

Gas Energy Australia Executive Summary

Gas Energy Australia (GEA) welcomes the opportunity to contribute to the Independent Review of the Future Security of the National Energy Market (NEM). By way of background, Gas Energy Australia 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.

GEA regards the best approach to securing Australia's energy security is to diversify supply and increase the capacity of the range of lower emitting 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 job. Indeed, the most cost-effective solutions to increasing energy security may lie outside the NEM.

GEA notes the contribution a diversified range of energy sources, including gas, can make to securing Australia'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 reduce pressure on the NEM.

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.

Gas Energy Australia has prepared our 2030 Vision for Domestic Natural Gas Fuels (ie LNG and CNG) which can be found at http://www.cleanercheaperfuels.com.au/ccf-content/uploads/2014/10/GEA_NGF2030VisionUpdate_V1.pdf and our Vision for Stationary Energy LPG which can be found at http://www.cleanercheaperfuels.com.au/ccf-content/uploads/2014/10/GEA_LPG2030Vision_LR.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.

We urge the Review to consider in its deliberations, options to increase NEM security that lie outside the NEM and not lock itself into particular NEM-based solutions and we would be more than happy to discuss these issues with the Review team.

INDEPENDENT REVIEW INTO THE FUTURE SECURITY OF THE NATIONAL ELECTRICITY MARKET (NEM)

1.1 *How do we anticipate the impacts, influences and limitations of new technologies on system operations and address these ahead of time?*

Australia's energy markets, including the NEM, need to be flexible, adaptive and able to accommodate changing technologies and consumer preferences. Upmost in the policies that govern Australia's energy markets, including the NEM, is that they maintain energy security. To be most effective, these policies need to be technology neutral to allow innovation and the adoption of new technologies.

Additionally, the Government should not plan future energy security around just the NEM. In fact, more affordable solutions to ensuring Australia's energy security may lay outside the NEM.

1.2 *How can innovation in electricity generation, distribution and consumption improve services and reduce costs?*

Innovation in electricity generation, distribution and consumption can improve services and costs by enabling the free movement of resources to their most optimal use. It is important that new technologies 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 from the more traditional sources of electricity to the new environment of lower emissions. As Minister Frydenberg recently stated "Gas is an important transition fuel. It can assist in providing a pathway to a lower emissions generation future with up to 50 per cent fewer emissions than coal"

1.3 *What other electricity innovations are you aware of that may impact the market in the future?*

The growing shift to distributed energy and the rise of the prosumer will continue to impact the Australian energy market in the future, with more consumers looking for options to reduce reliance on the NEM.

2.1 *How do we ensure that consumers retain choice and control through the transition?*

It is critical that consumers are given accurate and up-to-date information throughout the transition period. It is also important that all information is provided to consumers not just the information that leads consumers to a particular type of technology. Current regulations should be examined to ensure that consumers are not discouraged from looking for options to reduce reliance on the NEM.

2.2 *How do we best meet the needs of vulnerable and hardship consumers?*

It is important to ensure that those who use non-network services are not disadvantaged compared to those that do. For example, the NSW Government recently expanded its gas rebate for low income families to include household LPG users.

2.3 *How do we ensure the needs of large-scale industrial consumers are met?*

GEA has no comment on this question.

2.4 *How can price structures be made more equitable when consumers are making different demands on the grid according to their electricity use and their investments behind the meter?*

Price Structures should be made more reflective of costs ie cost reflective prices, with governments making community service obligation (CSO) payments to address equity concerns rather than some consumers subsidising others. In the case of some renewable energy schemes, poorer households end up subsidising wealthier households able to afford expensive renewable technologies.

2.5 *How do we ensure data sharing benefits and privacy are appropriately balanced?*

GEA has no comment on this question.

3.1 *What role should the electricity sector play in meeting Australia's greenhouse gas reduction targets?*

As a major source of greenhouse gas emissions, the electricity sector needs to play a major role in reducing these emissions. Recent South Australian experience has demonstrated the current limits to relying on renewable energy resources. GEA considers that the best approach to meeting Australia's greenhouse gas reduction targets is to ensure that all low emission technology options are included in the discussion. This is the most efficient way for the Government to achieve its targets.

3.2 *What is the role for natural gas in reducing greenhouse gas emissions in the electricity sector?*

Natural gas has a significant role to play in the reducing greenhouse gas emissions in the electricity sector. As discussed in 3.1, the Government should ensure that all low emitting technologies are able to contribute to the security of electricity supply and all energy supplies. Gas, not just for generation, but also as a distributed energy source in the form of LNG and CNG, along with LPG, should be a significant part of Australia's energy mix as it transitions to a low emissions economy.

3.3 *What are the barriers to investment in the electricity sector?*

GEA considers policy certainty and equal treatment of all technology options to be essential to ensuring that investment continues to occur in the electricity sector. Policy certainty is paramount in encouraging investment. Investment is unlikely to occur if the perception is that government policy might change after each election. Additionally, if the public perception is that government is favouring one form of technology above another, investment decisions will be biased.

3.4 *What are the key elements of an emissions reduction policy to support investor confidence and a transition to a low emissions system?*

As discussed in 3.3, policy certainty and opportunities for all low emissions technologies are key elements to support investor confidence and a smooth transition to a low emissions economy. All technology options should be treated equally.

