



9 January 2025

Submission: Senate Inquiry into the Hydrogen Production Tax Incentive Draft Bill

The Australian Pipelines and Gas Association (APGA) represents the owners, operators, designers, constructors and service providers of Australia's pipeline infrastructure, connecting natural and renewable gas production to demand centres in cities and other locations across Australia. Offering a wide range of services to gas users, retailers and producers, APGA members ensure safe and reliable delivery of over 1,600 PJpa of gas consumed in Australia alongside over 4,500 PJpa of gas for export.¹ We are at the forefront of Australia's renewable gas industry, helping achieve net-zero more quickly and affordably.

APGA welcomes the opportunity to provide comments to the Senate Economics Legislation Committee inquiry into the *Future Made in Australia (Production Tax Credits and Other Measures) Bill 2024* (the Bill). APGA's submission refers to Schedule 1 of the draft bill, the Hydrogen Production Tax Incentive (HPTI). This incentive as drafted in the Bill will provide significant signal to the market for investment in green hydrogen production. However, it may do so at the expense of investment in biomethane, which will provide a critical scaffold for Australia's transition to a net zero economy. APGA's submission argues that the HPTI should be extended to biomethane.

APGA supports a net zero emission future for Australia by 2050². Renewable gases represent a real, technically viable approach to lowest-cost energy decarbonisation in Australia. APGA sees renewable gases such as hydrogen and biomethane playing a critical role in decarbonising gas use for both wholesale and retail customers³. APGA is the largest industry contributor to the Future Fuels CRC⁴, which has over 80 research projects dedicated to leveraging the value of Australia's gas infrastructure to deliver decarbonised energy to homes, businesses, and industry throughout Australia.

Hydrogen tomorrow, biomethane today

The HPTI and the Hydrogen Headstart scheme will drive significant investment in large-scale hydrogen projects, especially where proponents can take advantage of both schemes. But even with fast-tracked investments, large-scale projects will likely not produce significant quantities of hydrogen until well into the 2030s.

¹ DCCEEW, 2024, *Australian Energy Update 2024*, Figure 3, https://www.energy.gov.au/sites/default/files/2024-08/australian_energy_update_2024.pdf

² APGA, *Climate Statement*, available at: <https://www.apga.org.au/apga-climate-statement>

³ ACIL Allen, 2024, *Renewable Gas Target – Delivering lower cost decarbonisation for gas customers and the Australian economy*, <https://apga.org.au/renewable-gas-target>

⁴ Future Fuels CRC: <https://www.futurefuelscrc.com/>

Australia needs renewable gas at scale well before this to support an efficient net-zero transition. Renewable gases will provide a decarbonisation pathway for current gas users who cannot electrify, and to enable green industries like green metals, low-emissions fertilisers and other products.

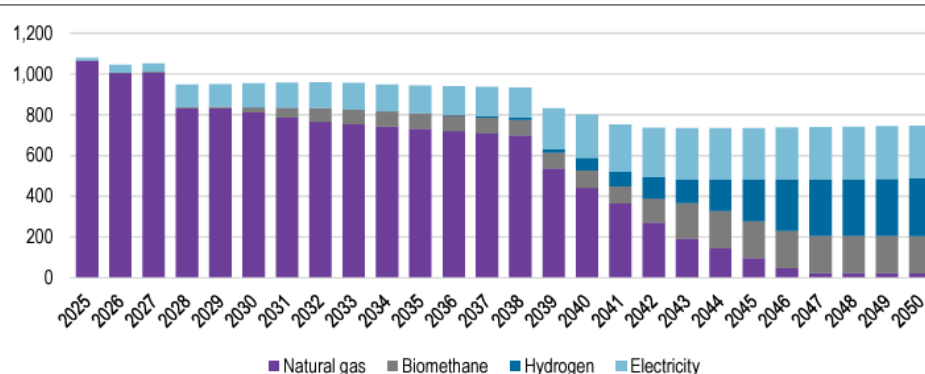
Biomethane can be immediately substituted for natural gas in transmission and distribution infrastructure, and in existing appliances. With the right policy settings, biomethane can both complement green hydrogen, and bridge the gap between now and when green hydrogen production scales up to provide sufficient volumes.

