23 July 2019

Via email Climate.Change@delwp.vic.gov.au

SUBMISSION: REDUCING VICTORIA’S GREENHOUSE GAS EMISSIONS

The Australian Pipelines and Gas Association (APGA) is the industry body representing the owners, operators, designers, constructors and service providers of Australia’s high-pressure gas transmission infrastructure. APGA welcomes the opportunity to comment on the proposed emissions reduction targets and priority actions for Victoria as presented in the Final Report from the Independent Expert Panel.

We congratulate the Victoria State Government on this important initiative. A key regulatory weakness in this area has been Australia’s lack of a coherent energy policy. The lack of consistent policy leads to uncertainty which is a drag on the investment environment and reduces the ability of companies to make long term energy technology investment decisions. This initiative at State-level is a step in the right direction.

APGA and the gas industry have a long-standing commitment to supporting research, development and demonstration of low / zero carbon gas technologies. APGA is the largest participant in the Future Fuels Cooperative Research Centre (FFCRC) and is a member of the Steering Committee for its Future Fuel Technologies, Systems and Markets Research Program (RP1). The FFCRC is an industry focussed RD&D partnership supporting Australia’s transition to a low carbon energy future. APGA is also a nominating organisation for Standards Australia’s Hydrogen Standards Committee and was a project supporter of CSIRO’s National Hydrogen Roadmap.

APGA will develop and maintain its participation in hydrogen and other “green gas” initiatives and as a key priority going forward.

Consultation Questions

1: Do you support [the] targets recommended by the Panel?

APGA supports the proposed targets. APGA accepts the conclusions of climate change science and we believe that GHG emission reduction targets should be both achievable and ambitious. These ambitious targets proposed by the Panel appear achievable, but only if implemented through consistent and robust policy and a technology neutral, least cost framework.
4: Are there other key greenhouse gas emissions reduction opportunities beyond those the Panel identified?

The opportunity to reduce greenhouse gas emissions through progressive decarbonisation of the natural gas networks is not mentioned in the Panel’s final report.

Gas distribution networks offer a cost-effective opportunity to kick-start the commercial deployment of low / zero carbon gas technologies, including hydrogen. Options for leveraging this opportunity should be explored as a matter of priority and not be lost in policy discussions that often focus on electrification to the exclusion of other potential, and more cost effective, approaches.

The report *Gas Vision 2050* was developed by Australia’s peak gas industry bodies and demonstrates how gas can continue to provide Australians with reliable and affordable energy in a low carbon energy future. Decarbonisation pathways for gas include three transformational technologies identified in Gas Vision 2050. The pathway and ultimate mix of decarbonised gas will consider regional energy advantages and technological developments. The three technologies identified are: Hydrogen; CCS; and Biogas production.

This is also a focus area for the [LGAG](https://www.lgag.org.au) Energy Council Hydrogen Working Group, currently developing Australia’s National Hydrogen Strategy. The Working Group included ‘Hydrogen in the gas network’ as one of 9 issues papers it released in July on specific topics to help develop the National Hydrogen Strategy. APGA is fully engaged with the Working Group in the strategy development process.

6: Are there any emissions reduction opportunities identified by the panel that you would not support government action on? Why not?

APGA supports the inclusion of ‘reducing emissions from electricity generation’ in the list of potential emissions reduction opportunities. However, when decarbonising the electricity system, regard must be paid to the need to retain sufficient flexible and reliable dispatchable generation capacity to ensure power system security on both a short-term and seasonal basis. The merits of natural gas generation, with one third the carbon intensity of some coal plants and a strong track record of flexible and reliable supply to the transmission grid, should be assessed from this perspective. The Commonwealth Government’s now shelved National Energy Guarantee (NEG) would have been a useful mechanism in this regard.

APGA does not support the proposals to ‘accelerate fuel switching from gas to electricity’ in the built environment and industry as the electricity supply decarbonizes. We propose additional consideration of two points in this regard:

1. the practical/cost implications of using electricity to meet the energy demand of residential and commercial buildings, and industry, currently met using natural gas; and
2. the implications of this for the development of “green gas” technologies (e.g. hydrogen) that would be delivered via existing gas distribution networks.

**Practical implications of full electrification**

The infrastructure costs of using electricity to meet the energy demand currently met by natural gas would be extremely high and do not represent an efficient least cost pathway to reducing carbon emissions. As noted in the 2017 Deloitte report *Decarbonising Australia’s gas distribution networks*:

> “Some gas use could potentially be decarbonised by substituting electricity from renewable generation sources. However, shifting energy consumption currently met by gas to electricity (where possible) would be costly and require a large investment in electricity networks and renewable generation. For example, in Victoria, switching from gas to electricity would result in a doubling or tripling of peak electricity demand in winter”. (p.6)

Given the relatively low carbon intensity of natural gas compared to other thermal energy sources such as coal, combined with the future potential for decarbonisation of the gas distribution networks, there are more cost-effective ways to reduce carbon emissions in Victoria than accelerating fuel switching from gas to electricity. Analysis from Deloitte suggests that full conversion of the gas distribution networks in Victoria to hydrogen would be around 40% cheaper than meeting energy demand currently met using natural gas through full electrification. This is primarily due to:

- the long-term capability of hydrogen storage to demand shift across seasons; and
- the major additional investment that would be required to upgrade electricity networks to meet the combined energy demand of electricity and gas if electrification was to be pursued.

**Negative implications for the development of new “green gas” technologies**

The development and commercial deployment of clean and/or efficient energy technologies that are not yet commercially available must be encouraged. Major resources are being invested in the development of a hydrogen industry in Australia and any policy that mandates or incentivises the fuel switching from gas to electricity limits the future role hydrogen and other renewable gas can play.

Making all-electric buildings effectively mandatory or incentivising electrification could create barriers to entry for these new technologies – thereby closing off market options and discouraging technological innovation. For example, without the existing

---


gas distribution infrastructure already in place (or continuing to be deployed in new buildings) the cost profile of supplying hydrogen gas to homes and industry in future will increase significantly – with much greater up-front costs – effectively blocking its development. As noted in the 2017 Deloitte report *Decarbonising Australia’s gas distribution networks*:

“Decarbonisation of gas distribution networks though the use of biogas and hydrogen would utilise the existing and highly reliable networks to deliver zero carbon energy”; and “Policy that supports a wide range of decarbonisation options, without picking winners, will lower the overall cost to reduce emissions”. (p.6)

Yours sincerely

[Signature]

STEVE DAVIES
Chief Executive Officer

---