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Foreign Affairs, Defence and Trade References Committee

Department of the Senate

Parliament of Australia

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Canberra ACT 2600

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Dear Committee Members

AGL Energy (**AGL**) welcomes the opportunity to respond to the Foreign Affairs, Defence and Trade References Committee inquiry into the implication of climate change for Australia's national security (**Senate Committee Inquiry**).

AGL is one of Australia's leading integrated energy companies and largest ASX listed owner, operator and developer of renewable generation. Our diverse power generation portfolio includes base, peaking and intermediate generation plants, spread across traditional thermal generation as well as renewable sources. AGL is also a significant retailer of energy, providing energy solutions to over 3.7 million customers throughout eastern Australia.

In addition, AGL is continually innovating our suite of distributed energy services and solutions for customers of all sizes (residential, business and networks). These 'behind the meter' energy solutions involve new and emerging technologies such as energy storage, electric vehicles, solar PV systems, digital meters, and home energy management services delivered through digital applications.

The diversity of AGL's portfolio has allowed us to develop a detailed understanding of the risks and opportunities presented by energy and climate policy. AGL economists have published a range of peer reviewed research on impacts associated with energy and climate policy.

Climate change and national security

We note the relationship between climate change and national and international security, as outlined in US Department of Defense report, referred to in the Senate Inquiry's terms of reference.¹ In the Australian context, we observe that the 2016 Defence White Paper explicitly acknowledges climate change as a key driver that will shape the development of Australia's security environment to 2035.² As Former Chief of the Australian Defence Force, Admiral Chris Barrie, summarised the concern for Armed Forces:

¹ United States of America Department of Defense, *National Security Implications of Climate Related Risks and a Changing Climate* (23 July 2015).

² Australian Government Department of Defence, *2016 Defence White Paper* (2016) Available at <http://www.defence.gov.au/whitepaper/Docs/2016-Defence-White-Paper.pdf>.



Military forces around the globe perceive climate change as a threat multiplier because its impacts can undermine individual and societal well-being. Climate change will affect the availability of food, water and energy, which become basic insecurities, as well as fostering migratory movements forced on people by sea level rise and the greater frequency and intensity of extreme weather events. These pressures have the potential to lead to conflict.³

We also note commentary that has linked the projected economic impacts of climate change and its security ramifications. As Chief of Army, Lieutenant General Angus Campbell DSC AM observed in September 2016, “the cost of inaction on climate change is estimated as a 23% decrease in global GDP by 2100.”⁴ Australia will not be immune to these impacts of climate change and all sectors of industry will need to adapt to the changes faced by these matters.

Beyond the significant social and political ramifications associated with climate change cited above, there are additional strategic and economic reasons to consider the defence sector’s investment in low-carbon energy generation. The military’s uptake of renewable energy and innovative technology could facilitate greater energy security and reliability for Government departments dependent on energy. It could also benefit Australia’s economy more broadly by reducing the risk of large-scale disruptions to markets and infrastructure occurring as a result of climate change. By taking a strong view on low-emissions generation policy, Australia would also be better placed to take a leading role in international policy negotiations, which could be leveraged in the context of global investment partnerships and political relationships.

The public policy framework that is required to address the security concerns associated with climate change should therefore extend beyond the development of operational protocols for the military’s response to natural disasters and the protection of bases, and include positions on technological innovation, strategic investment partnerships, and the delivery of secure and reliable energy in the future both within Government departments and to the Australian public generally.

In the context of our response to climate change, we believe that two fundamental imperatives will drive the future of energy supply: decarbonisation and the centrality of customers’ unique preferences and expectations in the delivery of energy. The defence sector is no exception to these drivers. We contend that it is in a strong position to promote the orderly transition of energy generation both through its role as a large and diverse user of energy and as a force for policy development across the political landscape.

AGL’s outlook on climate change

AGL accepts the Intergovernmental Panel on Climate Change (**IPCC**) conclusion that the risks associated with climate change are reduced substantially if warming is limited to less than 2 degrees Celsius above pre-industrial levels. Achieving this outcome would require complete decarbonisation of the world economy by 2100 and emission reductions of up to 70 percent by 2050.

Beyond the projected physical impacts of climate change, AGL has also given serious consideration to the transitional risks and opportunities associated with energy sector’s transition towards a low-carbon economy. We believe that decarbonisation is a fundamental imperative that will drive the future of energy generation in Australia.

³ Cited in Chief of Army, Lieutenant General Angus Campbell DSC AM, *Chief of Army opening address to the 2016 Chief of Army’s Exercise* (6 September 2016), Available at <https://www.army.gov.au/our-work/speeches-and-transcripts/chief-of-army-opening-address-to-the-2016-chief-of-armys-exercise>.

⁴ Ibid.



The electricity sector has an important role to play in meeting Australia's emission reduction targets and its long-term commitments under the Paris Agreement. Although electricity generation currently accounts for approximately one third of Australia's greenhouse gas emissions inventory and represents the single largest source of domestic emissions, technological substitutes to fossil fuels are available and increasingly cost effective. Electricity generation also has the potential to facilitate emission reduction in other sectors, notably transport with electrification powered by renewable energy.

