

## Gas infrastructure advice submission – 88

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Name: [REDACTED]

Stakeholder group/interest: Consumers

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

There seems inadequate consideration of the ability for pursuit of improved energy efficiency to increase employment. The modelling suggests Scenario C and D have increased employment when this seems counter intuitive given this is fuel substitution and based on "yet to be proven" technology - could be a ways off.

Second the likely speed of EV market penetration could surprise and provide options under the all electric scenario such as EV as a service where the car battery is part of the grid storage and stabilisation with high renewables. Early market moves in this regard could be evident.

### **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?**

As an engineering consultant we are already designing all electric buildings and being requested by clients to convert existing buildings from gas use to all electric - some own very large portfolios of buildings. Likely with limited effort this "as the way of the future" could enter popular residential market understanding and with the encouragement of gas cost increases easily reach a tipping point.

### **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?**

There may be more gains and easier and faster gains in "megawatts" with the benefit to society of lower energy costs and Heather and more comfortable buildings or for industry of lower operating costs with associated profitability gains than investment in alternatives and downstream capture. Given that these are far from new and it seems "still yet to arrive" as commercially viable it may demonstrate more wisdom to invest in proven energy efficiency - particularly as our building stock and industry is generally so poor - we are starting off a low base.

### **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?**

Reduce demand to preserve existing and new reserves for peaking plant and those industries for which gas is fundamental (not easily) replaced, when taken in a 30 year view. Each of these are discrete and large users so the network maintenance is well targeted rather than diffused across millions of small users as at present.

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

With the likely tipping point for EVs and battery storage arriving within the next decade these likely can be significant players in the renewable network operation - this was not evident in the report. Car ownership may likely be replaced with "rental" (early evidence of major market players changing the sales of vehicles model preempting this) and so then EVs can be aggregated as mobile battery storage for the grid stability.

Thermal storage could again be another player where hot water heat pumps are controlled to generate during the day when the electricity cost is zero or negative.

**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?**

Start now in providing clear and honest advice to consumers a map of the network and timing of switch off or where the network does not warrant upgrade already and will be switched off but providing consumers with accurate information and possibly incentives for their transition to all electric options - some could already be largely there with a split system in the living room.

Much of the older network will not suit hydrogen or biomass as noted in the report so early advice so this is not a surprise to consumers

As noted above large consumer with fewer options for alternate fuel sources in the medium term need a network plan and business certainty

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

As we are not a heating climate in the manner that Northern Europe is - our climate is actually mild it is just our housing stock is poorly insulated - you will confuse the market with scenarios B, C and D and especially around Hydrogen (a ruse by the fossil fuel industry at the moment?). singular clarity the awe are actually running out of gas and need to transition to electric and here are the options and timing matched with the appropriate education programs (Plumbers especially)

**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?**

There is a strong "ecosystem" I place in support of gas use. Some are the result of Victorian Government incentives as noted in the report and others or years of successful marketing by the gas industry that "gas cooking is best". Interesting that the top chefs almost universally prefer induction cooking and electric appliances in their restaurant kitchens.

There are "legacy generation" electric products such as heat pumps, heat pump water heaters and poor (heating) performing air conditioners that give "all electric" a bad name. The average plumber in reacting to this history and the reality that they now need to split the profit with an electrician (for electric alternatives) will strongly advocate for continued use of gas.

The average consumer remains convinced that gas is still cheaper (when this is generally not the case) however tariff variability with gas may be less compared to electricity retailer rates unless the consumer "shops around" regularly. Another problem but may need to be a integral part of the transition campaign.

**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?**

Each industrial large capacity user is unique and needs a unique solution. Funding the research and ultimately advice to each consumer of their options and alternative - which initially could be efficiency upgrades or feedstock alternatives - in collaboration with the consumer is likely the most successful approach. This combined with "name and shame" visibility of the large consumers (even if individual companies are not called out) could provide a subtle incentive for companies to prioritise improving their performance - no implications for behaviour no incentive to apply effort toward change.

**How would you like your submission treated?**

Published, but my name removed