

To: Department of Energy, Environment and Climate Action

6 February 2025

Industrial Renewable Gas Guarantee

We appreciate the opportunity to provide feedback on the proposed Industrial Renewable Gas Guarantee discussion paper.

About Environment Victoria

Environment Victoria is the leading not-for-profit environmental advocacy organisation in Victoria. With 96 grassroots member groups and over 200,000 individual supporters, we've been representing Victorian communities on environmental matters for over 55 years. Through advocacy, education and empowerment, Environment Victoria seeks significant and enduring solutions that will safeguard the environment and future wellbeing of all Victorians.

Introduction

The government's commitment as stated in the discussion paper is to "develop a thriving renewable gas sector that will gradually decarbonise significant volumes of Victoria's industrial fossil gas consumption", targeting "fossil gas usage where electrification is not commercially or technically feasible to meet the state's legislated emission reduction targets." The proposed Industrial Renewable Gas Guarantee is a market-funded certificate scheme commencing in 2027 with an initial target of 1 PJ.

Environment Victoria recognises the need to substitute fossil methane gas with renewable gas alternatives where electrification is not yet possible. We support the development of a healthy and responsible bioenergy industry that improves our management of waste and puts us on the path to genuine overall emissions reductions.

We cautiously support the introduction of a certificate scheme for renewable gas that is limited to industrial users and gas-powered generation. However, there are several aspects of policy design that require careful consideration and attention. This submission provides constructive input towards a well-designed scheme and flags other policy areas in need of attention.

The scheme needs clear objectives

Industrial gas use is just one segment of Victoria's energy system and cannot be considered in isolation. Changes brought by the scheme need to reduce overall greenhouse gas emissions and set industry on a path that provides longevity and certainty. These goals should be stated in the scheme's objectives in order to get the initial policy design right and effectively steer policy development over time.

Without clear and enforceable objectives the scheme could have negative consequences for end users and the climate, such as:

- Undermining efficient electrification that offers businesses reliable cost reductions and a noregrets pathway to being fully decarbonised;
- Undermining alternative bioenergy solutions that are not included in the scheme but might be more cost-effective and have lower overall greenhouse gas emissions;
- Wasting finite investment dollars going down 'dead end' paths such as hydrogen blending that cannot scale, reduce costs or reduce emissions;
- Diverting bioenergy away from electricity generation, as is currently done at many landfills around Victoria, without regard for which is the better outcome for climate and the energy system;
- Increasing fugitive methane emissions, including those already occurring in the gas network, behind the meter and other leakages we don't yet have enough information about.

Limiting access to industrial users

We strongly support limiting access to renewable gas to industrial consumers. While households and commercial premises have access to cheaper and healthier electric alternatives, in many cases industry does not yet have a viable alternative to using gas.

Limiting access to those without good electric alternatives will avoid unnecessary demand that drives up prices. The price of methane gas in Victoria has tripled in less than a decade because local industry has been forced to compete with lucrative LNG export contracts.¹ With the looming possibility of LNG imports exposing Victorian businesses to even higher gas prices, access to a pool of locally-produced bioenergy could help keep jobs in Victoria.

Limiting access to industrial users will also help Victoria reach net zero faster, because the volume of fossil methane that needs to be substituted with renewable gas is greatly reduced.

Cost recovery

The biggest policy challenge for the proposed scheme is how costs are recovered. It is an issue of fairness – who benefits, who bears the costs and the risks, and are those apportioned fairly? The below table summarises the benefits and cost/risks accruing to different groups, and we make the following observations:

• The gas networks are direct beneficiaries of the policy through delayed asset depreciation which extends their profits and, in reality, super profits. Any costs they incur are passed through to households and businesses – they bear little or no risk.

¹ Kevin Morrison and Amandine Denis-Ryan, 'LNG Exports Prompt Fall in East Coast Gas Demand' (IEEFA, December 2024), https://ieefa.org/sites/default/files/2024-

^{12/}LNG%20exports%20prompt%20fall%20in%20east%20coast%20gas%20demand_Dec24.pdf.

