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Victorian Renewable Gas Directions Paper

Gas Energy Australia (GEA) represents Australia's liquid gas supply chains including Liquefied Petroleum Gas (LPG) and associated gases. Our members span from producers to retailers and everything in between. The LPG industry safely and securely supplies 43PJpa of energy to industrial, commercial and residential consumers nation-wide, including around 30% of all regional Australian households[1].

GEA welcomes the opportunity to provide a submission to the Victorian Department of Energy, Environment and Climate Action (DEECA) Industrial Renewable Gas Guarantee (IRGG) Directions Paper.

GEA is encouraged by the Victorian Government recognising that LPG is different to natural gas. LPG plays a vital role supplying energy to Victorian industrial, commercial, residential, transport and recreational energy users today. Through the supply of drop-in renewable forms of LPG, Victorian energy consumers can continue to receive reliable, secure and affordable LPG supply while supporting emissions reduction targets[2].

General Feedback

Recognition of renewable energy beyond renewable electricity.

The (IRGG) is a significant step forward in recognizing that renewable energy includes more than just renewable electricity. By acknowledging the importance of renewable fuels, the IRGG establishes a foundation for developing support beyond renewable electricity via mechanisms comparable to the Renewable Energy Target (RET).

This expanded approach is essential for enabling new renewable fuel producers to contribute to the decarbonization of Australia's diverse energy supply chains. The framework provides assurance to energy consumers that renewable alternatives for the forms of energy which they choose will be supported across all jurisdictions, particularly benefiting sectors where electrification may be technically or economically challenging.

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[1] DCCEEW, 2024, Australian Energy Update 2024, https://www.energy.gov.au/publications/australian-energy-update-2024
Australian Bureau of Statistics, 2014, Environmental Issues: Energy Use and Conservation, https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4602.0.55.001Main+Features1Mar%202014?OpenDocument

[2] Frontier Economics, 2023, *Pathways to Zero Emissions for LPG*, https://www.gasenergyaus.au/get/2016/pathway-zero-emissions-for-lpg-frontier.pdf

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Renewable forms of LPG

IRGG liable entities could reduce their natural gas emissions by adopting behind-the-meter supply of renewable forms of LPG. Current drafting would unfairly disadvantage entities taking this approach. This is because current drafting would not reduce IRGG liability proportionate to the amount of renewable forms of LPG consumed.

GEA Proposes that proposed legislation should allow for the demonstrable behind-the-meter uptake of renewable forms of LPG should reduce IRGG liability to the same extent as uptake of biomethane or renewable hydrogen delivered via gas infrastructure.

Opportunity to take similar approach to LPG supply

The IRGG demonstrates an energy decarbonisation policy model that could be used to decarbonise LPG supply. LPG is utilized by a diverse array of industrial, commercial, and residential customers. A transition to renewable forms of LPG is required to ensure LPG supply remains available for those who depend on it as Victoria pursues its emission reduction ambitions.

GEA Invites the Victorian government to discuss the opportunity to apply the IRGG decarbonization policy model to the LPG supply chain.

Victoria is leaving greater decarbonisation on the table

Restricting IRGG liable entities to Industrial entities and proposing such low target volumes both limit the growth potential of renewable gas in Victoria. Bioenergy Australia and the Victorian Bioenergy Network have both demonstrated much greater bioenergy potential in Victoria and Australia than the proposed IRGG target in past submissions. And as identified by the Victorian Governments draft legislation to the Minimum Standards for Rental Properties and Rooming Houses, electrification can cost an unreasonable amount for some households[3].

GEA Proposes that the IRGG be expanded to a General Renewable Gas Guarantee with an increased target which will more greatly incentivise gas decarbonization in Victoria.

