



Ms Katie Brown
Director, Energy Strategy
Victorian Department of Land, Water and Planning

By email

Dear Ms Brown,

Victorian Gas substitution roadmap - consultation paper

ENGIE Australia & New Zealand (ENGIE) appreciates the opportunity to respond to the Victorian Department of Land, Water and Planning (“the Department”) in response to the consultation paper on the Victorian Gas substitution roadmap (“the consultation”).

The ENGIE Group is a global energy operator in the businesses of electricity, natural gas and energy services. In Australia, ENGIE has interests in generation, renewable energy development, and energy services. ENGIE also owns Simply Energy which provides electricity and gas to more than 720,000 retail customer accounts across Victoria, South Australia, New South Wales, Queensland, and Western Australia.

Both globally and in Australia, ENGIE is also at the forefront of the development of renewable hydrogen solutions. Renewable hydrogen is likely to play a major role in the progressive replacement of fossil fuels in our energy systems and the broader economy. In Victoria, ENGIE is a partner in one of the ARENA flagship hydrogen projects, a 10 MW electrolyser for gas blending at AGIG’s Murray Valley Hydrogen Park in Wodonga.

An important starting point

ENGIE commends the Department on embarking on a wide-ranging an open consultation on the future of gas in Victoria. The transition away from unabated natural gas – as effectively required by the Victorian government’s 2050 net zero emissions target will be technically complex and have wide ranging impacts on Victorian households and businesses. Policies to facilitate the transition may be very costly and have unintended consequences if not implemented thoughtfully and in co-ordination with other relevant policy areas.

The consultation contains a wide range of questions on the different pathways identified and the issues that may arise through the transition. This submission focusses on the higher-level principles that can be used to inform good policy in this area. In Victoria, ENGIE retails both electricity and gas, and does not have large scale generation or upstream gas investments. In this respect we are fuel neutral. ENGIE recommends the following principles and approaches for good policy.





Focus on cost effective measures

Community support for the ongoing transition will be dependent upon minimising the cost burden of any policies enacted by the Victorian Government. ENGIE recommends that individual policies be assessed by the department for their costs and benefits

When comparing measures to advance different pathways, the Department should consider long-term as well as short term impacts. As discussed below, marginal emissions reductions such as reducing fugitive emissions or energy efficiency may appear to be low net cost (given they have an intrinsic financial benefit too), compared with more transformational pathways, which may have significant upfront costs before major emissions reductions are released. But the marginal activities will not have any impact once the transition has been made and cannot achieve net zero on their own.

Co-ordinate with other policy areas

The transformational pathways will entail a whole-of-systems approach and will interact with other systems. Biogas will interact with agricultural and waste sectors, which will be the sources of the gas. Hydrogen will primarily come from renewable electricity sources and electrification will also have major impacts on the electricity sector. So, a holistic approach will be necessary to deliver the best outcomes.

Co-ordinate with other governments

Most of the businesses that can deliver pathway solutions will operate nationally if not globally. They will be best placed to deliver solutions at lowest cost if they are operating under consistent regulatory frameworks across jurisdictions. Other Australian jurisdictions are facing similar issues of their own and so there should be ample scope for a collaborative approach to developing policy and regulation, especially when there are already existing intergovernmental frameworks for gas and electricity under the aegis of the Energy Ministers' Meetings. A consistent approach doesn't preclude differing levels of ambition or speeds of transition.

ENGIE also notes that the Commonwealth Government is actively supporting key pathway and emerging technologies including hydrogen and carbon capture and storage (CCS). Victoria should look to leverage off these initiatives where possible.

