

26 February 2021

Michelle Croker  
Head of Division – Gas Taskforce  
Department of Industry, Science, Energy and Resources  
Via email: [gas@industry.gov.au](mailto:gas@industry.gov.au)

Dear Michelle,

## **Energy Networks Australia welcomes the development of a National Gas Infrastructure Plan**

Energy Networks Australia welcomes the opportunity to provide input during the consultation period on the interim National Gas Infrastructure Plan (NGIP).

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

To date, the focus of decarbonisation has been on the electricity sector, but gas networks are on their own decarbonisation journey. Customer tell us that they are seeking a clean energy future and are engaged in achieving emission reductions from gas use. New renewable fuels, such as hydrogen and biomethane, have the potential to become mainstream and complementary energy solutions that will use existing energy infrastructure. Our gas networks businesses are leading the development of renewable gas projects and will shortly begin blending renewable hydrogen in the Adelaide and Sydney gas distribution networks.

### **Decarbonising gas is underway**

Australia has committed to the Paris Agreement on climate change. This requires reaching maximum emissions as soon as possible combined with reaching net zero emissions in the second half of the century. Each State and Territory has further set targets of reaching net-zero emissions by 2050 or earlier. Industry has responded to this through Gas Vision 2050 ([www.energynetworks.com.au/projects/gas-vision-2050](http://www.energynetworks.com.au/projects/gas-vision-2050)).

Gas networks are already progressing the demonstration and blending of renewable gas in networks. Over 2 MW of electrolysers is operating or under construction in Australia to produce renewable hydrogen. Early in 2021, renewable hydrogen blending will commence in Adelaide and in by mid-year, blending will commence in the Sydney gas network. Further to this, a project is also under construction in Sydney to blend biomethane into the local gas network.

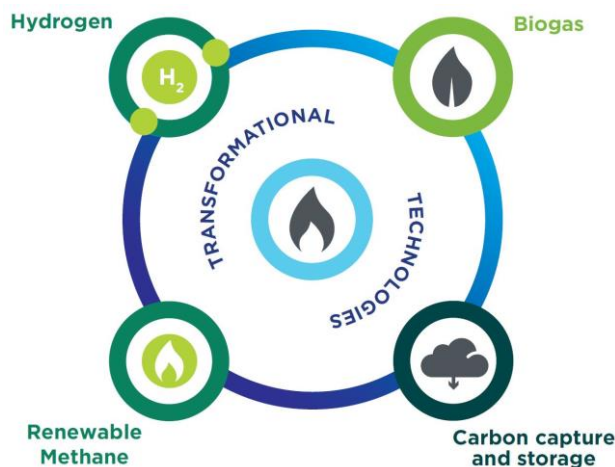
The next steps for networks are to expand renewable gas options and to become fully CO<sub>2</sub> free in the 2030's.



*Figure 1: Renewable gas pathway (Source: Gas Vision 2050: Delivering a Clean Energy Future)*

## Decarbonising gas can be done at half the cost of electrification

Decarbonising gas networks will adopt a range of transformational technologies including hydrogen, biomethane and carbon capture and storage.



