

17 April 2019

Michelle Croker

Assistant Secretary – Appliance and Building Energy Efficiency Branch

Department of the Environment and Energy

Via email: NEPPSecretariat@environment.gov.au

Energy Networks Australia response to Trajectory for Low Energy Buildings

Dear Ms Croker

Energy Networks Australia welcomes the opportunity to provide this submission in response to the Trajectory for Low Energy Buildings – Existing Buildings.

Energy Networks Australia is the national industry body representing businesses operating Australia's electricity transmission and distribution and gas distribution networks, with member companies providing more than 16 million electricity and gas connections to almost every home and business across Australia.

This submission highlights the need to ensure a balanced and technology neutral approach to energy efficiency. It outlines the current and future roles of gas networks in supporting the decarbonisation of the energy sector, balancing the energy trilemma of environmental impacts, cost and security, and presents our views on the consultation questions.

Australia's current energy mix produces 70 per cent of our emissions challenge, but as we move from coal and oil to cleaner technologies, gas and renewables can be part of the solution.

Industry's preferred carbon and energy policies are built on the following principles:

- » Australia contributing fairly to the global reductions of greenhouse gas emissions and pursuing targets with a technology neutral approach;
- » Ensuring security across the energy system by considering renewables, electricity and gas as a single energy system;
- » Avoiding unnecessary regulation or placing unwarranted restrictions on the development of industry; and
- » Allowing markets to work effectively to reduce costs to consumers and increase economic benefits.

Energy Networks Australia is supportive of the objectives of the Trajectory for Low Energy Buildings, specifically to lower energy bills, increase energy efficiency, improve comfort, improve system resilience and reduce carbon emissions. These objectives are a good foundation from which to design and implement policies for existing residential and commercial buildings.

There has been a large influx of renewable electricity generation in the form of rooftop solar PV, commercial solar farms and wind farms in attempts to reduce carbon emissions in the electricity supply chain. This has been due in part to the

subsidies for these renewable generation technologies driving investment decisions. This has produced a level of renewable energy generation that is starting to create challenges for the existing electricity system. For example, the intermittent generation has changed the typical supply profile and the relevance of the electricity network to optimise the use of this variable renewable generation is growing. An important parameter to consider is how and when rooftop solar PV systems are able to export surplus generation into the grid to meet the changing demand profile.

*Gas Vision 2050*¹ outlined a credible pathway for near-zero emissions gas by 2050 which balances energy security, environmental outcomes and cost, noting that gas is a cleaner energy source than grid-sourced electricity in mainland Australia.

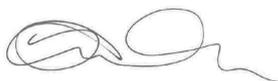
Both the electricity and gas networks are undertaking significant decarbonisation journeys so they can provide services which deliver long-term value to customers. Energy Networks Australia believes the best long-term outcomes are achieved under fuel-neutral policies which allow market forces and customer choice to provide solutions that customers value. Both networks have complementary properties to one another, especially given the current challenges in the electricity network with high levels of renewables and a wave of electric vehicles on the horizon. Any proposed policy settings should be technology neutral and not favour one energy source over another, especially as both gas and electricity networks are on a long term decarbonisation journey.

It is also apparent that a one-size-fits-all policy option may not be in the best interests of all customers. The attractiveness of policies can vary by location within Australia's different climatic zones and by the circumstances of different types of customers. For example, gas appliances are likely more attractive for a Victorian customer in a colder climate than a customer in a warmer climate such as Queensland. Similarly the needs and priorities of a vulnerable residential customer may differ to those of other customers. The preferred policy options should take these differences into account.

The following pages provide further detail in response to the consultation questions for stakeholders.

We appreciate the opportunity to comment on a project with a diverse variety of stakeholders and that this is a challenging project for the Department. Please do not hesitate to contact Dr Dennis Van Puyvelde – Head of Gas on 02 6272 1548 or dvanpuyvelde@energynetworks.com.au if you would like further information.

Yours sincerely,



Tamatha Smith
A/Chief Executive Officer

¹ Various authors, *Gas Vision 2050 – Reliable, secure energy and cost-effective carbon reduction* (2017), available from: <https://www.energynetworks.com.au/gas-vision-2050>

Energy Networks Australia response to Trajectory for Low Energy Buildings questions

Energy Networks Australia recognises that there are differences between residential homes and commercial buildings and as such the viability of policy options and considerations for the two sets of customers may not be the same. However, the policy options and questions posed to stakeholders in the *Trajectory for Low Energy Buildings* are similar for both residential homes and commercial buildings. Unless otherwise outlined, responses to the questions below should be treated as referring to both residential homes and commercial buildings.