AGL is committed to playing a leading role in developing a pathway to a modern, decarbonised generation sector. As our Greenhouse Gas Policy⁵ elaborates, we have made a strong commitment to a range of measures that will drive the decarbonisation of the energy sector, including the closure of all of our existing coal-fired power stations by 2050 and continued investment in new renewable and near-zero emissions technologies. Our policy is intended to give AGL a path to reducing its emissions by 2050 in line with the accepted science on the speed of decarbonisation required to avoid 2 degrees of warming.

The role of public policy in supporting the transition of Australia's energy sector

The electricity generation industry cannot effect a low-carbon transition in isolation of government and public policy settings and action from Government sectors.

A nationally coordinated and consistent approach to climate and energy policy is needed to ensure the smooth decarbonisation and modernisation of the electricity sector. The energy sector's transition will span several decades and a long-term vision and political support is required to support that transition.

The piecemeal introduction of carbon reduction and renewables policies has produced unintended consequences for wholesale energy markets. It is now critical that policy makers discuss how to better integrate wholesale market design with climate change policy to ensure that ageing 'firm' power plants are replaced with new, low-emissions generation and complementary infrastructure and ancillary markets.

This long-term sustainability of Australia's energy infrastructure should be a key policy concern for the Commonwealth, consistent with Australia's obligations under the Paris Agreement⁶ and broader commitment to sustainable development, as articulated in the adoption of the global Sustainable Development Goals.⁷

The defence sector's role in shaping our energy future

As has been discussed, the defence sector should support the transformation of Australia's energy market towards a carbon constrained future, as a sustainable national energy system provides overall benefits to long-term national security as well as direct short-term benefits to the defence sector's operations. Accordingly, we consider that public policy should enhance the defence sector's support of renewable energy and distributed energy resources (DER).

As the Defence Environment Strategy 2016-2036⁸ provides, Defence's management of the current and future risks associated with climate change is a core priority that dovetails with Defence's strategic aim of a sustainable estate.⁹ This could be implemented through appropriate internal defence estate policy including

⁵ For further information see https://content.agl.com.au/wp-content/uploads/2017/04/AGL_Greenhouse_Gas_Policy.pdf

⁶ Paris Agreement (adopted 12 December 2015, entered into force 4 November 2016).

⁷ Transforming Our World: The 2030 Agenda for Sustainable Development (UNGA Resolution A/RES/70/1, 25 September 2015).

⁸ Australian Government Department of Defence, *Environmental Strategy 2016 – 2036* (2016), Available at <http://www.defence.gov.au/estatemangement/Governance/Policy/Environment/Policy/EnvironmentStrategy2016.PDF>

⁹ Australian Government Department of Defence, *Defence Estate Strategy 2016 – 2036* (2016), Available at <http://www.defence.gov.au/EstateManagement/Governance/Docs/DefenceEstateStrategy2016-36.pdf>.



with respect to procurement, as well as policy regarding sourcing of energy coupled with investment and innovation in DER technologies.

AGL sees competition and innovation in technology and business models as the primary means for meeting the challenge of optimising the framework by which markets and technology can align the interests of energy service providers with those of the customers they serve. The Defence sector, as a diverse and large user of energy, should support public policy that supports innovation and allows for robust competition in the provision of energy products and services. Additionally, the sector should look to support policy that seeks to make the generation, distribution, and delivery of energy resources more competitive and efficient.

Defence policy that considers a decarbonised future will assist not only in meeting national decarbonisation targets but also promotes productivity, job creation and investments in Australia.

Utilising domestic climate change policy to strengthen international relationships

Australia could also leverage domestic energy policy to develop stronger international business partnerships through technology development and as a lever in strategic international negotiations. At the international level, we consider that there will be an increased focus on meeting emission targets and developing solutions to zero-emissions technologies that are within Australia's strategic interests.

AGL has reviewed the relationship between renewables policies and strategic international policy¹⁰ and considers that well-considered policy could strengthen Australia's international standing as a technology champion and leader in the global economy's transition towards a carbon constrained future.

Should you have any questions in relation to this submission, please contact Aleks Smits, Manager Policy and Research, on 03 8633 7146 or myself on 03 8633 6836.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Stephanie Bashir', is written over a light blue circular stamp.

Stephanie Bashir

Senior Director, Public Policy

¹⁰ See further Tim Nelson, 'Australian Climate Change Policy – Where to From Here?' (2015) 34(4) *Economic Papers*, 268-271, Available at <http://onlinelibrary.wiley.com/doi/10.1111/1759-3441.12114/abstract>, and Nelson, T., McNeill, J., Siriwanda, M., and Meng, S., 'After Paris: now what for Australia's climate policy?', *The Conversation*, 16 December 2015, Available online at <http://theconversation.com/after-paris-now-what-for-australias-climate-policy-51981>