



14 February 2025

## **Submission: Jemena Gas Networks Access Arrangements 2025-30**

The Australian Pipelines and Gas Association (APGA) represents the owners, operators, designers, constructors and service providers of Australia's pipeline infrastructure. APGA members ensure safe, efficient and reliable delivery of over 1,500 PJpa of gas consumed in Australia alongside over 4,500 PJpa of gas for export.

APGA and its members are at the forefront of Australia's renewable gas industry, helping achieve net-zero more quickly and affordably. We support a net zero emission future for Australia by 2050<sup>1</sup> and consider renewable gases to represent a real, technically viable approach to lowest-cost energy decarbonisation in Australia. Renewable gases will play a critical role in decarbonising gas use for both wholesale and retail customers.<sup>2</sup>

In this context APGA welcomes the opportunity to comment on the AER's draft decision on the Jemena Gas Networks NSW (JGN) proposed access arrangements 2025–30.

APGA submits that JGN's proposed expenditure on eight new renewable gas connections:

- Meets the requirements under NGR 79(2)(a) and 79(2)(c)(v). The projects together provide over \$1,412m in consumer value, through:
  - Enabling emissions reductions of up to 344,000 tCO<sub>2</sub><sup>e</sup> a year by 2030
  - Diversifying risk and supporting efficient investment.
- Aligns with National Gas Objectives of promoting efficient investment and operation of gas services, and to reducing Australia's greenhouse gas emissions.
- Enables efficient reuse of existing gas infrastructure, extending its useful life.

**The AER should approve \$79 million in capital expenditure in the revised 2025 plan.**

To discuss any of the above feedback further, please contact me on [REDACTED] or [REDACTED]

Yours sincerely,

CATRIONA RAFAEL  
National Policy Manager  
Australian Pipelines and Gas Association

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

<sup>2</sup> ACIL Allen, 2024, *Renewable Gas Target – Delivering lower cost decarbonisation for gas customers and the Australian economy*, <https://apga.org.au/renewable-gas-target>

## Gas infrastructure a key component of decarbonisation

Gas infrastructure connects energy producers with energy users. Traditionally this has been energy in the form of natural gas, but the development of a renewable gas industry has meant that it is now possible to efficiently transport renewable energy in pipelines as well.

JGN's gas networks will help support Australia's future decarbonisation by connecting renewable gas producers with existing gas customers, and will represent a significant expansion in renewable gas capacity in NSW. This will be particularly important for gas customers that are unable to readily electrify, who are also likely to remain customers of the gas network indefinitely.

Pipelines – transmission and distribution – are the most cost effective and efficient way to transport energy. Gas transmission pipelines consistently cost less to both build and transport the same quantity of energy across the same distance in comparison to electricity transmission powerlines.<sup>3</sup> Biomethane is a drop in fuel which is chemically indistinguishable from methane. This means that other than the connection from producer to pipeline, no additional expenditure is needed to enable blending of biomethane into existing gas infrastructure and use by existing gas customers.

Hence, JGN's networks are a key piece of the delivery infrastructure connecting renewable gas producers with gas users. The expenditure to enable this connection is relatively minimal when compared to the scale of electricity infrastructure investments to connect and carry renewable electricity. It also enables adaption and reuse of existing infrastructure, which itself is considerably more efficient than new purpose-built infrastructure.

APGA acknowledges that the AER received feedback that investments in large renewable gas projects are inconsistent with JGN's proposal for accelerated depreciation, and that the projects assume long-term demand while the latter assumes a declining customer base.

APGA considers that these are *not* inconsistent. The JGN customer base will decline based on electrification trends, particularly residential connections. However this still leaves a large number hard-to-abate commercial and industrial network customers, who will *require* access to renewable gases to decarbonise. This is most efficiently done through access to the gas network.<sup>4</sup>

## Networks supporting efficient use of feedstocks

The AER contended that JGN's proposal did not consider a counterfactual scenario where the feedstock can be used as an input for alternative methods – particularly the production of renewable electricity – and that biogenic feedstock is better suited to this use currently.

APGA notes that the digestate from upgrading biogas to biomethane can be reused as fertiliser or animal feed. The separated CO<sub>2</sub> is highly concentrated, and valuable as a chemical or industrial feedstock. The process of upgrading biogases to biomethane for

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<sup>3</sup> GPA Engineering, 2022, *Pipelines vs Powerlines*. Please contact APGA for a copy of this work.

<sup>4</sup> Currently NGERs does not have a method to report the emissions reduction potential of renewable gas blends in shared infrastructure. While this is being addressed through the development of a market-based method by DCCEEW, APGA considers it a strong market response that these projects are being proposed even in the absence of such a method.

injection into the network hence creates a much higher value product, both in terms of emissions reduction potential as well increasing the value of byproducts.<sup>5</sup>

It is also notable that biogas combustion for electricity generation is generally limited to in-situ applications. This is because the cost of transporting biomass long distances is expensive relative to the cost of transporting the biogenic fuel product. Where large amounts of biomass must be aggregated – such as cropping residue – considerable additional value is achieved by transporting biogenic energy in the form of biomethane in pipelines.

