

6 August 2021

Project Office: Victoria's Gas Substitution Roadmap
Department of Environment, Land, Water and Planning
[Submitted online via Engage Vic website](#)

RE. VICTORIA'S GAS SUBSTITUTION ROADMAP

Introduction

Geelong Sustainability fully supports the ambitious greenhouse gas emissions reduction target of 45-50% by 2030 set recently by the Victorian Government. We also recognise the breadth of excellent work being undertaken to transition rapidly and fairly to a net zero emission economy.

Geelong Sustainability welcomes the opportunity to provide a written submission on the topics and themes raised in the consultation paper on Victoria's Gas Substitution Roadmap (hereafter 'the Roadmap'). We congratulate the Victorian Government on a very well-considered and comprehensive consultation paper.

We agree with the Minister for Energy, Environment and Climate Change, the Hon. Lily D'Ambrosio MP that *'the energy landscape is changing, in Victoria and globally. Rapidly increasing investment in low cost wind and solar power generation, backed by grid-scale battery storage, is driving down energy costs for consumers and reducing emissions.'*

About GS

Geelong Sustainability (GS) is a dynamic not-for-profit incorporated community association, REO and charity. Our mission is to empower people to protect and regenerate the planet. As a regional change agents we're focused on sharing information, building community resilience, advocating for the environment and supporting effective action. We have a large community and professional network and over 5200 email subscribers. Our [strategy](#) aligns with the UN Sustainable Development Goals and we focus our activities on four pillars: 1) Climate Action, 2) Renewable Energy, 3) Circular Economy and 4) Sustainable Cities and Communities.

Since 2015, our Renewable Energy taskforce has developed and delivered numerous community solar programs and renewable energy projects including CORE Geelong, which was supported by the New Energy Jobs Fund. In 2019 we were named Scorecard Community Champion by DELWP. We have contributed to various consultations in the Barwon South West (BSW) region including the Regional Renewable Energy Roadmap and the Climate Adaptation Strategy. We have just acquitted our innovative Climate Safe Rooms project funded by the Virtual Centre for Climate Change Innovation. GS has just been contracted as an intermediary to assist Sustainability Victoria (SV) with its Small Business Energy Saver Program across the BSW region. In addition we're also been funded by SV to establish the BSW Community Power Hub on behalf of the Barwon Region Alliance for Community Energy.

General comments

Geelong Sustainability agrees with the proposed approach and much of its content. In responding, we've focused our comments on areas where we feel there's a need to raise something to a higher priority, to request further review, or where we disagree. Our comments reflect our GS lens ie. our mission, vision and values and our location. Greater Geelong has been experiencing high population growth and now faces a critical crossroads with regard to the two proposed gas import terminal.

For over fifty years, Victoria has had access to low cost, abundant natural gas, extracted from offshore gas fields located in Bass Strait. However the gas supply outlook for Victoria has changed. The Roadmap's priorities must be informed by contemporary data and evidence-based research. The path forward must be set within the global context of a climate emergency and the urgent need to reduce greenhouse gas emissions.

Summary of suggested improvements

Some suggestions to strengthen the development of the Roadmap.

1. Ensure decisions and pathways' selection are driven by the urgent need to meet the emissions reduction targets. All other risks and uncertainties need to be viewed within this context, ie. there can be no justification for Victoria to increase its emissions.
2. Make early no-regrets decisions to allow more time to address the harder challenges. We encourage further analysis of the opportunities from demand management solutions and to remove the risks from the gas sector expanding and increasing emissions in the short to medium term.
3. Give health, safety, security and affordability the highest priority in informing the choice of pathways. Increased gas consumption, even in the short-term, poses risks to these.
4. Ensure a just transition for existing workers in the gas industry and accelerating support for new clean energy jobs. An evidence-based just transition plan should be developed so no Victorian gas worker is left behind.
5. Prioritise a comprehensive awareness and education campaign, emphasising the opportunities from the energy transition.

Recommendations to strengthen the roadmap

1. Ensure the emission reduction targets drive decisions and priorities

Emphasis is given here to the urgency with which global carbon emissions need to be reduced. Indeed Victoria's climate change strategy¹ is clear on the increasing risks awaiting Victoria as atmospheric greenhouse gas concentrations increase: from more frequent and severe heatwaves, droughts, sea level rise, and bushfire risk and with a potential doubling of the number of high fire danger days by 2050.

