

Gas infrastructure advice submission – 97

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

Scenario design and analysis aids the evaluation of potential pathways for Victoria to move away from gas but they should still be seen as 'in development'.

Evidence shows certain uses such as household gas consumption could be better be served by electrification, while others such as hard to abate industries might need zero emissions fuels.

One thing that is not openly addressed in the pathways is the impact of fuels on consumers. As the Scenario Analysis reports indicate, Bio-methane tends to cost 20 to 40 \$/GJ. That is several times higher than current gas prices, on the other hand green hydrogen is not expected to be competitive with fossil gas until 2050. Replacing an expensive fuel with other even more expensive fuels will negatively impact vulnerable Victorians who would be better served with efficient electric appliances. This should be considered when choosing a pathway above the value of extending the life of existing gas infrastructure.

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?

Renew's (then called Alternative Technology Association) report Household Fuel of Choice (see reference below) showed that efficient electric appliances were already cheaper than gas. This gap is expected to grow as biogas and green hydrogen are expected to be more expensive than fossil gas and should be accounted for when identifying an optimum scenario for a net zero emissions gas sector in 2050.

https://renew.org.au/wp-content/uploads/2018/08/Household_fuel_choice_in_the_NEM_Revised_June_2018.pdf

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?

- 1) Strictly no new gas connections for new residential and commercial developments.
- 2) Tax the negative health impacts of fossil fuel use in residential settings i.e. to pay for the necessary societal costs of high rates of asthma in Victoria, lung cancers, stillbirths, etc.
- 3) Policy to support all new developments having a certain degree (%) of energy independence through locally-sourced abundant solar and wind power with on-site or community energy storage.

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?

It is important to have a managed transition. We encourage the Victorian government to have targeted retirement of sections of gas pipelines (further incentives to replace gas appliances could be geographically bounded) to reduce system and customer costs.

Targeted or zonal electrification to reduce the gas distribution infrastructure could ameliorate the impacts of the gas transition on users, but further research would be needed to comprehend the

scope, scale, speed and challenges of trying to manage gas distribution system costs though a gas phase out.

Targeting low socioeconomic areas for increased transitional funding will smooth this transition and reduce the social, economic and environmental impacts of changing natural gas usage patterns.

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

Having a moratorium on natural gas extraction through hydraulic fracturing in Victoria and a diminishing supply of Victorian natural gas reserves will result in our state becoming more reliant on interstate-sourced gas, almost entirely sourced through hydraulic fracturing. This is hypocritical and simply shifts the enormous health and environmental impacts of this practise onto the regional communities of NSW and Queensland. It is misaligned with the values and interests of Victorians.

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?

As stated before, focusing on a managed transition could provide the best of both worlds by allowing for a fast transition while minimizing the costs on the system and users. This would also allow for optimising the use of existing gas infrastructure during the transition in zones where strategic gas consumption exist.

Nevertheless, it is crucial that the importance of optimizing the use of existing gas infrastructure is not prioritised over ensuring a fair and rapid transition.

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

Just transition. It is crucial that the transition improves the standing of vulnerable Victorians to reduce energy poverty in the state.

A key measure would be to carry on an education campaign, so Victorians learn about the impacts of gas on their budgets, health and on the environment, and the advantages of other sources of energy such as electrification.

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

Firstly, the Victorian government should update planning schemes and building codes as soon as possible. The regulatory framework for buildings is outdated and is locking Victorians into gas, an expensive and polluting fuel. Specifically:

Victoria's Planning Provisions and Plumbing regulations to be updated urgently so no new development is forced to connect to the gas network and no Victorian is forced to use gas appliances.

The Victorian government should commit to building all-electric social housing as it will yield the greatest benefits for residents, the energy system and for the development of the industry.

A plan to require new buildings to be all-electric, or at least strongly incentivise it, should be developed to ensure that virtually all, if not all, new buildings in Victoria are fully powered by electricity by 2023.

Secondly, programs such as the replacement of inefficient heaters for heat pumps could be expanded to target ducted gas heating.

Finally, the Victorian government should consider launching a new version of the Environment and Resource Efficiency Plans Program which was administered by the EPA until 2013. This program was compulsory for our 200 largest users of gas, electricity and water. A key measure of this program was the mandatory implementation of efficiency measures that have a payback period of 3 years or less.

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?

Education of the alternatives and economic incentives to switch electrifying key processes currently using gas.

A report published by the Australian Renewable Energy Agency (ARENA) and produced by ITP Renewables entitled 'RENEWABLE ENERGY OPTIONS FOR AUSTRALIAN INDUSTRIAL GAS USERS' provides all of the technology that currently exists to transition all of Australia's largest industrial gas users to zero-emissions alternatives. Targeting these technologies for incentives and communication of their benefits (education) will support industrial users to make the switch.

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