

Gas infrastructure advice submission – 101

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Stakeholder group/interest: Researcher for a clean energy group

Q1. Do you have any further information, evidence, or concerns that you wish to raise in relation to the scenario design and analysis?

Scenarion 3: Scenario C: green and blue hydrogen with carbon offsets, electrification, no natural gas (by 2050), no CCS is the closest, but we do not need carbon offsets, and blue hydrogen, if it is not through CCS is a furphy.

Q2. Do you have any further information or evidence that can help identify an optimum scenario for a net zero emissions gas sector in 2050?

Q3. What policies and/or regulations, if any, are needed to support the development of low carbon pathways such as biogas, green hydrogen, and carbon capture and storage?

Stop wasting time and money in pursuing CCS

Q4. What is your view on the best ways to maintain the reliability and affordability of Victoria's gas supply if natural gas use declines?

The 2021 Gas Statement of Opportunities (GSOO) from AEMO forecasts an improved gas supply outlook compared to 2020, largely due to Australian Industrial Energy's (AIE's) commitment to the Port Kembla Gas Terminal (PKGT) in New South Wales, Australia's first liquefied natural gas (LNG) import terminal. Another import terminal was proposed for Crib Point but this has now been blocked by the Victorian government because of its potential impact on the local environment.

There is now projected to be sufficient supply to address the near-term shortfall forecasts of recent GSOOs (deferring shortfall forecasts to at least 2026). Overall, annual existing and committed Victorian production is forecast to decline by 43% from 2021 to 2025.

AEMO forecasts a 12.7% decrease in Victoria's annual total gas consumption over the next five years taking into account the gas use reduction measures that the government is proposing currently. However, Northmore Gordon, commissioned by Environment Victoria, modelled gas demand reduction from measures which align with the Roadmap found residential gas consumption could fall by 73% by 2030, while on an annual basis there is enough supply capacity in Victoria until 2027 with a small shortfall from 2027 until 2030 before supply exceeds supply. Without a measure of existing levels of gas leakage (fugitive emissions) through extraction and production, transmission, distribution and end uses, it is difficult to know whether actions to reduce these would help to fill the gap between supply and demand during those years. With less lost during end use because less is being burned, there may be a gap reduction. Another factor may play a role as with a strong wind in its sails, the cost of production of green hydrogen will have fallen sufficiently for the use of up to 10% green hydrogen within the gas reticulation system.

Q5. What else can you tell us about the implications of decarbonisation pathways for the electricity generation, transmission and distribution networks?

Q6. How can the use of Victoria’s existing gas infrastructure be optimised during the transition to net zero emissions, over the short (10 years), medium (20 years) and long-term (30+ years)? How can the Victorian Government assist in this?

Q7. What principles should apply or what measures will be needed to manage the impacts of gas decarbonisation on households and businesses?

Finding 1 of the Legislative Assembly Environment and Planning Committee Inquiry into tackling climate change in Victorian communities states that the impacts of climate change and the transition to a zero emissions economy will not be equally shared among Victorian communities, including those in different parts of the state, with different local industries, and with different social and economic characters.

Any transition away from gas must recognise there may be some challenges for vulnerable cohorts within our communities. This most likely manifests itself within the residential sector in low-income and/or rental housing where households may not be able to afford potential financial impacts from a switch from gas to all electric. The cost from switching to all electric is not just about the technology switch (e.g. heat pump hot water and induction cooktops) but on the potential costs for other elements which go along with that. For example, cookware may need to be updated to be suitable for induction cooktops.

Recent actions by the government to work with community organizations to promote improvements to the homes of vulnerable groups show the importance it gives to assisting the neediest to reap the economic and health benefits from removal of fossil fuels in the energy sector. Heating and cooling grants and rebates give a strong message to people to switch from gas to heat pumps, but although there is funding support for solar hot water rebates through the Solar Homes program there remains some reticence to promote heat pumps for water heating.

Any financial support should extend not just to the technology or appliance but also ensuring that consumers can make other changes required.

Q8. What policies, programs and/or regulations should the Victorian Government consider or expand to encourage households, commercial buildings and small businesses to reduce their gas use?

Increase the supply of renewable energy by:

- An offshore wind strategy
- Harnessing local and small-scale renewable generation - support for distributed energy resources (DER)
- Micro-grids
- Electricity Transmission upgrades
- Developing Renewable Hydrogen as a fuel for producing electricity
- Switching from Gas Distributed Through the Reticulation System
- Transforming Energy Demand – Energy Efficiency
- Improving the energy efficiency of commercial and residential buildings
- Improving the energy efficiency of existing residential buildings
- Big and community batteries
- Electric Vehicles for storage
- Pumped Hydro and Hydrogen storage to support the grid
- Community Partnerships in implementing the above

- Expanding The Clean Energy Workforce

Q9. What policies, regulations or other support, if any, do you think are needed to support industrial users to switch from natural gas to lower emissions energy sources or chemical feedstocks?

ARENA recommends

- Process re-design, combined heat and power, and location of green fields developments to benefit from available renewable resources, offer potential for overall least cost solutions.
- Restructuring of ammonia and iron and steel production around the use of green hydrogen could be central to achieving deep reductions in fossil fuel use in the long term

How would you like your submission treated?

Published with my name