

ExxonMobil Australia Pty Ltd

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Dylan Pugh
Chairman

ExxonMobil

16 August 2021

Victorian Government
Infrastructure Victoria

By email: [REDACTED]

To Infrastructure Victoria

ExxonMobil Australia (ExxonMobil) is pleased to make this submission to Infrastructure Victoria's interim report *Towards 2050: Victoria's gas infrastructure in a zero emissions economy*.

We support Infrastructure Victoria's statement that a diversified approach to gas sector decarbonisation is needed.

Given Victoria's current reliance on natural gas and its extensive gas infrastructure and local resources, Scenario B: Net zero emissions electrification supported by natural gas production coupled with carbon capture and storage or offsets, as outlined in your interim report, provides the most feasible pathway for Victorians as we transition to a zero emissions future.

Using gas fired power generation to support a reliable supply of electricity during peak demand periods, or as a back-up for intermittent renewable energy sources like wind and solar, will remain an important means of achieving energy security until a substitution for gas, such as hydrogen, becomes widely available in the longer term.

Our enclosed submission to consultation on Victoria's Gas Substitution Roadmap discusses this in more detail, along with the potential for Victoria's existing gas infrastructure to continue supporting the transmission and supply of other energy sources in a net zero emissions future.

Please contact [REDACTED] on [REDACTED] or [REDACTED], for any queries with respect to this submission.

Yours sincerely



Attach.

ExxonMobil Australia Pty Ltd

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Dylan Pugh
Chairman



2 August 2021

Victorian Government
Department of Environment, Land, Water and Planning

By email: [REDACTED]

To the Victorian Department of Environment, Land, Water and Planning,

ExxonMobil Australia (ExxonMobil) is pleased to make this submission in relation to the Victorian Government's Gas Substitution Roadmap for Victoria.

1. Introduction

Esso Australia, an affiliate of ExxonMobil, has operated the Gippsland Basin oil and gas production system for more than 50 years. Gas processed at our Longford oil and gas plants currently accounts for more than 40% of the gas consumed on Australia's east coast.

As with all mature basins, some Gippsland Basin fields are now reaching their end of productive life and Esso Australia is working to transition to a modern gas business, focused on continuing our much-needed supply of natural gas to Victoria and eastern Australia.

Victorian homes and businesses rely heavily on natural gas. This presents a challenge, but also a unique opportunity. Victoria's reliance on natural gas is supported by an extensive gas supply network, which could potentially be used to supply biofuels or even hydrogen in the future. Maintaining and promoting investment in this infrastructure will support the State to effectively transition from gas to alternative fuels at the right time, with minimal disruption to Victorian gas consumers.

As indicated by the Chief Executive Officer of AEMO on 14 July 2021 natural gas will play an essential role maintaining the energy security Victorians are used to, even in a net zero future. Its use as a back-up power supply is essential if we are to transition to intermittent renewable energy sources, such as wind and solar. Ongoing investment in maintaining natural gas supplies will be required to ensure Victorians can continue to access the reliable supply of energy that they need, especially during winter.

2. Victorian homes and businesses heavily rely on natural gas

Gas plays an important role in providing Victorians with a reliable supply of energy, where and when they need it.

As outlined in the Victorian Government's consultation paper, "Over two million Victorian households currently use natural gas to heat their homes, for cooking and hot water. At the same time, gas continues to be an important input for Victorian industry and essential services, such as hospitals."

Around 70 per cent of households across Australia rely on natural gas for heating, hot water and cooking, while in Victoria, we consume about three times the amount of gas during winter than we do in summer.

In addition to Victorian manufacturers, restaurants, health care providers and countless other industries relying on natural gas to be able to operate their businesses, the gas industry provides essential chemical feedstocks to other Victorian industries.

Importantly, as overall energy demand continues to grow, gas fired power plants are increasingly being relied on to produce electricity, especially during periods of peak demand.

Any pathway towards our net zero future must take into account the needs of the community and businesses who rely on natural gas, and the flow-on impacts to these gas consumers of any policy changes. Ensuring a reliable and secure supply of energy for all Victorians is paramount now, and in a renewable energy future.

3. Energy diversity is key to supply reliability

The benefit of natural gas is that once produced, it can be safely stored for use during peak demand periods, supporting a reliable supply of gas throughout the year.

Stored natural gas can be used for gas fired power generation, supporting a reliable supply of electricity during peak demand periods, or as a back-up for intermittent renewable energy sources like wind and solar.

Australian Energy Market Operator CEO, Daniel Westerman, recently spoke about the important role natural gas, hydrogen and batteries will play in the operator's bold plans to transition Australia's energy grid to be able to manage 100 per cent renewables penetration, at any moment in any day, by 2025.

Mr Westerman said that as more renewable generation capacity comes online to replace retiring thermal generators, the variability in weather means that the power system needs to change. It needs to accommodate periods of either very high or very low instantaneous penetration of renewables – and sudden changes from one to the other.

"In Australia, gas seems to have become the most debated piece of the energy jigsaw. I don't think it needs to be," he said.