Retain optionality as long as possible

Many of the key policy options, both in terms of the identified pathways and the emerging technologies, will take some time to be fully effective and for their long-term cost impacts to be clear. In some cases, they will initially be complementary to the existing gas system, in particular the substitution technologies. While current initiatives such as the Wodonga hydrogen blending project in which ENGIE is a partner is expected to prove up the viability of a small percentage of hydrogen in a natural gas network, a shift to 100 per cent hydrogen will require very different considerations. It will take several years to evaluate the viability and cost of the shift, but the benefits of retaining the existing gas delivery system are significant. Some of these are covered below. The Government should refrain from assuming that one pathway will be the dominant solution too early in the journey to net zero by 2050. For example, it may be premature to curtail new gas connections while this pathway remains a promising possibility.



The human dimension

The Consultation has appropriately identified equity issues to be considered in the transition. Beyond this there is the fact that current gas usage represents personal and commercial choices. In the former case, especially, the decisions to use gas over existing alternatives may have multiple factors beyond cost. People perceive different heating systems as having different qualities and many appreciate the controllability of gas for cooking. Simply making it cheaper (and some analysis contends it is already cheaper) to move to electrical alternatives, for example, may not be sufficient. And the government should be cognisant of how households and businesses may react if their choices are taken away from them as a result of the transition. This could be a potentially string advantage of decarbonised gas pathways, in that it maintains the opportunity to make these choices.

Transformational versus marginal pathways

The pathways examined have quite different characteristics. Decarbonised gas (i.e., renewable hydrogen, biogas) and electrification are transformational moves away from the use of natural gas. The implications of electrification are considered separately below. These pathways may have some very significant upfront costs, that will decline over time as technology costs decline and these substitute fuels become the norm for businesses and households. However, absent the development of an industry-wide carbon capture framework, one or more of these is likely to be required for net zero.

By contrast, fugitive emissions and energy efficiency will only ever deliver marginal abatement. Their impacts will effectively cease if and when there is a move away from the use of natural gas. They may be lowest cost in the short term, but if they are allowed to crowd out support for transformational investments, they may ultimately hinder the overall goal. This is not to say that cost-effective opportunities of these types should be ignored, rather that their long-term impact may be negligible.

The implications of electrification

The electrification pathway requires careful consideration before being actively driven by policy instruments. Of course, households and businesses may begin the shift to electric alternatives independently, for a range of reasons including cost and climate concerns. But this organic trend is likely to be less rapid and thus easier to manage. In energy terms, the gas network transports significantly more than the electricity network and has a large winter peak due to its use in space heating. While the additional energy required under electrification may be indeterminate – it will depend on the efficiency of heat pumps and hot water systems - it's reasonable to expect that it will drive new winter peaks that will need to be accommodated at both a network level – the transmission and distribution networks may need to be upgraded – and a wholesale level – additional dispatchable energy may be required to meet demand. This highlights an additional interaction – the electricity system is currently reliant on natural gas generation as a flexible source of supply to help meet demand peaks.

Energy efficiency measures may not be especially useful in this scenario as these reward electricity consumption reductions at *any* time, not necessarily at peak times. So, measures to manage peak demand would need to be much more targeted. The electricity sector currently has limited tools to reduce or shift peak load, as the Victorian Government has elected to inhibit tariff reform to ensure there are not adverse outcome on vulnerable



customers. While cost-reflective tariffs are not the only way to deliver these outcomes, a range of tools is likely to be the most effective way to address peak demand.

One area of interest for ENGIE is how winter gas peaks driven by residential use can be targeted initially as this may represent the marginal cost during periods of high prices.

Energy efficiency

In the electricity sector, energy efficiency has largely been driven by the Victorian Energy Upgrades (VEU) program. Simply Energy, like other retailers seeks to manage its obligations under this program so as to minimise the cost to consumers. This has led certain simple, low-cost activities to dominate the program, including at different times, standby power controllers and LED lightbulbs. Switching over multiple household appliances from gas to electric or, in due course, natural gas to hydrogen is a much more complex and costly proposition and the VEU program is unlikely to be the best vehicle to support this kind of activity.



Yours sincerely,

A handwritten signature in blue ink, appearing to read "Jamie Lowe".

Jamie Lowe

Head of Regulation,
Compliance and Sustainability

