the NEG domestic offsets resulting from non-network permanent electricity demand reductions that reduce emissions.*

We would be more than happy to discuss these issues with the ESB and look forward to working with it on the further development of the NEG and ultimately the delivery of more affordable, reliable and sustainable energy to all Australians.

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