[3] Victorian Department of Energy, the Environment, and Climate Action, 2024, *Exposure Draft - Residential Tenancies and Residential Tenancies (Rooming House Standards) Amendment (Minimum Energy Efficiency and Safety Standards) Regulations 2024,* *https://engage.vic.gov.au/download/document/35492*

The Role of LPG in Australia's Energy Landscape

Liquefied Petroleum Gas (LPG) plays a vital role in Australia's energy security and net zero transition. As a versatile energy source with drop-in renewable alternatives, LPG provides essential energy services to millions of Australians, particularly in regional and remote areas where it serves approximately 30% of households. The LPG industry safely and securely supplies 43 petajoules of energy annually across industrial, commercial, and residential applications nationwide.

LPG stands out as a cleaner alternative to many traditional fuels, producing 14% fewer greenhouse gas emissions than diesel. The industry is actively embracing Australia's transition to net zero through the pursuit of renewable forms of LPG. These include bioLPG (a co-product of Sustainable Aviation Fuel) and renewable LPG (rLPG). These alternatives produce near-zero scope 1 emissions while utilizing existing infrastructure and appliances.

One of LPG's most significant advantages is its superior energy storage capabilities in cheap, transportable LPG bottles and tanks. This is key in regional areas where mains power may be unreliable or unavailable. A standard residential LPG tank installation provides energy storage equivalent to more than 42 Tesla Powerwall 3 home battery systems at around one tenth of the cost. This storage capacity, combined with LPG's portability, makes it an invaluable resource for energy security and emergency resilience.

The LPG industry is uniquely positioned to support Australia's energy transition without requiring government funding or subsidies. As the nation moves toward net zero emissions, renewable forms of LPG complement renewable electricity, offering a practical decarbonisation pathway for applications where electrification may not be feasible or cost-effective. By recognizing and supporting the development of renewable forms of LPG, Australia can ensure a diverse and resilient energy mix that retains energy security while achieving its climate goals.

Consultation Question Responses

Question 1

How do you assess the feasibility of the 4.5 PJ target by 2035?

From a volume perspective, such a low 2035 target risks failing to enable the renewable gas market in Victoria and leaves decarbonisation opportunity on the table. Both Bioenergy Australia and the Victorian Bioenergy Network have indicated that there is much greater biomethane production potential in Victoria and adjacent states. Too small of a target could do more harm than good to renewable energy growth.

More generally, any 2035 IRGG target is achievable through a carefully structured policy framework. The IRGG leverages a proven model for market transformation, building on lessons learned from the successful RET scheme. Three key factors support the target's feasibility:

1. The IRGG's design enables both grid-injected and behind-the-meter renewable gas solutions, maximizing flexibility for industry participants.
2. The technology-agnostic approach allows market forces to identify the most cost-effective pathways, whether through biomethane, renewable hydrogen, or renewable LPG.
3. The target's timeline aligns with projected technology cost reductions and scaling of production capacity across the renewable gas sector.

However, achieving this target requires maintaining policy certainty to support long-term investment decisions. Early market signals through the IRGG will be crucial for stimulating the necessary infrastructure development and supply chain maturity.

Do you think 1 PJ of biomethane production annually is possible within the first three years of the scheme? If so, why? If not, why not?

As per the 4.5PJ 2035 target, the 1PJ in 2030 target is unambitious and risks undermining renewable energy market growth. This is based upon Bioenergy Australia and Victorian Bioenergy Network projections.

Victoria's existing landfill gas infrastructure provides a strong foundation for rapid scaling. Current landfill gas capture facilities can be upgraded to biomethane production, offering a quick pathway to market. Victoria has other substantial and accessible feedstock resources as well as evidenced by Bioenergy Australia and Victorian Bioenergy Network.

Question 2

Could industry potentially deliver volumes greater than 4.5 PJ by 2035? If so, what degree of confidence is there, and what evidence is that confidence based on?

There is ample industry capacity to exceed the 4.5 PJ target by 2035. Victoria has substantial biomass resources provide sufficient feedstock capacity for large-scale

production across both biomethane and renewable hydrogen pathways. This is able to be supplemented by interstate renewable gas production potential which can exceed Victorian demand.

