26 September 2024

Submission: Senate Environment and Communications Legislation Committee inquiry into the Guarantee of Origin Scheme

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 provide a submission to the Environment and Communications Legislation Committee's inquiry into the *Future Made in Australia (Guarantee of Origin) Bill 2024* and related bills (GO Scheme legislation).

APGA supports a net zero emission future for Australia by 2050[1]. Renewable gases represent a real, technically viable approach to lowest-cost energy decarbonisation in Australia. As set out in Gas Vision 2050[2], 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 CRC[3], 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 is a necessary component of Australia's gaseous energy requirements through to 2050 and beyond.[4] Alongside biomethane, hydrogen will contribute to decarbonising natural gas use and provide critical firming services for electricity grids. It is critically important that the needs of a domestic hydrogen industry are fully supported by hydrogen energy policy including via the GO Scheme.

The draft GO Scheme legislation released 12 September shows important improvements and intent in support of domestic hydrogen use. However, one key aspect appears to risk its usability for delivering energy to industrial customers via existing gas infrastructure.

---

[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/
[4] AEMO, 2024, 2024 Integrated System Plan, https://aemo.com.au/en/energy-systems/major-publications/integrated-system-plan-isp/2024-integrated-system-plan-isp;
ACIL Allen, 2024, *Renewable Gas Target: Delivering lower cost decarbonisation for gas customers and the Australian economy*, https://apga.org.au/renewable-gas-target

Specifically, requiring stapling of Product GO (PGO) certificates to hydrogen transactions delivered via existing gas infrastructure is incompatible with facilitated gas markets.

This incompatibility stems from the anonymising nature of facilitated gas markets such as the Domestic Wholesale Gas Market (DWGM) and various Short Term Trading Markets (STTMs). Around 2,000 terajoules per day of maximum gas delivery capacity is facilitated through these markets. Stapling requirements for hydrogen energy transacted through these markets, downstream of the PGO delivery gate, will prevents PGO certified hydrogen from being traceable through these markets. This is explained in more detail through APGA's submission below.

APGA recommends that stapling requirements cease at the delivery gate. We welcome the commitment of the Department of Climate Change, Energy, Environment and Water (DCCEEW) GO Scheme Taskforce to continue engaging with industry on this matter.

APGA also recommends the scheme be expanded to biomethane as soon as practicable. Biomethane is generally cheaper than green hydrogen today while still being more expensive than natural gas. It can deliver the same level of gas decarbonisation for any gas customer, generally at a lower price compared to decarbonisation alternatives. We hope to see biomethane high on the list of future PGO supported renewable energy products.

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

Yours sincerely,

JORDAN MCCOLLUM
Head of Policy
Australian Pipelines and Gas Association

Guarantee of Origin legislation an important step

The introduction of legislation for the GO Scheme is a significant step forward for the renewable gases industry in Australia, particularly renewable hydrogen. A number of schemes refer to the GO Scheme, including the NSW Renewable Fuels Scheme, and the federal Hydrogen Headstart and Hydrogen Production Tax Incentive schemes.

DCCEEW can be commended for its hard work over four years on the scheme, and its commitment to industry consultation. APGA has provided extensive comment on the scheme over the course of its development and recognise the shift towards trying to ensure that PGO design can facilitate hydrogen use via existing gas infrastructure.

However, APGA remains concerned about one key aspect of PGO design. The requirement to staple of PGOs to hydrogen transactions when hydrogen is being delivered via existing gas infrastructure was an unexpected and previously undiscussed aspect of draft legislation. While we appreciate the intent of this aspect, a requirement to staple PGOs to hydrogen transactions is incompatible with facilitated gas markets.

This incompatibility would ultimately hamper the development of a domestic renewable hydrogen industry.

Design must amend stapling of PGO certificates

APGA has commented extensively[5] on the design of the GO Scheme as it has evolved. Our key concerns remain on the design of the scheme enabling a domestic hydrogen industry.

A viable domestic hydrogen industry will initially require blending into natural gas pipelines. To realistically achieve this, PGO's must be compatible with use via existing facilitated gas markets. Existing facilitated gas markets anonymise gas supply and demand across markets, meaning that it is not possible to directly trace production to consumption.

