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Ms Michelle Crocker
National Energy Productivity Plan Secretariat
Department of the Environment and Energy
John Gorton Building
King Edward Terrace
Parkes ACT 2600

By email: NEPPSecretariat@environment.gov.au

GAS ENERGY AUSTRALIA'S RESPONSE TO THE DRAFT REPORT – TRAJECTORY FOR LOW ENERGY EXISTING HOMES

Gas Energy Australia (GEA) welcomes the opportunity to provide comments in response to the consultation questions in the draft report for energy efficiency measures for existing residential buildings – the *Trajectory for low energy existing homes* (the Report).

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.

The members and associates of GEA support efforts to improve the energy efficiency of residential buildings and reduce greenhouse gas (GHG) emissions that are technology neutral and do not impose costs on households that exceed the benefits. GEA supports technology neutral energy policies and therefore supports the scope of the trajectory for existing homes reflecting this principle.

GEA understands that incentives targeted at particular technologies (eg, batteries and solar/renewables) are in scope, but it is unclear why other low emission technologies (eg, natural gas or LPG) and even other forms of emerging renewable technology such as biogas (eg, the installation of biodigesters in homes is becoming increasingly common and economical) are not included. Indeed, many of these other forms of low emission technology can be fitted to today's homes, utilising existing infrastructure.

A technology neutral approach would facilitate the take up of the most cost-effective low energy technology for specific types of residential buildings in specific regions eg, buildings that receive minimal sunlight for solar photo voltaic (PV) capture. These other forms of low emission technologies, including new renewable technologies, offer consumers a suite of opportunities to meet low energy building objectives.

GEA's responses to the consultation questions are outlined below.

Chapter 1: Setting the context

Are there any other key facts about the existing building stock that should be included?

- GEA supports the objectives outlined in the draft report to improve the energy efficiency of existing homes. GEA considers it critical that the development of mechanisms to meet these objectives does not embrace greater electrification of new buildings and appliances as an end goal as was evident in some of the early work of the Trajectory for new buildings. Such an

approach would be counterproductive to the objective of saving energy and reducing wastage for the wider economy.

- If homes are increasingly electrified, the option to utilise more energy efficient gas or other fuel technology would be taken away, even though they may often be more energy efficient. As such consumers would have to use less energy efficient electric appliances which would be in direct conflict with the objective of saving energy.
- GEA considers that the modelling supporting the draft report overstates the energy performance of reverse cycle air conditioners for space heating in colder climates. For example, not only is the use of electric heat pumps less efficient and more expensive in cooler climates than warmer ones, but heat pump technology does not give sufficient comfort to residents due to the temperature of air delivered from the heat pump system. While the draft report's modelling assumes maintaining internal air temperatures during occupied hours of winter at 18c, if the air flow temperature being supplied is at or below skin temperature, occupants are going to have the perception of being cooled instead of warmed. This results in suboptimal human comfort in colder climates.
- In addition, the results of a number of studies which demonstrate that the electrification of energy supply, which would require massive investment in new electricity infrastructure, is a much more expensive option than decarbonising gas supply and maintaining existing gas infrastructure, need to be taken into account. GEA considers that carbon abatement should not be limited to being achieved through greater adoption of electric appliances without the consideration of the emissions intensity of the grid. Otherwise carbon abatement opportunities that are achieved 'on site' are prioritised over decarbonisation of energy grids (electricity and gas) which can potentially deliver significant abatement opportunities. Innovations such as biogas and hydrogen create the potential for clean, dispatchable energy resulting in zero emissions while using existing infrastructure. These opportunities would not be realised if homeowners are encouraged to remove existing gas infrastructure and make their homes all-electric.
- The fact that emission reduction opportunities are significantly different for the over 400,000 Australian households and businesses in regional Australia that are not on the electricity grid also needs to be taken into account¹. GEA considers that a mechanism to reduce greenhouse gas emissions from on-site generation should be within scope. As one of the cleanest conventional fuels available, LPG is a viable choice to facilitate the generation of off-grid electricity and reduce emissions in low energy intensive applications.

Chapter 3: Framing the opportunities

Are there any items that should be removed or included from the scope?

- GEA considers that the emissions intensity, including emissions from generation, and energy losses of the electricity grid, and the need to consider system impacts of electrification of household energy demand, should be considered as part of the Trajectory work.
- GEA also considers that if enabling electric vehicle capability is within scope then so should be that for hydrogen, LPG, natural gas and renewable gas-powered vehicles. Otherwise, the Trajectory would be picking particular technology winners and not remaining fuel/technology neutral.

¹ Bureau of Resources and Energy Economics, Beyond the NEM and the SWIS: 2011-12 regional and remote electricity in Australia, October 2013, pg. 6.

Chapter 4: Understanding our options

Do the goals capture the key outcomes needed to achieve low energy existing homes?

- GEA welcomes the acknowledgment of the decarbonisation journey of gas, and recognition of the role gas fuels can play to achieve cost effective carbon abatement and energy security.
- GEA also welcomes the acknowledgment of the need to retain a technology/fuel neutral approach to policy design. And mandating or prescribing fixed appliance choices would be counterproductive to achieving the objectives of the Trajectory.
- Attached is a copy of **Gas Vision 2050** – this report reflects the ambitions of key organisations which represent Australia’s gas sector and demonstrates the pivotal role gas fuels will play in Australia’s low carbon future to 2050 and beyond.

Are there any policy instruments that should be removed or included?

- GEA considers that additional financial incentives should be removed. As mentioned in the draft report, there are a broad range of financial incentives currently in place. GEA does not support additional incentives which would encourage the take up of particular appliances and in turn fuels which may be seen as optimal today but may not continue to be into the future with the development of new technology and increasing energy efficiency of gas appliances.

Is there anything that should be removed or included for the Energy Efficiency Obligation Schemes policy instrument and what are the key considerations to take into account if implemented?

- Ensuring technology neutrality in the development of incentive schemes and utilising more outcome-based schemes which allow greater consumer choice need to be included.

Is there anything that should be removed or included for the Tax and Financial Incentives policy instrument and what are the key considerations to take into account if implemented?

- Remaining technology and fuel neutral need to be included.

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.

A handwritten signature in black ink, appearing to read "John Griffiths", with a horizontal line drawn through it.

John Griffiths
Chief Executive Officer
Gas Energy Australia