

Victoria's Gas Substitution Roadmap Consultation – submission

Thank you for the opportunity to submit this response to the above consultation, regarding the Victorian Gas Substitution Roadmap. This is a personal submission. I am a doctor practising in Melbourne, specialising in hospital medicine/infectious diseases.

I am submitting this response as a health professional with concerns about the impact of climate change, to which gas, a fossil fuel, is a significant contributor, as well as the direct health implications of gas exposure. I want to thank the Victorian government for recognising that gas is a dangerous fossil fuel which, given when taking into account fugitive emissions, is often no better than coal for the environment; despite the federal government messaging that a gas-led recovery is the way forward.

Specifically, it is widely recognised that we need to limit global warming to less than 2 degrees, and preferably less than 1.5 degrees, to avoid the catastrophic implications of runaway climate change. Australia is widely viewed as one of the world's weakest high income countries when it comes to climate policy, despite being one of the highest risk for severe adverse weather events. This roadmap provides an opportunity to limit the effects of gas usage on climate change.

I recommend that the Gas Substitution Roadmap clearly articulates a path to fully exiting fossil methane gas distribution in Victoria by 2035 at the latest, and considers this alongside a wider strategy to bring forward the current aim of achieving net zero emissions by 2050.

With regards to the health impacts of gas itself, it is reported that the local health impacts on those who live near gas wells includes higher rates of asthma, skin rashes, headaches, sinus problems, as well as increased hospital admissions and some cancer rates; negative birth outcomes and mental health effects [1]. Indoor gas use also has negative health implications due to the pollutants released during combustion of gas. This fine particulate matter is associated with higher heart, brain and lung disease [2] and of great concern is the recent finding that 12% of childhood asthma is related to indoor gas stove use [3]. A transition away from domestic gas use is required to improve the health of our children.

I would like to provide the following comments on the aspects outlined in Victoria's Gas Substitution Roadmap Consultation Paper [4].

- More Victorian households use gas for cooking, space heating and hot water than anywhere else in Australia [4]. Empowering households to improve their energy efficiency is a key component to being able to reduce gas usage, and investing in non-gas strategies and incentives will assist with this. Electrification will help bring energy efficiency benefits, cost savings, and will also help to reduce adverse health impacts which are associated with exposure to gas and fine particulates, such as the known link to childhood asthma [2, 3].
- To achieve electrification, close co-ordination with the electricity grid operator and distributors is essential. Incentives to households to retrofit and electrify existing properties, and legislation to mandate electrification of new builds, is important. Legislation for minimum standards for rented homes, and increased powers by tenants to seek electrification and retrofitting, will assist those who do not, for many reasons, own their own home, and will allow them to also benefit from reduced energy prices (these often include more vulnerable groups who will benefit from increased financial, economic and health security as a result of these initiatives).

- A strong education campaign on the benefits of electricity (health and economic benefits) to households and industry would assist with households able to make their own transitions, to do so. In much the same ways as the Chief Health Officer has been a constant, reliable, trusted source of information, would a Chief Climate Officer be an equally valuable role to consider for dissemination of information?
- Alongside this, I suggest a review of the legality of gas companies' claims that natural gas is a clean alternative to coal, as this is often used as a marketing ploy and can hamper efforts to educate people on the benefits of electrification. Is there scope to enforce transparent advertisements e.g. with climate warnings, such as is done elsewhere with health warnings on tobacco products; or does the Victorian government have the authority and nous to ban gas advertisements in the state outright?
- I commend the Victorian State government for its plans to source 100% renewable electricity for all government operations including all Victorian public hospitals from 2025. I strongly recommend consideration of expansion of incentives to Victorian private hospitals and primary care settings, to enable these areas also to reduce their reliance on gas. I recommend that any new hospital builds be built without infrastructure that relies on fossil gas for heating, especially as these buildings will be planned for a longer lifespan than we can afford to rely on gas for [5].
- I recommend consideration of partnering with other initiatives, such as the Australian Parents for Climate Action 'Solar our Schools' campaign, to assist schools and daycare centres reduce any reliance they have on fossil fuels including gas [6].
- Regarding hydrogen production, the suggestion of hydrogen enrichment i.e. adding hydrogen to the fossil gas network, is fraught with a number of issues. These include issues with failing pipes, less incentive for people to buy electric over gas appliances, and the need for owners to need to upgrade gas appliances to cope with the higher concentrations of hydrogen. Instead, it would be more beneficial to bring to the nearer term a parallel 100% hydrogen infrastructure with the focus on producing hydrogen close to its points of use, thus reducing the reliance on distribution networks.
- The use of biogas as a pathway is not ideal and I submit that this should only be considered for uses that cannot be substituted with emissions-free alternatives e.g. green hydrogen. Any use of biogas should have significant attention paid to strategies to minimise fugitive emissions and losses. Methane is a greenhouse gas with a massive warming effect on the climate, and has 86 times the warming potential of carbon dioxide over a 20 year period [7]. It accounts for around 25% of all global warming, and even a small methane leak makes this process as emissions intensive as using coal to generate electricity [8].
- I am concerned about the suggestion that carbon capture could represent a viable option for assisting with gas substitution. It is clear that carbon capture solutions are not yet working, and may not be available quickly enough to use to avert the worst aspects of climate change; such as has been recently reported with the substantial failure of the Gorgon liquefied gas facility by Chevron [9].

- Finally, a gas substitution roadmap must include the recognition that new gas exploration or extraction, such as fracking, is at odds with its aims; and therefore, I suggest inclusion of a clear policy within the roadmap to legislate to permanently ban new gas exploration or extraction offshore [10]. Alongside this shift away from fossil fuel usage, it is imperative to support individuals, communities and businesses who rely on this for employment, to undergo a just transition.

References

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