



12 July 2024

Submission: Hydrogen Production Tax Incentive

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 the safe and reliable delivery of 28 per cent of the end-use energy consumed in Australia and are at the forefront of Australia's renewable gas industry, helping achieve net-zero as quickly and affordably as possible.

APGA welcomes the opportunity to comment on Treasury's consultation on the Hydrogen Production Tax Incentive (HPTI). This incentive will provide significant signal to the market for green hydrogen and significantly de-risk those investments.

APGA supports a net zero emission future for Australia by 2050¹. Renewable gases represent a real, technically viable approach to lowest-cost energy decarbonisation in Australia. As set out in Gas Vision 2050², APGA sees renewable gases such as hydrogen and biomethane playing a critical role in decarbonising gas use for both wholesale and retail customers. APGA is the largest industry contributor to the Future Fuels CRC³, 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.

An agnostic scheme is beneficial for industry development

The HPTI has been designed to be agnostic to the end use of the product. APGA welcomes this aspect of the scheme.

Australian governments have previously suggested that policies supporting green hydrogen production would be limited to production for high-value uses. APGA considers this 'scarcity' approach to be detrimental to hydrogen market development. End-use agnosticism in the HPTI will enable a much greater range of potential customers, ultimately increasing hydrogen production. Those customers will then have the opportunity to gain the emissions reduction benefit of green hydrogen.

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.

¹ APGA, *Climate Statement*, available at: <https://www.apga.org.au/apga-climate-statement>

² APGA, 2020, *Gas Vision 2050*, https://www.apga.org.au/sites/default/files/uploaded-content/website-content/gasinnovation_04.pdf

³ Future Fuels CRC: <https://www.futurefuelscrc.com/>

But even with fast-tracked investments, large-scale projects will likely not produce significant quantities of hydrogen until the 2030s.

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.

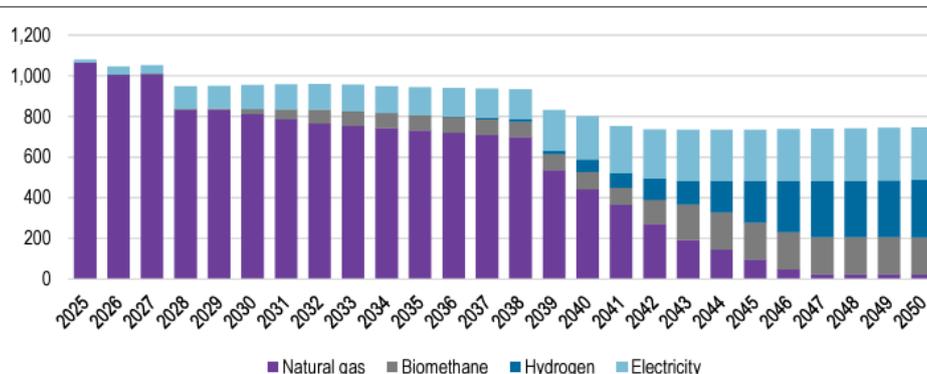
Biomethane can be immediately substituted for natural gas in transmission and distribution infrastructure, and in existing appliances. With the right policy settings, biomethane can both complement green hydrogen, and bridge the gap between now and when green hydrogen production scales up to provide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

The largest biomethane production facility in Australia, Jemena’s demonstration biomethane plant in Malabar,⁴ 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.⁵

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.⁶ 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.

⁴ Jemena, 2024, *Malabar Biomethane Injection Plant*, <https://www.jemena.com.au/future-energy/future-gas/Malabar-Biomethane-Injection-Plant/>

⁵ ENEA, 2021, *Australia’s Bioenergy Roadmap*, <https://arena.gov.au/knowledge-bank/australias-bioenergy-roadmap-report/>

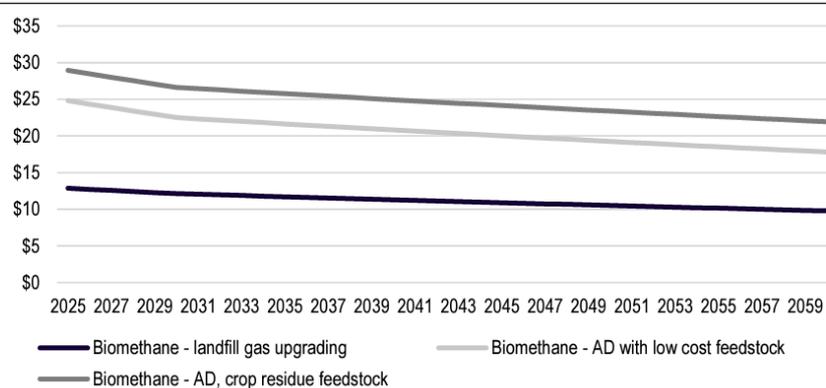
⁶ ACIL Allen, 2024, *Renewable Gas Target: Delivering lower cost decarbonisation for gas customers and the Australian economy*, <https://apga.org.au/renewable-gas-target>

A similar scheme should be investigated for 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.⁷ In terms of current and projected biomethane prices, 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, and in some cases may effectively be zero cost. 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)⁸



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.

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

Yours sincerely,

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⁷ 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. Other conversions use a "lower" energy content factor of 120 GJ/tonne, which is not appropriate for the Australian context.

⁸ ACIL Allen, 2024, adapted from estimates published in *Australia's Bioenergy Roadmap*.



