



6 August 2021

Department of Environment, Land, Water and Planning
8 Nicholson St
East Melbourne VIC 3002

Victoria's Gas Substitution Roadmap

Alinta Energy welcomes the opportunity to respond to the Department's consultation on the Government's Gas Substitution Roadmap.

Alinta Energy, as an active investor in energy markets across Australia with an owned and contracted generation portfolio of nearly 3,000MW, a target of 1,500MW of owned and contracted renewable energy generation by 2025, and more than 1.1 million electricity and gas customers has a strong interest in the future of the Victorian gas market and transitioning to a lower carbon intensive energy system.

We support the Victorian Government's overarching policy objective of reaching net zero CO₂-e emissions by 2050 and the setting of interim targets to validate progress against this goal. Decarbonisation of the gas industry is one of many sectors that can contribute to the net zero objective. We would also emphasise the significant steps taken in the electricity generation sector across Australia over the last fifteen years, including by Alinta Energy as joint investor and manager of Western Australia's largest wind-farm (Yandin), and the take up of renewable distributed energy resources such as solar PV by consumers. There are steps that can be taken in the gas sector that will lead to lower carbon intensity and Alinta Energy welcomes the staged approach the Government intends to adopt.

As highlighted in the consultation paper, Victoria is unique among Australian jurisdictions given its climate influenced demand for natural gas space heating; materially greater than any other state or territory. Increasing electrification, blending hydrogen or biogas in the distribution network and improved energy efficiency will all contribute to lowering the carbon intensity of Victoria's gas industry. Alinta Energy believes any transition will take several decades to avoid inefficient investment and price shocks to industry and smaller consumers of gas.

Alinta Energy acknowledges that the gas industry itself has been at the forefront of preparing for a lower carbon future. For example, the establishment of the Australian Hydrogen Centre with distributors such as Australian Gas Networks, AusNet and the Department itself as founding members.

We encourage an objective of harmonising policies and regulation across other Australian jurisdictions in the development of the Roadmap to minimise the cost of transitioning to lower carbon future for gas. This will reduce costs to consumers, increase choice and maximise the potential for innovation and efficient solutions provided by industry to meet the objectives of the Roadmap.

We make comment on the questions raised in the consultation paper below and welcome

Yours sincerely



Graeme Hamilton
General Manager, Government & Regulatory Affairs

Reference	Topic	Questions	Comments
Page 27	<p>Decarbonisation pathways</p> <ol style="list-style-type: none"> 1. Energy efficiency 2. Electrification 3. Hydrogen substitution 4. Biogas substitution 5. Emerging technologies 6. Fugitive emissions 	<p>For each pathway</p> <ul style="list-style-type: none"> • What are the key benefits, risks, and potential impacts on various end-users, on energy affordability, safety, security, reliability and equity? • What is the scale of the opportunities and potential to accelerate uptake? • What are the key technical, regulatory and economic barriers? • What are the roles to be played by government, industry and how will consumers preferences be accounted for in the transition? • What are the likely timings of technical maturity and economic viability? • What are the best ways to maintain social acceptability and consumer confidence? • What are the inter-dependencies and trade-offs with other pathways (are pathways complementary or alternatives)? • What are the key uncertainties and potential for unintended consequences? 	<p>1. <u>Energy efficiency</u> Expanding energy efficiency programs too ambitiously (for example applying building standards to retailer targets under the Victorian Energy Upgrades program) could impact on the affordability of energy for end-users. Some decarbonisation pathways are better achieved through new home building standards. The risk of managing energy efficiency is best dealt with through consumer preferences, standards and market responses, rather than imposing forms of indirect taxation on consumer's energy bills.</p> <p>Alinta Energy acknowledges that there is a role for government (as well as industry, regulators and most of all consumers) in leveraging opportunities for energy efficiency to contribute to interim and long-term emissions reduction targets.</p> <p>We agree that minimum standards for EE for new and upgraded buildings (page 28) are an important contributor to reducing emissions and meeting Victoria's net zero target.</p> <p>2. <u>Electrification</u> Replacing legacy appliances (for example heating) with more efficient alternatives that use electricity will take significant planning, education and execution as well as coordination between government, regulators, industry, appliance manufacturers, installers and again, consumers themselves.</p> <p>The viability of gas transmission and distribution infrastructure needs to be considered (e.g., with falling new connections and the recovery of costs of the remaining customer base).</p> <p>3. <u>Hydrogen substitution</u> Trials involving hydrogen substitution are underway in Australia and overseas. Community acceptance (and addressing perceptions around safety) will be key. Alinta Energy acknowledges the work and investment undertaken to date by the gas transmission and distribution sectors.</p>

