

Towards 2050: Gas infrastructure in a zero emissions economy

All Victorians are invited to have their say about the future of gas infrastructure as we transform to a zero emissions economy by 2050

Preamble

I have read the above report, done a little further reading and have limited my response.

Some years ago, gas paid for by the State (I assume) rolled into town past my door in Inverloch and we were offered a free connection. Fortunately, it was at the time when it was becoming known that gas was no longer the cheap and cheerful energy of the past. We had also insulated, skylighted, solared and heat pumped our 1980's red cedar cottage and were paying no electricity bills. So, it was not hard to refuse. We had also endured years of a flueless gas heater when visiting my mum before we were able to breathe again when she installed a heat pump.

Submission

It is clear that gas as a residential energy source has to finish as soon as possible if for no other reason than for its well-documented negative impact on indoor air pollution, a fact not mentioned at all in this Infrastructure Victoria report. For adults and children cooking and heating with gas is a significant risk factor implicated in multiple health conditions, As reported by the Climate Council which states that *'using a gas stove indoors without proper ventilation has a comparable impact on childhood asthma to the impact of having a parent who smokes. A 2018 study estimated that exposure to gas stove emissions is responsible for 12.3% of childhood asthma in Australia'*. Kicking the Gas Habit: How Gas is Harming Our Health, The Climate Council 2021

The Australian State of the Environment 2016 Report states *'In dwellings that relied on gas appliances for cooking, levels of carbon dioxide, carbon monoxide, nitrogen dioxide, PM_{2.5}, formaldehyde, benzene and total VOCs were significantly higher than in households that solely used electric cooking appliances.'* The omission of the significant negative health effects of burning gas in the domestic situation leads to questions as to the report's completeness in terms of an holistic assessment of the costs and benefits assessed in formulating and choosing a forward looking Scenario. If only as much focus had been applied to all the community effects as there was on stranded assets.

It is particularly clear that the only choice is Scenario A - the switch to full electric, particularly for households. It will supply immediate health benefits to individuals. It relies on the proven and mature technologies of electricity and Energy Efficiency Improvements unlike the yet to proven technologies of CCS or Hydrogen (of whatever shade). It also does

not rely on agroforestry for partial carbon mitigation, as proposed in several Scenarios, an approach with all the chances of success to be almost as shaky as CCS.

Health and greenhouse emission benefits to households and the community start at once and are readily expedited. The electricity network, household connections are in place, the appliances, the retail outlets, and the skills to install are also in place.

In a report on the energy future particularly as it relates to the major users – the residential household it appears that the greatest energy revolution of our time in which Australia leads the world in uptake has been downplayed. I speak of domestic rooftop solar. Equally, I could also speak of heat pump for space heating and induction cooktops for cooking. These technologies have respectively upturned the energy supply and usage of many a Victorian household, and batteries are coming. None of which were dreamed of when the gas network installation commenced in the 1950's. Gas appliances are now a poor and polluting alternative compared to more efficient and healthier electric alternatives. Distributed energy production, consumed at the point of production, fuelling energy efficient space heaters and cooktops obviates the reliance and the relevance of the second centrally produced energy source and its distribution network.

Gas as an energy source is as obsolete as is most of the aging distribution network. The gas infrastructure will be stranded assets like many internal combustion engine powered vehicles, both victims of technological advancement of electrification. The significant difference is that corporations own the gas distribution network assets and individuals own the obsolete cars. As such government will want to be very careful to not find itself the holder of stranded gas assets as all worth expires.

Particularly a network that distributes a product that has documented health impacts contributing to the childhood asthma epidemic among other health issues, while exuding *'fugitive emissions from leaks or venting of gas in exploration, processing, storage, transmission and distribution (2.4 Mt CO₂e, or 14%)'* Page 15, Towards 2050: Gas infrastructure in a zero emissions economy Interim report.

Which means that the loss to the atmosphere of 14% of total gas (methane) production is the cost society must pay to have a gas supply. It is not hard to pick the low hanging fruit of greenhouse gas reduction when it comes to which centralised energy distribution to dispense with particularly when the state of infrastructure is also taken into account, *'Some of Victoria's gas pipeline infrastructure is reaching end of life, limiting its potential for long-term retention and reuse. Over half of Victoria's onshore pipeline infrastructure is greater than 40 years old, and operators need certainty around the potential use and development*

of an ongoing viable gas network to confidently invest in replacing aging infrastructure.'

'Page 37, Towards 2050: Gas infrastructure in a zero emissions economy Interim report.

The immediate steps are, cease the gas network roll out to country Victoria and rescind legal mandates to have gas in new estates and to use gas for solar hot water boosting. Use the 40% predicted gas production decline as a spur for energy efficiency measures starting with public and low-income housing in country areas instead of gas piping. Make it an energy efficiency led recovery; anything but a gas led recovery; make it the beginning of the gas end.

Sincerely

Ed Thexton

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3rd August 2021