3.5 *What is the role for low emissions coal technologies, such as ultra-supercritical combustion?*

All technologies should be treated the same, with any government support linked to abatement.

4.1 *What immediate actions could be taken to reduce the emerging risks around grid security and reliability with respect to frequency control, reduced system strength or distributed energy resources?*

GEA notes the contribution a diversified range of energy sources, including gas, can make to Australia'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 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 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 higher emitting fuels, in keeping with the national commitment to reduce carbon emissions. 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.

4.2 *Should the level of variable renewable electricity generation be curtailed in each region until new measures to ensure grid security are implemented?*

GEA has no comment on this question.

4.3 *Is there a need to introduce new planning and technical frameworks to complement current market operations?*

4.3.1 *Should there be new rules for generator connection and disconnections?*

4.3.2 *Should all generators be required to provide system security or should such services continue to be procured separately by the power system operator?*

GEA has no comment on this question.

4.4 *What role can new technologies located on consumers' premises have in improving energy security and reliability outcomes?*

4.4.1 *How can the regulatory framework best enable and incentivise the efficient orchestration of distributed energy resources?*

Consumers should be given access to the full suite of distributed energy technologies available, including access to distributed gaseous fuels, which are low emitting, take pressure off the grid and are cost effective for consumers. The Government should ensure that its policy is technology neutral. This will result in the best outcome for both consumers and taxpayers.

The regulatory framework should not discourage consumers from going off the grid and should also prevent anti-competitive behaviour by energy suppliers.

4.5 *What other non-market focus areas, such as cybersecurity, are priorities for power system security?*

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.

4.6 *How could high speed communication and sensor technology be deployed to better detect and mitigate grid problems?*

GEA has no comment on this question.

4.7 *Should the rules for AEMO to elevate a situation from non-credible to credible be revised?*

GEA has no comment on this question.

5.1 *Are the reliability settings in the NEM adequate?*

GEA has no comment on this question.

5.2 *Is liquidity in the forward contract market for electricity adequate for the needs of commercial and industrial consumers and, if not, what can be done?*

GEA has no comment on this question.

5.3 *Are commercial and industrial users experiencing difficulties in obtaining quotes for supply?*

GEA has no comment on this question.

5.4 *What impact will an increasing level of renewable generation have on the forward contract market and what new products might be required?*

GEA has no comment on this question.

5.5 *Rule changes are in process to make the bid interval and the settlement interval the same, both equal to 5 minutes. Are there reasons to set them to a longer or shorter duration?*

GEA has no comment on this question.

5.6 *What additional system security services such as inertia, as is currently being considered by the AEMC, should be procured through a market mechanism?*

5.6.1 *How can system security services be used as 'bankable' revenue over a sufficient period of time to allow project finance to be forthcoming?*

5.6.2 *How will generators and retailers mitigate price risk in such a market?*

GEA has no comment on these questions.

6.1 What additional mechanisms, if any, could be implemented to improve the supply of natural gas for electricity generation?

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 NSW Chief Scientist Mary O’Kane 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.”

6.2 What are the alternatives to building network infrastructure to service peak demand?

Australia has a lot of gaseous fuels available, which are cost-effective, low carbon emitting and easily accessible through virtual pipelines. The gaseous fuels industry travels more than 70 million kilometres per annum on Australian roads. Australia does not have to commit further resources to costly infrastructure to ensure the nation’s energy security.

Virtual pipelines mean that Australian households and businesses can have immediate access to cleaner, affordable Australian gaseous fuels. This provides Australians with the secure energy they want and deserve without the need for expensive infrastructure which is often slower to come to fruition.

Additionally, greater use of gaseous fuels eases pressure on the electricity grid.

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.

6.3 What are the benefits of cost reflective prices, and could the benefits be achieved by other means?

Cost reflective prices enable consumers to reduce consumption of energy when it is expensive thereby reducing overall costs and the need for government subsidies. In situations where governments consider a community service obligation (CSO) payment is warranted, cost reflective prices can still reduce overall energy costs by encouraging consumers to choose the cheapest energy option that meets their needs.

6.4 How can we ensure that competitive retail markets are working?

6.4.1 What outcomes of competition should we monitor?

GEA has no comment on this question.

7.1 *Is there a need for greater whole-of-system advice and planning in Australia's energy markets?*

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

7.1.1 *If so, what are the most appropriate governance arrangement to support whole-of-system advice and planning?*

7.1.2 *Do the roles of ministers and energy market institutions need further clarification?*

7.2 *What lessons can be drawn from governance and regulation of other markets that would help inform the review?*

GEA has no comment on this question.

7.3 *How should the governance of the NEM be structured to ensure transparency, accountability and effective management across the electricity supply chain?*

GEA has no comment on this question.

7.4 *Are there sufficient outcome statistics for regulators and policy makers to assess the performance of the system?*

GEA has no comment on this question.

7.5 *What governance measures are required to support the integration of energy and emissions reduction policies?*

7.5.1 *Should the AEMA be amended?*

7.5.2 *Should the NEO be amended?*

GEA has no comment on this question.

7.6 *How can decision-making be appropriately expedited to keep up with the pace of change?*

GEA has no comment on this question.