Of great concern is that the globe, including Victoria, is on track to well exceed the dangerous 2°C post-industrial global temperature rise. Current policies in place around the world are projected to result in a 2.9°C warming above pre-industrial levels. The unconditional pledges and targets that governments have made, as of April 2021, would limit warming to about 2.4°C above pre-industrial levels, or in probabilistic terms, likely (66% or greater chance) limit warming below 2.6°C². This confirms that, at present, Victoria is heading towards a climate that poses serious and unacceptable risks for its communities, businesses and its environment.

Economic and risk management experts from the World Economic Forum have assessed the need to decarbonise as urgent. Despite the inescapable fallout from COVID-19, it is climate-related risks that make up the bulk of the highest rated risks, which their report describes as "an existential threat to humanity."³

World leading energy experts assess the need to transition to clean energy as urgent. The International Energy Agency's (IEA) first comprehensive energy roadmap shows government actions to rapidly boost clean energy and reduce fossil fuel use can create millions of jobs, lift economic growth, and keep net zero emissions in reach. However, the IEA also states that the "pathway is narrow and requires an unprecedented transformation of how energy is produced, transported and used globally". Crucially they state that no new oil and natural gas fields are needed in their pathway.

So, it is critical that Victoria meets its 2050 target of net zero as well as its 2025 and 2030 interim targets. All other risks and uncertainties need to be viewed within this context, i.e. there is no justification for Victoria to increase its emissions. Furthermore, Victoria's climate change strategy and the Roadmap will need to be adaptable and prepared to shift to more ambitious targets as improved science, data and information dictate.

2. Make early no-regrets decisions to allow more time for harder challenges

If the criticality of meeting Victoria's emissions reductions targets is accepted then the state's critical path needs to prioritise early no-regrets decisions to allow time for solutions to the more challenging reductions to be developed and scaled.

So, where proven alternative solutions already exist and are capable of delivering emissions reductions, such as space- and water-heating heat pumps, their adoption should be incentivised immediately, rather than waiting for potential alternatives such as hydrogen to be market-ready. Uncertainty around the best solutions for some types of gas consumption should not be used as a reason to delay the low-uncertainty, no-regrets pathways such as household electrification.

¹ <https://www.climatechange.vic.gov.au/victorias-climate-change-strategy>

² <https://climateactiontracker.org/global/temperatures/>

³ <https://www.weforum.org/reports/the-global-risks-report-2021>

Energy efficiency needs to be a high priority for the Roadmap regardless of the chosen fuel mix to replace gas. It has the potential to significantly reduce our emissions, improve energy security, and support a thriving economy while delivering positive climate and social outcomes. The Roadmap would benefit from including ambitious measurable energy efficiency targets for households, business and industry.

Another benefit of no-regrets early decision making is that meeting Victoria's emissions reduction targets may well get much harder if the gas industry is allowed time to develop more infrastructure and drive increased gas consumption. For example, with Geelong's population predicted to rapidly increase in coming years, the gas industry is set to benefit from having thousands of new homes consuming gas for heating, cooking and water heating.

Viva Energy is intending to expand into gas distribution through building a gas import terminal in Geelong and, significantly, the project has a 20-year time horizon⁴. (Interestingly, in its 2020 Sustainability Report, Viva Energy has no ambitions to reduce its carbon emissions⁵ - this is unacceptable as we all must play a role in reducing emissions.) Without banning new homes from being connected to gas, there is significant risk that government incentives to transition existing homes from gas to electricity will be significantly offset by new homes consuming gas. The potential for Victoria to use fracked gas from its northern neighbors is another concern given our state's public opposition to this fossil fuel.

Expanding gas infrastructure also raises the risks of costly stranded assets. The Victorian government's interim report about the future of gas infrastructure makes this very clear⁶: "Each of the scenarios we considered suggest that Victoria's reliance on natural gas will decline significantly in the years to 2050 in order to achieve net zero. Further expansion of natural gas infrastructure increases the risk of some assets becoming unused or stranded. This could end up costing consumers more money as infrastructure owners attempt to recover the cost of their investment more quickly. It could also lock in pathways which are not compatible with Victoria's net zero emissions targets." It follows that governments must also avoid locking in future governments into liabilities accrued by signing up for gas off-take agreements or "take or pay" agreements with gas infrastructure companies to underwrite supply⁷ as recently proposed by the National Covid-19 Coordination Commission.

