

## Gas infrastructure advice submission – 87

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**Name:** Georgina Greenland

**Stakeholder group/interest:** Bioenergy Australia

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

Bioenergy Australia (BA) is concerned to see that two scenarios do not incorporate any biogas/biomethane and the remaining two scenarios underplay the significant role biomethane can place in decarbonisation of the gas network. BA encourages further research into the full potential of biomethane production in Victoria. Relevant data will be available in the Commonwealth Bioenergy Roadmap which is due for release later this year. The Roadmap identifies the role that the bioenergy sector can play in accelerating Australia's clean energy transition, and the investment signifies the validity and potential value of the Australian bioenergy industry. Specifically, the Roadmap will highlight the significant opportunity presented by biomethane to decarbonise Australia's gas networks. We trust that when released, the Bioenergy Roadmap will be a valuable resource to inform consideration of Victoria's infrastructure requirements.

In March 2019, Enea produced this report on Australia's Biogas Opportunities:

<https://www.energynetworks.com.au/resources/reports/biogas-opportunities-for-australia-enea-consulting/>. Whilst not Victoria specific, this comprehensive report details Australia's broader biogas potential and provides some informative and compelling international case studies which may be of value.

### **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?**

Any resilient future energy scenario will include a variety of energy sources. BA advocate for inclusion of biomethane as it is uniquely placed to utilise existing gas infrastructure, making it an affordable and quickly deployable opportunity to decarbonise Victoria's gas network. It is Bioenergy Australia's opinion that provision of support for a Victorian biomethane industry will greatly assist to:

- decarbonise the gas industry, including driving rapid changes through the upgrading of existing biogas infrastructure to provide biomethane,
- reduce the risk of gas constraint,
- deliver effective pricing and improved consumer ability to purchase renewable gas,
- improve investment across the Victorian gas market, supporting wider uptake of biomethane technology by the waste sector, and
- create substantial employment opportunities, particularly in regional areas.

The current Malabar biomethane injection project will demonstrate the process of upgrading biogas to biomethane for injection into the Jemena gas distribution network. The biogas produced from the anaerobic digestion process at Sydney Water's Malabar wastewater treatment plant uses its existing infrastructure and then goes on to utilise the new gas cleaning and upgrading equipment prior to injection into the distribution network. The project investment is \$14 million, with \$5.9 million of this funded on behalf of the Australian Government by the Australian Renewable Energy Agency (ARENA).

Looking overseas, Europe has been a strong adopter of biomethane. Biomethane plants in Europe increased by 51% in the 2 years from 2018 to 2020, from 483 plants to 729. Copenhagen is an exemplar in this space and has announced that 100% of their gas network will be supplied by biomethane by 2025. Australia lags far behind these numbers, but with an abundance of feedstock, particularly in Victoria, there is no reason this cannot change quickly.

**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?**

Bioenergy Australia proposes that each of the following mechanisms be adopted in Victoria to overcome current barriers to maximise Victoria's green gas potential:

- Rapid development of a renewable gas certification scheme to support customers to use renewable energy

A key policy barrier to the growth of renewable gas is the lack of a market mechanism to support and encourage the use of biomethane in the national gas grid (and biogas behind the meter). Some of our largest companies (e.g., Brickworks, Arnotts and Boral), are publicly asking for renewable gas – but there is no mechanism to provide them with this product. Our members also have a range of clients seeking behind the meter solutions for renewable gas. Similarly, Australian gas consumers are increasingly aware of the environment and their purchasing power. The demand is high for gas companies to provide, and governments to support, a green gas alternative.

However, with no mechanism to verify renewable gas usage, these companies cannot clearly support desired investment, leaving a lack of urgency by some of the biggest gas users in the country to replace their natural gas with either biogas or biomethane.

The Malabar biomethane injection project specifically interacts with the New South Wales gas market and is also aiming to explore how best gas consumers can ensure they are paying for renewable gas by exploring renewable gas trading opportunities. It is expected that the learnings from this will be able to be applied across other gas networks and beyond the wastewater sector in the future.

Early findings from GreenPower and the Malabar biomethane injection framework together with renewable gas certification processes commencing imminently elsewhere (eg New Zealand) need to be considered as quickly as possible to rapidly establish a nation-wide certification and trading scheme. This should be pursued urgently, not over a period of years.

Following the establishment of a renewable gas program, it would also be necessary for there to be a unified community information campaign on the benefits of renewable gas and its availability for purchase.

- Implementation of an effective Emission Reduction Fund (ERF) method for biomethane to support investment in new projects, working with the federal government

Biogas use could greatly assist with hard-to-abate industries to rapidly reduce Australia's carbon emissions. Various technologies will be incentivised once their abatement value is enabled through a Biomethane ERF method. A Biomethane ERF Method is currently under development by the Clean Energy Regulator but current drafts do not allow the inclusion of agricultural waste as a feedstock, which will greatly impair its value as a mechanism to drive industry growth. Similarly, the proposed crediting period needs to be extended to be equivalent with international benchmarks to support the investment required for green gas projects. Bioenergy Australia has communicated these requirements to the Clean Energy Regulator.

- Implementation of a Green Gas Target, incorporating biomethane and hydrogen

The development and use of Green Gas Target would act to incentivise supply chain participants to shift from fossil fuel gas to renewable gas – similar to the function of the Renewable Energy Target (RET). This could be expected to rapidly build scale and bring down renewable gas costs.

- Provide suitable financial incentives

Biogas has not yet been able to compete with the low costs of natural gas as enjoyed in the current policy and finance environment. There are both capital expenditure barriers (eg cleaning and upgrading infrastructure) and operational expenditure barriers at this time. To promote biogas sector development, there ought to be:

- a. Funding for projects or project hubs,
  - b. Funding for biogas cleaning and upgrading infrastructure for new and existing biogas facilities, and
  - c. A renewable gas injection tariff.
- Pursue supportive policy and education

The intended rollout of food and green waste services to all households in Victoria plus the additional measures to promote commercial food waste recovery are welcomed to support biogas feedstock quality and quantity. Clear planning and sustained investment in this roll out and for related waste infrastructure will support its success.

We now need supportive, clear and fair regulation for the use of anaerobic digestates as a by product of anaerobic digestion. The regulation of digestates and other organic waste reprocessing outputs (eg aerobic compost) should be risk based and equivalent (ie, technology-agnostic).

Alongside this, biogas generators, especially landfill operators, could greatly benefit from waste policies that incentivise the maximised capture and use of biogas, in a manner that effectively complements carbon abatement mechanisms.

Gas injection standards and regulatory guidelines for pipelines should be reviewed to enable renewable gas to be injected into the system. Further, carbon benefits from the use of renewable gas need to be passed onto those users who purchase the gas. We understand that changes to the national carbon emission reporting framework may be required to accommodate this.

**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?**

Through enabling and encouraging biomethane injection into the gas grid.

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

**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?**

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

**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?**

**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?**

Please refer to answers given to question 3

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

Published with my name