APGA acknowledges that DCCEEW have attempted to solve this through provisions in PGO Certificates Subdivision B, sections 57-59, of the Bill. While PGOs themselves are not tradeable and are required to be stapled to the product, these provisions include measures by which *consumption profiles* can be transferred. This creates a mechanism where customers who are connected to shared infrastructure – in this case, the East Coast Gas Market – can pay producers for the right to complete the embodied emissions information for PGO certificate.

Molecules of gas in a multi-user pipeline are not functionally different to electrons of renewable electricity. Gigajoules of gas moving through a facilitated gas market are not functionally different to megawatt hours of electricity passing through a NEM region market.

---

[5] APGA, 2023, *Submission: Guarantee of Origin Scheme Accounting*, https://apga.org.au/submissions/guarantee-of-origin-scheme-emissions-accounting;
APGA, 2023, *Submission: Guarantee of Origin Scheme Design*, https://apga.org.au/submissions/guarantee-of-origin-scheme-design;
APGA, 2023, *Submission: Australia's Guarantee of Origin Scheme,* https://apga.org.au/submissions/australias-guarantee-of-origin-scheme

This is exactly how renewable hydrogen[6] and biomethane[7] are being delivered to many customers today. In NSW, Origin has entered into an offtake agreement with Jemena for its production of biomethane at Malabar. Because that biomethane is injected into the network, functionally this means that Origin have purchased the right to claim[8] the emissions reduction of that biomethane. At the same time, Origin needs to sell the gigajoules of biomethane into the local STTM and then buy them back out. If this gas were to be traced by a PGO, it would not be able to be connected from production to customer via transactions. This does not differ whether the gas is biomethane or hydrogen.

The only way that a customer could complete a PGO in this instance would be if Origin could sell the right to complete the PGO to the customer without it being directly related to the hydrogen sale transaction.

It is understood why PGOs are treated differently from REGOs up until the designated delivery gate. It is not clear however why PGOs not able to be treated the same as REGOs for the general purpose gas supply chain portion of the supply chain which exists downstream of the delivery gate designated by the PGO.

The justification in the explanatory memoranda appears to be that electrons cannot be tracked while gas molecules can:

> "*Renewable electricity certificates decouple claimable attributes of the electricity from its physical delivery, reflecting the reality that electrons cannot be tracked, and most generated electricity is pooled in a network before reaching users. PGOs, on the other hand, would not be tradaeable, but track the embodied emissions of a product to the point of its delivery to a consumer.*" [9]

While this may be the case across the portion of the supply chain covered by the PGO, it is not the case for the portion of the supply chain downstream of the PGO delivery gate in the instance of gas infrastructure blending.

APGA urges the Senate Committee to recommend amendments to the design of the PGOs to enable the development of a functionally practical market for renewable gases, contributing to Australian decarbonisation goals.

APGA will be pleased to work with DCCEEW to design a mechanism that reflects the nature of gas markets in Australia while abiding with the chain of custody requirements of the GO Scheme.

---

[6] AGIG, 2024, *Hydrogen Park South Australia*, https://www.agig.com.au/hydrogen-park-south-australia
[7] Jemena, 2024, *Malabar Biomethane Injection Plant*, https://www.jemena.com.au/future-energy/future-gas/Malabar-Biomethane-Injection-Plant/
[8] Currently under the National Greenhouse and Emissions Reporting Scheme, it is not possible for entities to report the emissions reduction potential of renewable gases in shared infrastructure. DCCEEW is developing a market based mechanism to address this.
[9] APH, 2024, *Future Made in Australia (Guarantee of Origin) Bill 2024* - explanatory memorandum, p9, https://parlinfo.aph.gov.au/parlInfo/download/legislation/ems/r7245_ems_f6ba1951-c855-47e4-af3d-9bbae044ea6b/upload_pdf/JC014047.pdf

Expand Product GOs to cover additional renewable gas products

APGA understands it is the intent that other products will eventually be covered by the GO Scheme beyond renewable hydrogen including biomethane. However, we also understand that green metals and renewable liquid fuels will be a more immediate priority for DCCEEW.

If the GO Scheme is intended to support a domestic renewable hydrogen industry, it should be expanded to also include biomethane as a matter of urgency. This will ensure that projects which are already producing biomethane are able to be covered by the scheme.