"The prospect that the recently announced gas-fired power station at Kurri Kurri might only be needed for 2 per cent of the time seemed to draw quite a lot of attention.

"But the conclusion to make is not that firming plants like these aren't required.

"The point is even at 2 per cent of the time, dispatchable generation like this unlocks many multiples of low-cost renewable generation capacity into the market by providing the security for when the sun isn't shining, the wind isn't blowing and other storage can't bridge the gap."

This reliance on natural gas to quickly fill supply shortfalls in other energy sources already occurs.

During June, Esso Australia responded promptly to fill a gas market shortfall and help Victorians avoid further power disruptions, when severe weather events disrupted usual power sources in the state.

We were able to respond promptly to fill some of the shortfall utilising Gippsland gas from Longford and our flexible gas inventory in storage, which helped to maintain the reliable supply of electricity to Victorian homes and businesses.

4. Less carbon-intense gas is being achieved in Victoria

Achieving meaningful reductions in greenhouse gas emissions from local gas production will require a wide range of solutions. Esso Australia is working to reduce the carbon intensity of Gippsland gas by improving the efficiency of our operations and actively identifying alternative beneficial uses for some of our emissions.

As at June 2020 the team at our Longford Gas Plants had worked to reduce the use of fuel gas by 27 per cent as well as reduced flaring by 38 per cent. They achieved this by assessing the energy footprint of individual pieces of equipment and making decisions about the value of running them compared to the energy use and implementing changes to improve this. These many small changes made a big

difference - the gas we're now saving each year at Longford Gas Plants is enough to supply more than 80,000 households, which is well over the total domestic gas supply of the whole Gippsland region.

We are also working to identify beneficial uses for some of our emissions, helping to reduce the carbon intensity of our Gippsland gas operations. For example, we recently signed a long-term CO₂ supply agreement with Air Liquide, who will process CO₂ from our Longford Gas Plant to food and beverage grade quality and provide the in-demand gas to Australian businesses.

5. Policy certainty will help to achieve supply reliability

Although the Gippsland Basin has been producing energy for Australia for more than 50 years, it remains the largest single source of gas supply to the east coast domestic market.

Esso Australia has led investment in exploration, resource development and infrastructure. Through these investments, we have done the heavy lifting to deliver natural gas to the east coast domestic market.

The recent West Barracouta development, which delivered gas to Victorians in time for winter this year, demonstrates the Gippsland Basin still has the capacity to bring material new gas supply to the market.

We continue to assess further opportunities to bring additional gas supplies on line. However, these opportunities are smaller and more challenging than the large and easily accessible fields of the past and Gippsland gas will continue to decline significantly in the coming decade.

The proposed roadmap provides an opportunity to plan for the expected decline of gas supply from the Gippsland Basin, but needs to be balanced with ensuring supply reliability for Victorians throughout this transition.

Certainty of the role of gas in Victoria's future will help to facilitate the right investment at the right time to make more gas supplies available – gas supplies that will still be needed to keep Victorian homes warm and Victorian businesses running as we transition to a renewable energy future.

6. Natural gas infrastructure supports a transition to diverse energy sources in future

Over the last 50 years, Victoria has benefitted from the development of an extensive gas reticulation network, which could be beneficially reused to supply biogas, and potentially hydrogen, in the future.

Transitioning to an electricity-based system will require significant investments and require buy-in from consumers, prolonging the transition period.

With Victoria's fluctuating energy demand, based primarily on home heating during winter, producers and suppliers will need to invest in sufficient storage, such as batteries or hydrogen to be able to meet these peak demand periods.

Electrification will also require every day Victorians to invest in converting their home appliances. Even if the sale of gas appliances was prohibited, it would take a significant amount of time and cost to transition millions of Victorian homes and businesses to electric hot water, cooking and heating appliances.

Coupled with Carbon Capture and Storage, hydrogen production and distribution utilizing existing gas supply infrastructure supports a faster and easier transition to a net zero future.

Maintaining the use of Victoria's existing gas supply infrastructure now so it can support this transition in future is essential.

7. Conclusion

Supporting ongoing energy security for Victorians while transitioning to a net zero future is essential and will require a range of solutions.

Victorian homes and businesses rely heavily on natural gas. Natural gas will continue to play an important role in Victoria's energy mix, and is necessary for ensuring supply reliability, especially as the use of intermittent renewable energy sources, such as wind and solar, grows.

Any pathway towards gas substitution must take into account the needs of the community and businesses who rely on natural gas, and the flow-on impacts to these gas consumers of any policy changes. Opportunities to reduce the carbon intensity of local gas production, such as Carbon Capture and Storage, can support the ongoing reliable supply of gas to Victorians while also supporting Victoria's decarbonisation goals.

Maintaining the use of existing gas infrastructure supports energy security now, while also providing opportunities to use these facilities for the provision of alternative fuels, such as biogas or even hydrogen, in a net zero future.

Please contact [REDACTED], on [REDACTED] or [REDACTED], for any queries with respect to this submission.

Yours sincerely

A handwritten signature in blue ink that reads "Dylan V. Pugh". The signature is written in a cursive style with a clear first name and a last name.