Proven technology readiness is demonstrated through successful commercial-scale operations in both biomethane and renewable hydrogen production, reducing technical risk. The IRGG policy framework provides complimentary investment certainty needed for rapid scaling – certainty which could be provided for behind-the-meter renewable forms of LPG if included in legislation.

Strong market engagement is evidenced by industry commitments to invest in renewable gas infrastructure, indicating private sector confidence in exceeding the target.

Is there likely to be demand for renewable gases that exceeds 4.5 PJ by 2035? If there is, what evidence is this based on?

Market demand is expected to exceed 4.5 PJ by 2035. Corporate decarbonization commitments are accelerating, with many major industrial users setting ambitious emissions reduction targets that will require renewable gas adoption. Industry consultation feedback demonstrates strong customer interest in purchasing above the target levels, particularly given the anticipated recognition of renewable gases as zero scope 1 emissions.

However, the industrial market is only the beginning. Many commercial and residential customers, in particular regional residential customers, are either unable to electrify or could decarbonise at a lower cost using renewable gas.

Question 3

How should the dual ambitions of scaling up a renewable gas sector while directing renewable gases to their highest-value use cases to drive additional decarbonisation be managed?

The optimal approach to balancing sector growth with targeted deployment involves creating a flexible market framework that achieves both objectives. Allowing market mechanisms to identify and prioritize high-value applications while maintaining broad access across user segments will ensure renewable gas will go to where it is needed. This would prevent artificial constraints that could hamper sector development and end user decarbonisation.

Implementing technology-neutral policies that accommodate both current solutions and emerging technologies (like renewable LPG) will support longevity of the scheme. Flexibility will ensure the market can adapt as new renewable gas options become commercially viable.

Further, maintaining universal market access - including for rural and regional residential customers – would supports both scale-up through broader demand and

optimal resource allocation. This balanced approach would enable organic development of high-value applications while building the scale needed for sector growth.

Question 4

Should the costs of a renewable gas certificate scheme be recovered from all gas users, including residential and small commercial (i.e., Tariff V) users, or should the costs be recovered from industrial gas (i.e., Tariff D) users only? Please state your reasons in support of one option or the other.

The renewable gas certificate scheme costs should be recovered across all gas users (both Tariff V and Tariff D). Broad-based cost recovery creates a more sustainable funding model that reduces individual cost impacts while supporting faster market development.

Universal cost contribution should be matched with universal access to benefits. Any customer contributing to scheme costs should have access to the resulting decarbonization opportunities. This approach ensures equitable distribution of both costs and benefits while maximizing the scheme's effectiveness.

Question 5

Should the liable entity (i.e., the organization that must procure and surrender certificates in line with annual targets) under any Victorian renewable gas certificate scheme be:

- **Licensed gas retailers along with wholesale energy purchasers who do not procure gas through a licensed retailer?**
- **Or are there other actors that could potentially be liable entities? Please state your reasons in support of one option or the other.**

Licensed gas retailers and wholesale energy purchasers should be designated as liable entities under the scheme. This structure would mirror the proven Renewable Energy Target framework, leveraging existing compliance mechanisms and reducing implementation complexity.

Placing liability at the retailer level enables efficient integration of behind-the-meter renewable gas solutions, including renewable LPG, supporting comprehensive market development. This approach maintains market stability for rural energy access while supporting domestic manufacturing capabilities through established supply chains.

LPG has the potential to contribute significantly to Victoria's energy landscape, especially in regions where traditional electrification may be impractical or costly. By working together, we can develop policies that support not only emissions reduction but also the energy needs of all Victorians.

Thank you for considering our submission. We look forward to continued discussions on this important matter.

To discuss any of the above feedback further, please contact me on +61 422 057 856 or via jmccollum@gasenergyaus.au.

Yours sincerely,

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