

31 January 2020

Sarah Stephen  
Director, Energy Demand and Efficiency Policy  
Department of Environment, Land, Water and Planning  
8 Nicholson Street  
Melbourne Victoria 3000

## Energy Networks Australia submission to Victorian Energy Upgrades Consultation

Dear Ms Stephen

Energy Networks Australia welcomes the opportunity to provide this submission in response to Inquiry into Tackling Climate Change in Victorian Communities.

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

Energy Networks Australia recognises increasing energy efficiency is an integral part of the energy transition.

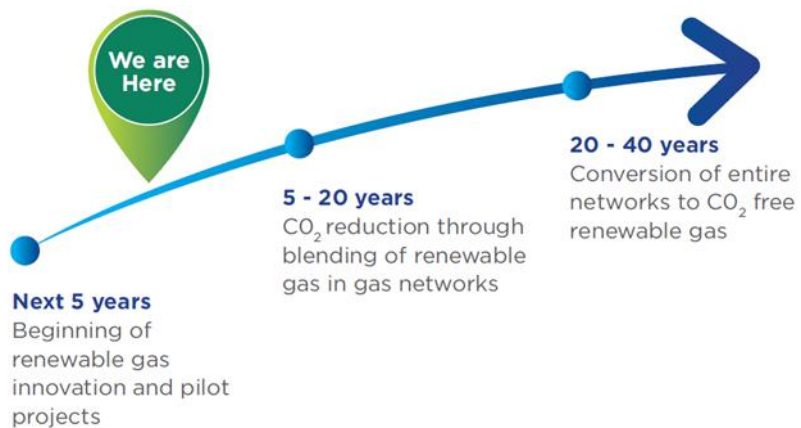
### Decarbonising gas networks

Our gas distribution networks manage over two million connections to Victorian households and businesses. The gas supplied through these networks provides 69 per cent of the annual energy consumption in Victorian homes. This is much higher than the Australian average of 44 per cent.

To date, the predominate focus of decarbonisation has been on the electricity sector, however, gas networks are on their own decarbonisation journey. New fuels, such as biogas and hydrogen, can become mainstream and complementary energy solutions that will use existing energy infrastructure.

The gas industry has developed a strategic plan – [Gas Vision 2050](#) – with the aim to decarbonise gas in line with Australia's long-term decarbonisation targets. The decarbonisation pathway involves the use of hydrogen, biogas and carbon capture and storage.

The pathway, illustrated below, involves testing and developing renewable gas technology through applied research and pilot projects out to 2022. Our network businesses are currently progressing four trials around the country (although not in Victoria) with two already operational to demonstrate hydrogen's value and push hydrogen R&D. These trials are outlined in our [Hydrogen Innovation, Delivering on the Vision](#) publication.



This will be followed by blending renewable gas into networks at larger scale. Gas networks believe that an injection target of 10 per cent is achievable, followed by large scale conversion of gas networks can be carried out to achieve 100 per cent renewable gas.

### Victorian Energy Upgrades program opportunities

It is our understanding that the intent of the program is to provide energy with lower greenhouse gas emissions. This would both involve energy efficiency and fuel switching to lower carbon fuels. Energy Networks Australia believes that there are opportunities presented by renewable gases, such as hydrogen and bio-methane, which should be considered when developing targets for the Victorian Energy Upgrades program.

Bio-methane is a renewable gas that can be cost-effectively produced from a range of biomass streams. It presents opportunities in the short-term to decarbonise and can be easily blended with natural gas.

Hydrogen presents an alternative option to decarbonise the energy sector more broadly including gas networks, industry and mobility. It also creates an excellent export opportunity. As the cost of hydrogen continues to decrease its role in the energy sector will become more established. Renewable hydrogen produced from renewables will reduce emissions and should be considered in the energy upgrades program.

Decarbonising gas consumption could also be achieved through direct electrification. However, this increases demand on electricity infrastructure and can require more investment in networks to meet this demand. Increasing the load on electricity networks will make them more difficult to decarbonise. Particularly for gas-dependent Victoria, decarbonising gas networks and electricity networks at the same time provides the best opportunity to achieve overall emission reduction goals while maintaining energy security and flexibility, with the added benefit of providing customers with fuel choice.

Hydrogen is providing the opportunity to decarbonise gas while maintaining other benefits of the gas network such as its ability to store energy for prolonged periods at high efficiency.

It is important that incentives and certificates from the Victorian Energy Upgrades program are technology neutral and have an eye towards long-term carbon reduction possibilities across both electricity and gas sectors. This will result in the best long-term outcome for Victorian consumers.

We welcome the ongoing opportunity to be involved in the development of the Victorian Energy Upgrades program and associated projects.

If you have any other queries, please contact Dr Dennis Van Puyvelde, Head of Gas on [dvanpuyvelde@energynetworks.com.au](mailto:dvanpuyvelde@energynetworks.com.au) or 02 6272 1548.

Yours sincerely,



**Andrew Dillon**  
CEO