- Households and businesses connected to the gas network are already paying tripled gas prices which are pushing up the cost of living and doing business, and pushing jobs out of Victoria. The tripling of gas prices was caused by exposure to the LNG export market – something that households and businesses had no say in.
- The cohort of households and businesses connected to the gas network will increasingly be comprised of those that would rather not use gas, but face barriers to electrification. These groups will be exposed to spiralling network connection costs unless the regulation of gas networks is reformed in favour of consumers.
- Bioenergy developers benefit from industry expansion, and in return are asked to take on the business risk of development. This appears to be a fair apportionment.

If the Victorian government ultimately decides that an Industrial Renewable Gas Guarantee is the best policy for gas substitution in hard-to-electrify industries, the gas networks need to take on their fair share of costs and risks of the scheme.

At the same time, the Victorian government needs to keep working to ensure that households and businesses can electrify. Where electrification is not possible, improving gas efficiency and cutting waste is also an important measure. Australia and Victoria have not had an industrial energy efficiency program in over a decade and there remains significant opportunity to reduce gas use through efficiency.

Group	Benefits	Costs/risks
Tariff V customers (residential and small commercial)	Shared societal benefits of lower greenhouse gas emissions	Higher per-unit gas prices, with increasingly disproportionate burden on low income families, renters and apartment dwellers Exposure to spiralling fixed costs
People not connected to mains gas	Shared societal benefits of lower greenhouse gas emissions	None
Bioenergy developers	Industry expansion	Business risks of investing in new technologies and facilities
Tariff D customers (large commercial and industrial)	Supplement dwindling fossil gas supplies Lower exposure to potential future climate policies	Higher per-unit energy prices Exposure to spiralling fixed costs
Gas networks	Extension of profits and super- profits	None

All bioenergy development that replaces fossil methane should be included

Bioenergy is a diverse industry producing different products and reaching customers via different means – via pipelines, on site or transported in other ways. The scheme needs to include this diversity so that industrial energy users can access bioenergy products at the lowest price and as best suits their needs. The scheme also needs to support competition - users should be able to change their gas purchasing arrangements over time without disrupting the volumes of gas that are subject to the scheme.

The scheme should include all renewable gas from bioenergy that displaces fossil methane, including renewable hydrogen (with caveats as stated below), biogas and biomethane.

The scheme should include renewable gas that is produced on site where it is then used in industrial processes. On-site facilities have lower emissions from fugitives and transport, and can be more cost-effective due to lower transportation costs.

The scheme should include renewable gas that is delivered to off-site customers via means other than pipelines, for example by road transport. We heard from attendees at the Department's January 15 webinar that some bioenergy producers are planning to do exactly this. As we have noted above, the policy should consider overall greenhouse gas emissions including those from road or rail transport.

Hydrogen in pipelines should be omitted

Renewable hydrogen may be a good solution for certain applications where there are no viable alternatives, such as shipping or steel production. These might be catered to by the scheme or by a more targeted policy. However, hydrogen blending in gas pipelines and network conversion to 100% hydrogen are implausible options that should not be catered to.

The upper limit of hydrogen blending is low. Gas networks and appliance lobby groups commonly use ambiguities such as "up to x% hydrogen" to avoid specifying upper limits achieved in practice. Because hydrogen has a lower energy density than methane, even a 5% hydrogen blend requires topping up with 3% more methane gas in order to deliver the same amount of energy to customers.²

The costs to upgrade gas networks for hydrogen blending and conversion have routinely been underestimated by the gas industry. Cost items commonly omitted include excavating and remediating pavements, assessment and replacement of gaskets, joins and other components, replacement and addition of valves necessary for safety, new compressors suitable for the additional volumes required, and the cost of managing significant safety issues inside pipes such as internal abrasion, residiual hydrogen and condensate.

Gas network regulation needs reform

With every new challenge facing methane gas supply and demand it becomes clearer that the way gas networks are regulated and funded is not fit for purpose. The existing regulatory paradigm where Victoria's households and businesses have all costs passed through to them while LNG companies and privatised networks reap profits is clearly not in Victoria's interest and no longer fit for purpose.