1. Is there anything missing from the summary of policy options for improving existing commercial/ residential buildings?
 - The opportunities identified appear largely focussed on providing information to households to allow them to make better decisions regarding the energy efficiency of their homes.
 - Any policy options to improve energy efficiency should be technology neutral and focus on improving the energy consumption of that building. Specific subsidies to support a single technology (eg subsidies for phasing in rooftop solar systems) should be avoided as they may distort the market. Furthermore, the systems wide impact of continual growth of rooftop solar PV systems should be assessed during the policy development process.
 - Energy Networks Australia and other gas industry bodies previously provided evidence demonstrating that prescribing appliance choices could be counterproductive to emissions and/or reductions. In our earlier submission, we outlined how 5 star gas heating and 5 star gas hot water (without solar pre-heating) is both the cheapest and cleanest option for space conditioning and water heating. Energy Networks Australia is not supportive of prescribing appliance choices to households and/or businesses.
 - Policy options should recognise the increasing availability and use of renewable gas such as hydrogen or biogas which can take advantage of existing gas infrastructure. As both the gas and electricity networks decarbonise, we will be able to access two sources of low emissions fuels.

2. What policy options do you think present the greatest opportunities to improve the energy performance of existing commercial/ residential buildings, and what do you think the order of priority, or suite of options, should be?
 - There are many opportunities to improve the energy efficiency of buildings with improvements in the building envelope appearing to be the more cost-effective options of energy efficiency. Many studies have been completed as part of Commonwealth and State based energy efficiency policy analysis and Energy Networks Australia recommends that the key energy efficiency

opportunities identified in those studies are considered by the Department when developing a suite of options for the Low Energy Buildings process.

- Improving the energy efficiency of the building envelope by upgrading the insulation, water use, lighting or glazing on windows yields the greatest opportunity to improve the energy performance of both existing residential and commercial buildings.
 - Other measures such as the building orientation, or changing technologies to provide heating and cooling services to the building may require significant renovation and may not be practical for existing buildings.
 - Appliances are long-lived investments and their replacements are an important decision for home owners. The efficiency of appliances continues to improve and is monitored by other measures such as MEPS and GEMS. Any energy efficiency measures for existing buildings should not duplicate the efficiency improvement measures for appliances.
3. What are the key considerations that need to be taken into account with the policy options identified?
- Customers must be given their right to choice by ensuring that no potentially viable policy options are excluded from future consideration. Appliance replacement programs should allow customers the opportunity to choose which appliances best suit their circumstances while also lowering bills, energy usage and carbon emissions in a practical and cost-effective manner.
 - Emissions offsets from the use of electricity could be achieved through a combination of rooftop solar systems generation and/or the use of gas, especially as it decarbonises.
 - Australia has many climatic zones so a one size fits all approach may not be in the best interests of all customers.
 - The gas industry is developing and demonstrating technologies to reduce emissions from the domestic use of gas. The policy options should consider the role of low carbon gas in the form of biogas or hydrogen, in addition to options for electrifying some applications, without being prescriptive about technologies.
4. What evidence might assist in progressing this work?
- “Gas Vision 2050” outlines the role gas can play in Australia’s energy future and found that the gas sector is well-placed to provide cost-effective carbon reductions by 2050 across the entire supply chain. The report highlighted that natural gas provides 44% of household energy but produces only 13% of household greenhouse gas emissions.
 - Previous Energy Networks Australia submissions to the Trajectory for Low Energy Buildings referred to international studies which showed that full electrification is more expensive than electrification supported by

decarbonisation initiatives. This work also applies to the current consultation process.

5. Would you be interested in attending a workshop in person at some point during June/July/August? If so, what jurisdiction/s would be your preferences?
 - Yes, preferably in Canberra or Melbourne.

6. Do you have any other comments or suggestions?
 - Implementing and regulating policies for existing buildings may be challenging as there is no code that applies to existing buildings, unlike the National Construction Code, which applies to new buildings. The most appropriate form of policy may therefore be incentive schemes.
 - Energy Networks Australia recommends that any incentive schemes are technology neutral and based on a verifiable improvements in energy efficiency of commercial and/or residential buildings.
 - National schemes are generally preferable over state schemes. However, where state schemes are used, inconsistencies between schemes should be minimised wherever possible.