Encouragingly, there is huge potential for improving energy security in Victoria through demand-side solutions. According to analysis by Northmore Gordon, commissioned by Environment Victoria⁸, the state could significantly reduce its gas consumption through efficiency and electrification using existing technology and targeted economic support. The excellent four-year heater replacement rebate scheme announced by the state government in November 2020 is targeted at low to mid-income homes. Strong consideration should be given to expanding the scheme over time to assist more households and extend to different types of household gas appliances. Given the potential for early and more certain gains, we encourage further analysis of the opportunities from demand management solutions.

The business case for the cessation of any expansion of gas reticulation system are clear. There is no rationale for expenditure on gas distribution infrastructure that will not recover the investment over the short period that the product being delivered will be used. Existing reticulation system should not be expanded. Connection of new developments to existing reticulation should be actively discouraged. Smart investment allocation should be directed to renewable energy infrastructure not into assets that will quickly become stranded.

3. Give health, safety, security and affordability a high priority

The Roadmap needs to give greater weight to the benefits on health, safety, security and affordability for Victorians in transitioning away from gas and towards renewable energy.

Increasing greenhouse gas emissions are increasing risks to the health, well-being and safety of Victorians. The impacts from increasing heatwaves, droughts, sea-level rise and bushfires have already been discussed. Victoria's climate change strategy rightly states that climate action will help protect our

⁴ <https://www.vivaenergy.com.au/energy-hub/gas-terminal-project>

⁵ <https://www.vivaenergy.com.au/sustainability>

⁶ <https://www.infrastructurevictoria.com.au/wp-content/uploads/2021/07/Gas-Infrastructure-Advice-Interim-Report-FINAL-4.pdf>

⁷ https://ieefa.org/wp-content/uploads/2020/08/Reviewing-COVID-19-Advisory-Board-Proposals-To-Subsidise-the-Gas-Industry_August-2020.pdf

⁸ <https://environmentvictoria.org.au/2020/06/03/victorian-gas-market-demand-side-measures-to-avoid-forecast-supply-shortfall/>

precious flora and fauna and improve the health and wellbeing of our community by restoring landscapes and reducing pollution of our water, air and soilⁱ.

The Climate Council recently reported that the expansion of gas across Australia puts more people at risk of adverse health impacts⁹. Furthermore, cooking with gas is estimated to be responsible for up to 12% of the burden of childhood asthma in Australia. The vulnerable are disproportionately affected and with poorer households more exposed to the harmful effects.

The Roadmap does emphasise the importance of safety in considering decarbonising the gas sector. However, even within our local communities, we see the possibilities of risks to both safety and public amenity increasing as the gas industry seeks to expand. As previously mentioned, Viva Energy is proposing a gas import terminal in Geelong's Corio Bay. There are currently no Victorian waters where LNG is either imported or exported but, in Darwin (where LNG is exported) moving safety exclusion zones of 1000m to the front and 500m in all other directions is enforced by water police. Furthermore, waterside safety and security zones of 500m are enforced in all directions around berthed LNG vessels¹⁰.

Translating these impacts to Geelong, for LNG to be managed safely there would need to be new public exclusion zones which will permanently change Corio Bay access for recreational boaters, sailors, fishermen and nearby residents. Serious questions are being raised within the Geelong community, such as how can a 500m exclusion zone around a moving ship be enforced on residents whose houses are only 200m from the shipping channel? The Darwin LNG facility is intentionally located far from public and residential areas at a distance of 6km to the nearest residence and 10km to Darwin City. Gladstone LNG facilities have a distance of at least 7km from central Gladstone and any residential areas. Locating a LNG facility a mere distance of 1.5km from a residential area raises serious safety concerns. Exacerbating these concerns is that, if approved, the gas operation would operate adjacent to an existing oil refinery, also owned by Viva Energy, and for which an additional 90 million litres of diesel storage will be built¹¹. There are clear advantages in the Victorian government ensuring it has best practice regulations in place to effectively safeguard community safety.