² 'Hydrogen Expert Says Blending Green Fuel into Gas Network an "Expensive" Waste', RenewEconomy, 27 March 2023, https://reneweconomy.com.au/hydrogen-expert-says-blending-green-fuel-into-gas-network-anexpensive-waste/.

Households and businesses are carrying the burden of this necessary structural change in the way we serve our energy needs. Renewable gas alternatives are currently more expensive per unit of energy delivered and increasing disconnection from the gas network means costs are shared across fewer and fewer customers.

Recent research from Energy Consumers Australia found that 37% of Victoran households are planning to cancel their gas supply by 2035.³ This has significant cost implications for households and businesses that remain connected.

Both households and businesses face barriers to disconnect from gas, even when there is a compelling case for electrification. Everyone who consumes gas in Victoria is already struggling with the severe price jump since east coast LNG exports commenced in 2015. In the case of households, groups that are most impacted by high energy prices find it hardest to break free of gas. These include low income households, renters and apartment dwellers. Businesses facing high gas prices and worried about spiralling connection costs are struggling to stay competitive and keep jobs in Victoria.

Meanwhile, the gas networks enjoy guaranteed profits plus almost the same amount again in superprofits.⁴ As more customers plan to electrify, the gas networks are responding by seeking to accelerate depreciation of their assets and make even more money from their customer base sooner. This situation is completely antithetical to an energy system that is supposed to operate in the best interests of consumers.

The existing state of affairs is a choice – it does not have to be this way. The Victorian government needs to urgently initiate reform of the regulation of gas networks to ensure that costs are borne by those able to. This should preferably be done with the jurisdictions that are part of the east coast gas market.

Liable entity

The choice of liable entity should be consistent with our assertions above: firstly, that the scheme should be inclusive of all bioenergy that replaces fossil methane gas regardless of whether or not it is delivered through a pipeline, or whether the producer and end user are the same entity. This means that the liable entity should not be limited to participants in the regulated gas market. Secondly, the choice of liable entity should allow for the fair apportionment of costs and benefits across all parties.

³ Energy Consumers Australia, 'How Households Use Gas and Their Attitudes towards Electrification' (ECA, 30 January 2025), https://energyconsumersaustralia.com.au/wp-content/uploads/survey-consumer-energy-report-card-dec-24-report-how-households-use-gas-attitudes-electrification.pdf.

⁴ Jay Gordon, 'Gas Networks Are Making Persistent and Significant Supernormal profits_May24.Pdf' (IEEFA, 2024), https://ieefa.org/sites/default/files/2024-

^{06/}Gas%20networks%20are%20making%20persistent%20and%20significant%20supernormal%20profits_May 24.pdf.

A slow start to the scheme is a good idea

Relative to Victoria's industrial gas consumption and existing production rates of biogas, 1 PJ is a small target. 1 PJ per annum is around 1.7% of annual consumption by large commercial and industrial (Tariff D) customers in Victoria.⁵ Victoria's recoverable biogas potential has been estimated as between 10.5 and 24.9 PJ per year.⁶

However, substitution of fossil methane with biomethane is complex. Biomethane composition varies with implication for off-gases, metering and suitability for end users. In addition, it is not clear whether gas networks would be obliged to accept all biomethane injections, as is the case for electricity networks. The advantage of a slow start to the scheme is it provides space for producers, consumers, operators and regulators to iron out practical challenges. After that, the scheme can ramp up to the pace required for net zero.

We would be pleased to discuss any aspects of this submission in detail should you wish.

Dr Kat Lucas-Healey Senior Climate and Energy Advisor Environment Victoria <u>k.lucashealey@environmentvictoria.org.au</u> 0404 571 605

⁵ Australian Energy Market Operator, 'Victorian Gas Planning Report Update', 2024.

⁶ Enea Consulting, 'Assessment of Victoria's Biogas Potential' (Sustainability Victoria, December 2021), https://assets.sustainability.vic.gov.au/susvic/Report-Energy-Assessment-of-Victorian-biogas-potential.pdf.