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Page 40	Key issue 1: Maintaining electricity reliability with new sources of demand	<ul style="list-style-type: none"> • What policies are needed to ensure that the electricity network can reliably serve new sources of demand from electrification of gas demand, hydrogen production and electric vehicles? • What is the role for gas-fired power generation and hydrogen in maintaining electricity reliability? 	<p>4. <u>Biogas substitution</u></p> <p>Similar to hydrogen substitution, community acceptance and understanding will be critical with the use of biogas.</p> <p>5. <u>Emerging technologies</u></p> <p>Consistency with national regulation and bodies (such as ARENA) should be incorporated into any policies dealing with emerging technologies. Technology neutrality should be a central objective to the treatment of new technologies that will assist with decarbonisation of the gas (and stationary electricity) sectors.</p>
			<p>To the extent possible, Victoria should harmonise energy policy (particularly in relation to wholesale electricity markets, electricity transmission and distribution) to national frameworks. This will provide investment certainty and ensure that efficient and timely investment is made across the National Electricity Market to meet challenges that other jurisdictions will face in relation to increasing electrification. Encouraging opportunities for private investment in grid-scale batteries, peer-to-peer microgrids and energy trading and aligning policies with the development of demand response mechanisms proposed in the Energy Security Board's recommendations on post 2025 NEM design would ensure efficient and competitive responses to the challenges of degasification and increasing electrification of appliances.</p> <p>Gas-fired power generation (GPG) and hydrogen both have a role to play in maintaining the reliability of the electricity network as electrification of appliances grows. GPG in Victoria (and the NEM more broadly) will be required to meet increased demand in peak periods. Over time, gas generation fuelled by hydrogen may become competitive and meet shortfalls in electricity demand when variable renewable generation or storage is unable to. Hydrogen may also substitute for natural gas for space heating and industrial processes, reducing the extent of electrification required.</p>

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Page 41	Key issue 2: Transitioning to more sustainable gaseous fuels with minimal disruption to end-users	<ul style="list-style-type: none"> What are the key technical challenges in converting existing gas networks to accommodate more sustainable gaseous fuels? What are the potential costs and opportunities in switching to more sustainable gaseous fuels for consumers? 	<p>The take up of electric vehicles will have a significant compounding impact on grid reliability and electricity demand and optimisation of demand through price signals and incentives will become increasingly important to maintain low and high voltage network reliability.</p> <p>Maintaining a sustainable gaseous fuel substitute for consumers (for example for space heating) is desirable. Whether this is a mix of hydrogen or bio-methane, the availability of choice for industrial, business and residential consumers will relieve the pressure on electricity grids from increasing electrification and provide alternatives for consumers.</p>
Page 42	Key issue 3: Maintaining the reliability, affordability and safety of gas supply	<ul style="list-style-type: none"> What are the affordability, reliability and safety considerations related to gas supply and gas infrastructure, both in the short term and during a long-term transition to a decarbonised gas sector? What policies are needed to ensure that the gas system continues to operate reliably and safely and remain affordable for end-users during this transition? 	<p>As discussed above, the cost of recovering fixed assets over a shrinking base of natural gas connections (where new connections are prohibited/discouraged), will impact the affordability of gas for customers who remain connected to the gas network.</p> <p>Electricity networks may determine that demand and capacity pricing of electricity distribution services may better reflect the recovery of their long-term average and marginal costs. If customers substitute significant heating loads (for example) to electricity, significant education may be required for consumers to avoid price shock from having higher instantaneous (kW/kVA) demand.</p> <p>A transition away from natural gas will need to be gradual given the significant capital investment of upgrading/changing appliance technologies and meeting new standards for both business and residential customers.</p> <p>The approach taken by the AER to regulating gas transmission and distribution may need to adapt if connection rates and volumes of gas transported decline over future decades.</p>
Page 45	Key issue 5: Managing uncertainty in the transition	<ul style="list-style-type: none"> What key uncertainties should the Roadmap take into account, and what is 	<p>Alinta Energy supports the Victorian Government's staged and precautionary approach. We would strongly encourage close engagement</p>

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		the government's role in reducing these uncertainties?	with national rule making and regulatory bodies and alignment with decarbonisation approaches to gas in other jurisdictions.