## **Biomethane a key component to meeting emissions reduction targets**

### **Biomethane will enable decarbonisation of JGN networks**

In 2023 the National Energy Objectives were amended to incorporate an emissions reduction objective into each market objective, including the National Gas Objective. This makes clear that network pipeline service expenditure which contributes to the meeting of government emission reduction targets is to be considered when setting regulated prices.

JGN proposed connections to eight biomethane production facilities would introduce 6.7PJ of renewable gas to the JGN NSW network. This would replace approximately 8.3% of the natural gas transported on the network, and represents an emissions reduction potential of 344,000 tCO<sub>2</sub>-e a year by 2030. This is a significant contribution to the NSW and Australian government's 2030 emission reduction targets.

APGA notes JGN's amended 2025 Plan provides a positive NPV for each biomethane project. Overall, the projects will deliver over \$1,412m in consumer value, primarily through the reduction of emissions.

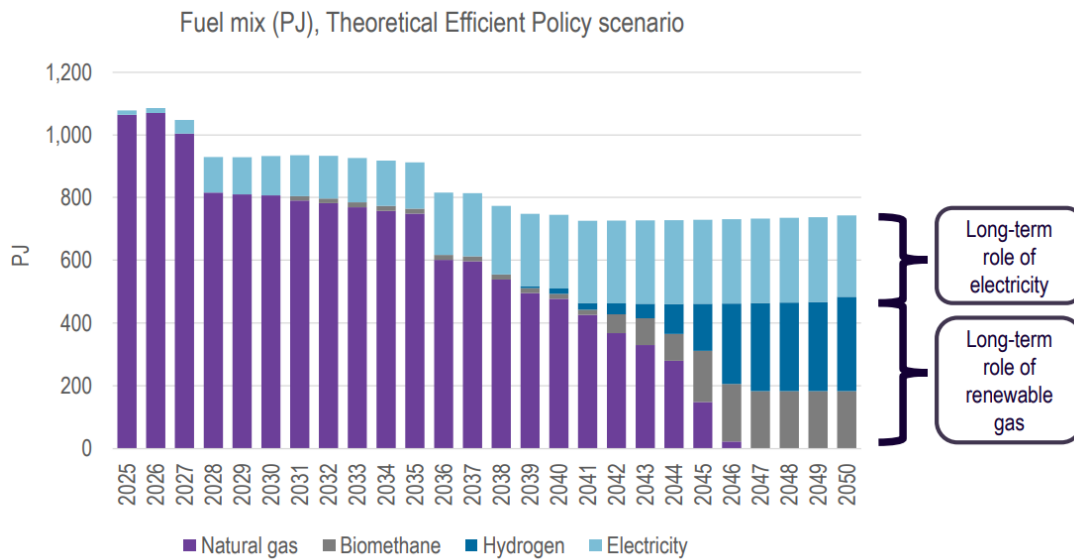
### **Biomethane today, hydrogen tomorrow**

The decarbonisation of coal and oil use is a priority for decarbonisation of fossil fuels. Gas – natural gas now, and renewable gases in the future – will play a significant role in the decarbonisation of those fuels and of overall energy consumption.

In 2024 APGA commissioned ACIL Allen to explore policy solutions to decarbonise gas consumption, including through a national Renewable Gas Target (RGT). An RGT would work in a similar way to the national Renewable Energy Target which supports investment in renewable electricity generation, by supporting investment in the renewable gas industry.

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<sup>5</sup> Direct biogas combustion for electricity achieves approximately 35% conversion efficiency, while upgrading biogas to biomethane results in up to 99% methane recovery rates.



ACIL Allen’s analysis found that the least cost decarbonisation pathway for Australian gas consumers is achieved through a combination of electrification, hydrogen and biomethane uptake.<sup>6</sup> This would also support the decarbonisation of other fossil-derived fuels, particularly coal, as renewable gas can be substituted for coal in a range of uses.

Biomethane is particularly important, as it is a cost-competitive decarbonisation option which will scale well before green hydrogen becomes available from the 2040s.<sup>7</sup> Hence it is appropriate that the capital expenditure for renewable gas connections to JGN’s networks commences now, rather than from 2030.

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

<sup>7</sup> ACIL Allen, 2024, *Gas, liquid fuel, coal and renewable gas projections*, Report to AEMO, <https://aemo.com.au/-/media/files/major-publications/isp/2025/acil-allen-2024-fuel-price-forecast-report.pdf>