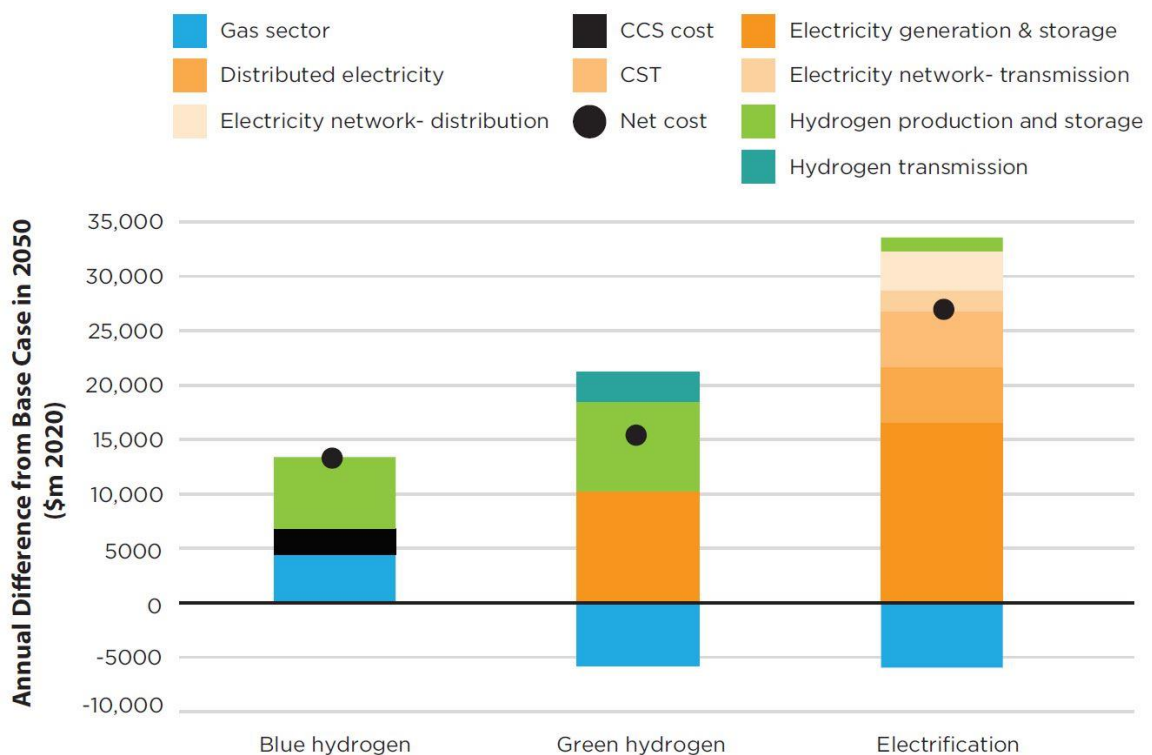
*Figure 2: A range of options are available to decarbonise gas networks (Source: Gas Vision 2050)*

Maintaining both gas and electricity networks, that both deliver decarbonised energy, provides more options for customers and improves energy reliability and security while also providing customers with choice. Economic analysis completed as part of *Gas Vision 2050 - Delivering a Clean Energy Future* showed that decarbonising gas can be done at half the cost compared to electrification of the gas load. This reflects

the opportunity to repurpose existing gas infrastructure because electrification may impose system-wide costs for grid reinforcement on customer bills.

## Repurposing Gas Infrastructure

ENA notes that the interim NGIP will focus on addressing southern supply constraints in the near term. We recommend that future editions of the NGIP should identify infrastructure requirements to support both delivering of natural gas (for example for exports) as well as of decarbonised gas to support Australia’s decarbonisation journey.



Source: Frontier Economics (2020)

*Figure 3: Costs of decarbonisation scenarios (Source: Gas Vision 2050: Delivering a Clean Energy Future)*

The analysis by Frontier economics showed that green hydrogen could be produced from renewable electricity in allocated renewable energy zones and that this hydrogen would then be shipped to demand centres using new dedicated hydrogen pipelines. There may be opportunities to repurpose existing pipelines – if they are no longer required to transport natural gas AND are located in the correct regions – which would further reduce the cost of delivering green hydrogen to customers. Future editions of the NGIP could provide more detailed information on these pipeline repurposing opportunities.

ENA is currently working with DNV GL to develop a high-level plan for the conversion of natural gas networks and pipelines to deliver renewable and decarbonised gases to customers. This plan is expected to be completed mid-year.

If you have any questions or would like a to discuss this further, please do not hesitate to contact our Head of Gas - Dr Van Puyvelde on (02) 6272 1548 or [dvanpuyvelde@energynetworks.com.au](mailto:dvanpuyvelde@energynetworks.com.au).

Yours sincerely,

A handwritten signature in blue ink, appearing to read "A. Dillon".

**Andrew Dillon**  
Chief Executive Officer