

17 August 2018

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

By email: [NEPPSecretariat@environment.gov.au](mailto:NEPPSecretariat@environment.gov.au)

## **TRAJECTORY FOR LOW ENERGY HOMES COST BENEFIT ANALYSIS**

Dear Ms Crocker

Gas Energy Australia (GEA) welcomes the opportunity to provide comments and respond to the questions posed in the Department of the Environment and Energy's, *Trajectory for Low Energy Homes, Cost Benefit Analysis report*.

By way of background, GEA is the national peak body, which represents the bulk of the downstream alternative gaseous 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 gaseous 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. As such GEA considers that gaseous fuels and other forms of renewables should be considered as part of the scope for changes to the NCC.

The early stages of consultation process for the NEPP Low Energy Homes Trajectory failed to engage more broadly with industry, and as such other forms of new low emissions technology eg, biogas and hydrogen were not considered as part of the scope for the modelling work. The use of these fuels is increasing internationally, and their use can significantly affect building design. GEA considers gaseous fuels have a critical role to play in a low-emissions future as both a replacement for largely coal fired electricity and a partner for renewables and as such it is crucial that these technologies are considered as part of the scope of the modelling work.

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

**1) Do you think the scenarios should be adjusted?**

- i) Brought forward or delayed?**
- ii) Include other changes?**

GEA considers that it is important to set performance criteria rather than prescription as targets. Of the scenarios outlined, only scenario 1 & 4 appear to set performance targets without prescribing particular technologies. The other scenarios outlined prescribe specific technical solutions as energy offsets which can impose costs on consumers, place further burdens on electricity networks and are underpinned by assumptions of technological advancement.

GEA considers it is critical that building policies be performance based and not adopt policies that are prescriptive of specific technologies, as this would allow for the specified overall performance to be achieved in the most economical way. The implementation of these increases provides a pathway.

Scenarios other than 1 and 4 should be redrafted to show performance requirement (i.e. Scenario 2 – performance criteria – no net draw of energy from a grid connection from 2022).

In summary, the scenarios need to be formulated in a comprehensive manner that accommodates the use of a variety of viable low emission technologies that is consistent with the Government's technology neutral approach to energy policy.

**2) Are there implementation issues that need to be considered with the scenarios?**

- i) Are there lead-times that would not work within these timelines?**
- ii) Are there issues with including renewable energy requirements in the NCC?**

GEA supports technology neutral energy policies and therefore supports the scope of the NCC reflecting this principle. GEA understands that batteries and solar/renewables are included in the scope because such technologies can affect building design. 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, biodigesters in the home which are becoming increasingly available and economical) are not included. As these other forms of low emission technology can be implemented in today's homes, it is unclear why these technologies have not been modelled for the retrofit of existing buildings to significantly reduce emissions by 2022 and 2050. A technology neutral approach would facilitate the take up of more economical technologies for specific types of buildings in specific regions eg, buildings that receive minimal sunlight for solar PV capture. These other forms of low emission technologies, including new renewable technologies, offer consumers a suite of opportunities to meet energy performance requirements.

**3) Do you have any additional data that should be used in the modelling?**

- i) Is there better data for cost reductions over time, e.g. windows?**

GEA notes advice provided in previous stakeholder workshops and submissions that the modelling assumes that LPG for traditional (i.e. non-transport or stationary energy) use is consumed by the residential building sector only in the Northern Territory. I have attached a copy of our LPG Supply and Demand Study for 2017. This demonstrates significant traditional LPG use across Australia, particularly in New South Wales and Victoria (the two largest consumers of LPG for traditional use) where 185 tonnes and 231 tonnes of LPG for traditional use were consumed respectively. The GEA 2017 supply and demand study demonstrates that the Northern Territory is the jurisdiction which on average consumes the least amount of LPG for traditional use. GEA is concerned that the modelling is based on unrealistically low amounts of LPG consumption in the Australian residential building sector, especially in regional and remote Australia where LPG consumption is higher than in the major Australian capital cities.

GEA also notes that biogas production or use has not been included in the modelling. I have attached the [International Energy Agency's Country Report Australia](#) which demonstrates biogas usage around

Australia. The report notes that in 2016 there were a total of 242 biogas plants in Australia which had a potential production output of 1,442 GW/year<sup>1</sup>. This report shows production and use of biogas is not limited to rural or regional areas but can be adopted into building designs in inner city and suburban areas, such as the Federation Square - Anaerobic Digestion Unit. Looking further ahead, especially given the modelling extends to 2050, recent research found that potential biogas production in Australia exceeds consumption from distribution networks<sup>2</sup>. GEA understands that batteries and solar/renewables are included in the scope because such technologies can affect building design. But it is not clear why biogas should be excluded. The use of renewable gas, including biomethane and biopropane, is growing overseas, and its use can affect building design, especially when it is produced on-site from household waste.

#### **4) Do you have any other comments or suggestions?**

GEA is concerned about the way the modelling treats electricity generated by solar panels as a saving or energy offset which increases energy efficiency. GEA considers that energy offsets should not be included in the energy savings of class 1 and 2 buildings and not included in the cost benefit analysis.

GEA seeks confirmation that the modelling has included the rundown of the federal government's small-scale renewable energy scheme, as this would significantly alter the outcomes of the modelling as currently subsidised technologies such as solar and heat pumps will become less economically competitive in the absence of such subsidies.

#### **Conclusion**

In summary, GEA supports efforts to improve the energy efficiency of residential buildings and reduce GHG emissions that are technology neutral. GEA has concerns about the scope and underlying assumptions of some of the modelling work, and how this could undermine the quality of the policy recommendations to be provided to COAG Energy Ministers.

GEA considers the Trajectory work would benefit from a broader modelling approach with includes gaseous fuels and other forms of renewable energy. As the Low Energy Homes Trajectory is modelled out from 2020 to 2050 it is important that other emerging technologies that may become more economical and readily available within this time frame are considered within the scope. GEA looks forward to continuing with this consultation process to ensure gaseous fuels are considered as part of a low emissions future.

Should you have any questions relating to this submission please do not hesitate to contact Melissa Dimovski at [mdimovski@gasenergyaustralia.asn.au](mailto:mdimovski@gasenergyaustralia.asn.au).

For your consideration.

A handwritten signature in black ink, appearing to read "John Griffiths", with a long horizontal line extending to the right.

John Griffiths  
Chief Executive Officer

<sup>1</sup> IEA Bioenergy Task 37 Country Report Australia 2016.

<sup>2</sup> CSIRO Hydrogen Roadmap to be completed 25 August 2018.