Consultation questions

<p>1. Please provide any feedback on the impact this incentive may have on your community, facility or industry.</p>	<p>This incentive will provide a powerful market signal to significantly scale the production of green hydrogen in Australia. In doing so, it may give hydrogen projects a competitive advantage over biomethane projects, which will be necessary to bridge the renewable gas gap between now and when hydrogen production at scale comes online in the 2030s.</p> <p>Treasury should make this incentive truly technology agnostic and consider a similar scheme for biomethane projects.</p>
<p>2. Please provide any feedback on the proposed eligibility criteria.</p>	<p>Beyond extending the scheme to biomethane, APGA considers the eligibility criteria to be appropriate. APGA agrees with the end-use-agnostic approach which will provide producers with access to the broadest possible customer base, both domestically and overseas.</p>
<p>3. What key factors would need to be accounted for in a definition of an eligible facility for the purposes of the HPTI?</p>	<p>APGA defers to producers on this.</p>
<p>4. What key factors would need to be accounted for in a definition of Final Investment Decision (FID) for the purposes of the HPTI?</p>	<p>APGA defers to producers on this.</p>
<p>5. How long do you expect it will take for projects to reach first production following FID?</p>	<p>APGA defers to producers on this.</p>
<p>6. For foreign investors, do you currently encounter any impediments to investment in projects that would be eligible?</p>	<p>N/A</p>
<p>7. Please provide any feedback on the proposed emissions intensity threshold of 0.6kg of carbon dioxide equivalent up to the production gate.</p>	<p>While the HPTI is technically technologically agnostic, the eligible emissions threshold of 0.6kg of CO₂-e effectively restricts hydrogen production to electrolysis.</p>
<p>8. Other than electrolysis, what production processes would meet this emissions intensity threshold now or before 2030?</p>	<p>See above.</p>
<p>9. Please provide feedback on the proposed minimum capacity requirement (equivalent to 10 MW electrolyser)?</p>	<p>APGA considers this to be appropriate. The minimum capacity requirement will drive investment in the larger facilities that will immediately provide scale, without needing to be as large as the grid-scale facilities targeted under the Hydrogen Headstart scheme.</p>

<p>10. For renewable production processes other than electrolysis, is using the minimum capacity requirement of “equivalent to a 10MW electrolyser” appropriate? Is another definition of capacity required to deal with other production pathways?</p>	<p>APGA defers to hydrogen producers on this but considers this to be an appropriate definition.</p>
<p>11. Should grid connected electrolyser projects be required to match their hydrogen production with electricity generated by the same electricity grid? Please provide feedback on this proposal.</p>	<p>This may not be necessary if producers can demonstrate sufficient certificates for their renewable electricity inputs, which is a requirement under</p>
<p>12. Please provide feedback on the proposal to not include additional requirements on renewable energy generation for access to the incentive, such as additionality and hourly time-matching with hydrogen production.</p>	<p>APGA concurs that these additional requirements are not necessary and would introduce additional complexity with comes at cost, adding investment risk to projects.</p>
<p>13. Please provide any feedback on the proposed administrative approach.</p>	<p>As a tax incentive scheme it is appropriate that the HPTI be co-administered by the ATO and DCCEE, utilising administrative structures that are planned to be emplaced through the GO Scheme.</p> <p>As the GO Scheme is yet to be legislated it may be worth considering additional consultation on the interactions with the GO Scheme once the design of that scheme is finalised.</p>
<p>14. The proposed GO scheme will be used to support the registration and verification of hydrogen production. Are there any additional factors that would need to be accounted for in the proposed design of that scheme?</p>	<p>As the GO scheme is yet to be legislated, APGA suggests that Treasury also consider integration with the GreenPower Renewable Gas Certification Scheme.</p> <p>The GreenPower Renewable Gas Certification scheme provides a tradable certification and verification scheme. Importantly, this scheme is already active and certifying renewable gas projects, including Jemena’s biomethane injection facility at Malabar.</p> <p>APGA is unable to comment on the final design of the GO Scheme, however previous iterations of the GO Scheme have proven challenging to apply to the domestic context. Integration with multiple schemes may be a desirable option.</p>

15. The Government may legislate the administrative arrangements in subordinate legislation. Please provide any feedback on this proposed approach.	APGA defers to hydrogen producers on this.
16. What obligations should be imposed on potential recipients of the HPTI to ensure the community benefit principles are met?	APGA defers to hydrogen producers on this.
17. What obligations are potential recipients of the HPTI currently subject to that might support the community benefit objectives (noting these will be finalised under the Future Made in Australia Act)?	APGA defers to hydrogen producers on this.
18. Are there any additional objectives that you consider important? What obligations might support these?	APGA defers to hydrogen producers on this.
19. Recipients of the HPTI may be subject to additional transparency and disclosure requirements in order to be eligible. What kind of requirements are appropriate? What are the key practical considerations to take into account when setting the requirements?	APGA defers to hydrogen producers on this.
20. How should entities proposing to claim the HPTI be required to demonstrate compliance with tax obligations?	APGA defers to hydrogen producers on this.
21. What information do you consider important for the community that should be reported publicly on the recipients of the HPTI such as the amount of credit received?	APGA defers to hydrogen producers on this.
22. Who should the reporting requirements be imposed on? For example, on the recipient entity, or central reporting through a regulator?	APGA defers to hydrogen producers on this.
23. Please provide feedback on the proposed treatment of the interactions between the HPTI and other forms of Commonwealth, State or foreign government support.	The ability for projects to apply for both the HPTI and the Hydrogen Headstart scheme is a positive step. Functionally the main difference is the minimum 50 MW capacity for the Hydrogen Headstart scheme. The opportunity to take advantage of both schemes may lead to a greater focus on larger capacity electrolysers, which APGA considers to be a positive step.