The Roadmap rightly highlights energy security as high priority in its considerations. As described above, there is huge potential for improving energy security in Victoria through demand-side solutions, including improving energy efficiencies in households and industry. Mandating new buildings to be all-electric would further enhance energy security by putting a ceiling on residential and commercial gas consumption. There is enormous potential for the State Government to assist local government with this process by amending state planning legislation to mandate all new developments to be all-electric rather than leaving this critical policy decision to individual Councils to pursue. It is poor policy to allow any new Victorian homes to connect to gas when it is already an inferior energy source for multiple reasons. The Roadmap identifies some medium- to long-term solutions to support the transition away from gas by improving energy security.

The Roadmap states that, in most cases, it is cheaper to establish new homes as all-electric now. Consistent with this, the CSIRO found that, even with the additional costs to support a combination of solar PV and wind generation in 2030 added, wind and solar PV are the least cost generation technologies for the electricity system for any expected level of deployment¹². For improved affordability, these facts support the case for both accelerating new homes to be all-electric and incentivising households to transition from gas to electricity.

4. Ensure a just transition for existing workers in the gas industry and accelerate support for new clean energy jobs

Encouragingly, the Roadmap has a vision for Victoria accelerating the development and deployment of all opportunities to decarbonise gas supply, promote economic growth and create clean energy jobs. We support the Victorian Government's new Clean Economy Workforce Skills initiative in ensuring the gas workforce has the necessary skills to support the decarbonisation of the gas industry

Beyond Zero Emissions' (BZE) Million Jobs Plan shows how in just five years, renewables and low emissions projects can deliver 1.8 million new jobs in the regions and communities of Australia where

⁹ <https://www.climatecouncil.org.au/resources/gas-habit-how-gas-harming-health/>

¹⁰ https://ntepa.nt.gov.au/_data/assets/pdf_file/0006/553191/plan_gas_epl217_conoco_phillips_emergency_response.pdf

¹¹ <https://www.vivaenergy.com.au/media/news/2021/geelong-refinery-to-bolster-diesel-storage>

¹² <https://publications.csiro.au/publications/publication/PIcsi:EP208181>

these are needed most¹³. In contrast, the gas industry is one of the least labour-intensive industries in Australia, providing around one eighth of the jobs per dollar spent across the average for all Australian industries¹⁴.

The Roadmap should include assessing the impact on jobs of different alternatives to decarbonise the gas sector and the timeline of those impacts so an evidence-based just transition plan can be developed and so no Victorian gas worker is left behind.

5. Prioritise a comprehensive awareness and education campaign, emphasising the opportunities from the energy transition

The Roadmap needs a comprehensive community engagement plan to ensure Victorians understand the imperative and can actively participate in the transition.

The community would be more likely to embrace the transition from gas to electricity if the clear explanation of energy inefficiency inherent in gas combustion is compared to renewable on-site electricity generation for use in high efficiency appliances. Misinformation about the benefits of gas promoted by incumbent interests needs to be better refuted by superior contemporary understanding.

State and territory governments have raised their ambitions with emissions reductions and Victoria's targets place it near the head of the pack. Reducing Victoria's climate risks ultimately hinge on reducing global atmospheric concentrations of greenhouse gases and so national and international advocacy needs to be a priority. If our current Prime Minister is not going to take science-based targets to COP26 in Glasgow then perhaps our Premier, Daniel Andrews should!

There is now plenty of evidence that shows that investing in clean energy and energy efficiency is good for the economy, for jobs, for households, for stimulating innovation, attracting investment, and for our health. However these opportunities will be tempered if businesses and communities lack the awareness and understanding on why the transition is urgently needed.

Conclusions

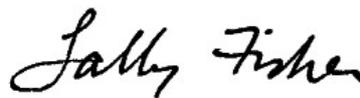
The consultation paper on Victoria's Gas Substitution Roadmap is a very well-considered and comprehensive document. GS agrees with the proposed approach. Our recommendations relate to ensuring that decisions and pathways' selection are driven by the urgent need to meet Victoria's emissions reduction targets. All other risks and uncertainties need to be viewed within this context. Given the seriousness of the risks facing Victoria, there is no justification for further delay nor for businesses within the state to increase their emissions.

Thank you for the opportunity to make this submission.

Yours sincerely,



Vicki Perrett, President



Sally Fisher, Climate Action Coordinator



Geelong Sustainability wishes to acknowledge the significant contribution by GS member and climate scientist, Neil Plummer to this submission.

¹³ https://bze.org.au/research_release/million-jobs-plan/

¹⁴ <https://australiainstitute.org.au/wp-content/uploads/2020/12/P908-Gas-fired-backfire-web.pdf>