The largest biomethane production facility in Australia, Jemena’s demonstration biomethane plant in Malabar,⁵ can currently produce 95 terajoules of renewable gas annually – but conservative estimates of Australia’s biomethane potential is in the tens of petajoules per annum. This is enough to replace a quarter of Australia’s domestic natural gas use.⁶

Together hydrogen and biomethane can deliver least cost gas use decarbonisation

The role of biomethane in Australia’s future fuel mix under a least-cost decarbonisation pathway was demonstrated in ACIL Allen’s recent modelling for a Renewable Gas Target.⁷ Biomethane will be critical today and in the near future, well ahead of delivery of significant volumes of hydrogen from the late 2030s (Figure 1).

Figure 1: Projected fuel mixes of current gas users under an Optimal Renewable Gas Target (PJ)



Source: ACIL Allen Gas Transition Model

APGA anticipates that once the renewable gas market is enabled through policies such as a market-based method for emissions recognition and a Renewable Gas Target, it will take the same path as the renewable electricity market and develop to multiple times its current size.

⁵ Jemena, 2024, *Malabar Biomethane Injection Plant*, <https://www.jemena.com.au/future-energy/future-gas/Malabar-Biomethane-Injection-Plant/>

⁶ ENEA, 2021, *Australia’s Bioenergy Roadmap*, <https://arena.gov.au/knowledge-bank/australias-bioenergy-roadmap-report/>

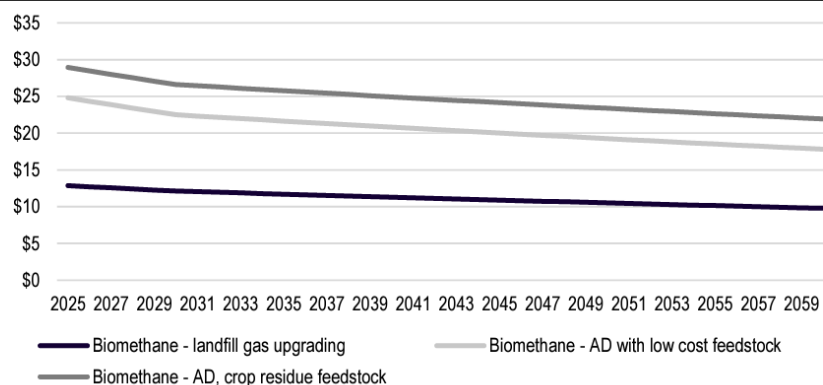
⁷ ACIL Allen, 2024, *Renewable Gas Target: Delivering lower cost decarbonisation for gas customers and the Australian economy*, <https://apga.org.au/renewable-gas-target>

Extend the Production Tax Incentive to biomethane

Biomethane is an internationally mature technology, but in Australia the industry is experiencing challenges in scaling up project investment. Similar to green hydrogen production, these challenges are largely related to initial costs before scale can be achieved.

The HPTI of \$2/kg of green hydrogen equates to \$14/gigajoule.⁸ If applied to biomethane production this would represent a significant incentive for investment. Biomethane from upgrading landfill gas would become available at a cost considerably lower than the current premium. This incentive would also make viable many currently marginal projects which produce biomethane from anaerobic digestion (Figure 2).

Figure 2. Expected costs of biomethane by source, to 2059 (\$/GJ)⁹



Source: ACIL Allen analysis of Enea and Deloitte 2021, Australia's Bioenergy Roadmap, <https://arena.gov.au/knowledge-bank/australias-bioenergy-roadmap-report/>, adjusted for inflation using ABS CPI data

Ultimately, the HPTI will provide significant signal to the market for investment in green hydrogen and significantly de-risk those investments. This opportunity should be extended to biomethane to meet the need for renewable gases now and in the near future. APGA also notes that the HPTI is closely integrated with the Guarantee of Origin scheme, which the Government intends to expand to products other than green hydrogen in the future, potentially including biomethane.

To discuss any of the above feedback further, please contact me on +61 409 489 814 or crafael@apga.org.au.

Yours sincerely,

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⁸ This conversion uses the "higher" 143 GJ/tonne energy content factor for hydrogen, as listed in the NGER Measurement Determination, Schedule 1–Part 7–Energy commodities.

⁹ ACIL Allen, 2024, adapted from estimates published in *Australia's Bioenergy Roadmap*.