



30 July 2021

Department of Environment, Land, Water and Planning
8 Nicholson St
Melbourne VIC 3000

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Dear Madam/Sir

Gas substitution roadmap consultation paper

Thank you for the opportunity to respond to the *Help build Victoria's Gas Substitution Roadmap Consultation Paper* (the Paper) published in June 2021.

EDL is a leading global producer of sustainable distributed energy. We own and operate nearly one hundred power stations across Australia, North America and Europe, both grid connected and remote and fueled by wind, solar, waste gases and liquid fuels. We have been operating in Victoria for thirty years. Of note, we convert landfill biogas to green gas (biomethane) in our North American operations and are interested to substitute natural gas with green gas in Victoria.

Green gas benefits and scale

Green gas (biomethane) is a zero emissions gas produced from the organic component of waste and agricultural feedstocks. It can be used as an industrial feedstock as well as make power, heat, transport biofuels, green hydrogen and commercial carbon dioxide. Victoria has the potential to produce up to 48 PetaJoules (PJ) of green gas a year, around one sixth of the State's current gas demand¹.

A green gas industry would reduce the risk of gas supply constraints, help Victoria meet its emissions reduction targets, improve the sustainability of local manufacturing and industry², make beneficial use of waste as well as promote regional investment and jobs. Green gas is a ready to go solution: the production technologies are proven and the industry can scale quickly and at a low cost compared with other natural gas substitutes such as hydrogen.

Methane gas has a safety profile well understood by the community. Unlike hydrogen, no retrofitting of pipelines or end-user equipment is needed to blend green gas into the distribution network. Introducing green gas would also help maintain the life of those network assets while avoiding the costs involved in electrifying the associated demand.

Government's role

The rapid development of the green gas industry would require the Government to take three key actions.

¹ *Decarbonising Australia's gas distribution networks*, Deloitte Access Economics, 2017, p 45.

² Given the potential scale of local green gas production, EDL sees manufacturing, industrial businesses and precincts (such as university campuses) as the most likely key end use customers for green gas supplied into the gas distribution network. Those customers are also the ones most willing to pay for green gas's zero carbon attribute.

Introduce a Green Gas Certificate Scheme

The first action would be to introduce a Green Gas Certificate Scheme. This would involve setting an industry-wide target with gas producers and importers required to meet their share by submitting green gas certificates to a regulator. They could create certificates by producing green gas themselves or by buying them from other sources. The scheme is flexible with the target and other components able to be adjusted over time as needed, and this could be appropriately reflected in the retail tariff design.

Similar Australian schemes, such as the Federal Renewable Electricity Target and previous Queensland's Gas Electricity Certificates scheme have operated successfully. Green gas plays an important role in the decarbonisation efforts of advanced economies overseas, all of which involve schemes that support its takeup. For example:

- the UK Government has introduced a Green Gas Support Scheme that targets an increase in green gas produced from anaerobic digestion plants —The investment is supported by 15 year tariffs via a levy on fossil fuel gas suppliers³
- US states Washington, Nevada and Oregon as well as Quebec in Canada require gas utilities to procure increasing amounts of green gas at a premium to brown gas prices and either pass this cost on through regulated tariffs or voluntary customers — For example, Oregon is targeting 10% RNG by 2025 and up to 30% by 2050⁴
- the UK Renewable Transport Fuels Obligation and the US Renewable Fuels Scheme (RFS) both target the use of low carbon biofuels in the transport sector by imposing an obligation on either conventional fuel importers/producers or retailers to supply them — This includes Compressed Natural Gas and Liquid Natural Gas made from green gas. The schemes currently have penetration rates above 10%⁵. The RFS has delivered over 190 green gas facilities to date with another 232 in development. The Californian Low Carbon Fuels Standard is similar. It obliges suppliers to reduce the carbon intensity of their overall sales by including a proportion of low carbon biofuels⁶.

Implement a Guarantee of Origin scheme

The second action would be to implement a green gas Guarantee of Origin (GO) scheme. A GO scheme is way to certify the key attributes of green gas, especially its zero emissions value. Certification allows end-users the ability to trade and potentially surrender that value, improving uptake and thereby attracting investment into the industry. The Government is a foundation partner in the Zero Carbon Certification Scheme currently under development. It may be appropriate to include green gas in that scheme. As an alternative, the NSW Government is trialling extending the national GreenPower scheme to include green gas⁷.

³ <https://www.gov.uk/government/consultations/future-support-for-low-carbon-heat>

⁴ <http://biomassmagazine.com/articles/17217/oregon-puc-adopts-rules-for-rng-program>.

⁵ See RTFO https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/953892/rtfo-guidance-part-1-process-guidance-2021.pdf) and RFS <https://www.govinfo.gov/content/pkg/FR-2020-02-06/pdf/2020-00431.pdf>).

⁶ <https://ww2.arb.ca.gov/our-work/programs/low-carbon-fuel-standard>.

⁷ <https://www.energymagazine.com.au/jemena-ena-greenpower-launch-renewable-gas-certification-pilot/>.

Undertake waste reforms to strengthen the supply of green gas feedstocks

The third step would be to progress waste and other policy reforms that strengthen the reliable and cost effective supply of green gas feedstocks. Victoria has long led other jurisdictions in its progressive waste and recycling policies including:

- introducing the mandatory separation of household and commercial recyclable materials
- leading the collaborative procurement of waste services by local councils
- planning for waste to energy facilities as part of resource recovery infrastructure and
- developing and promoting relevant standards, specifications and guidance materials — this could include the development of green gas feedstock standards⁸.

The development of a robust and low cost supply of feedstock would be enhanced by further actions to progress the above policies.

Conclusion

As noted at the start of this submission, EDL currently owns and operates an eight million gallon a year green gas facility in the United States. We also have two more plants in the final stages of construction and another two due to reach Financial Investment Decision in the coming months. This involves investing more than \$400m of capital with a further \$56m annual spend over the 20+ year life of the projects. EDL has capital available and is keen to continue to invest in Victoria.

We would be more than happy to discuss potential projects as well as share our working knowledge of best practice green gas policy mechanisms overseas. Please contact me on

Yours sincerely



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⁸ <https://www.vic.gov.au/transforming-recycling-victoria>.