27 March 2025

GEA Submission: Guarantee of Origin Rules – Tranche 1 Exposure Draft

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 regional households where electricity can be unreliable or unavailable[1].

GEA welcomes the opportunity to comment on the Department of Climate Change, Energy and Water (DCCEEW) Guarantee of Origin – Tranche 1 Exposure Draft.

LPG plays a vital role supplying energy to Australian industrial, commercial, residential, transport and recreational energy users today. Through the supply of drop-in renewable forms of LPG, energy consumers can continue to receive reliable, affordable energy via LPG while supporting emissions reduction targets[2].

General Feedback

The proposed rules provide a sound framework for the Product Guarantee of Origin (PGO) scheme. They promote transparency and accountability in emissions reporting while being sufficiently flexible to operate alongside existing energy and fuel markets.

The rules as drafted are expected to adequately support the anticipated market for renewable forms of LPG. LPG fuel gas networks function similarly to natural gas networks. Provisions supporting natural gas market integration should support LPG market integration. Flexibility within the rules is crucial for future developments in renewable forms of LPG.

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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

LPG today, renewable forms of LPG tomorrow

Just like electricity and natural gas, LPG also has renewable alternatives. Drop-in BioLPG and Renewable LPG (rLPG) can be used with no changes in LPG infrastructure or appliances. Dimethyl Ether (DME) can be blended into LPG for use with existing appliances and infrastructure or used in its pure form with minor changes to existing LPG or natural gas appliances and infrastructure.

For many energy customers, these options will have much lower upfront and lifecycle decarbonisation cost than electrification. This is especially true in rural Australia where electricity can be unreliable or unavailable, making electrification less practical.

A PGO scheme which supports renewable forms of LPG supports least cost decarbonisation for all Australian households and businesses.

Recommendations:

GEA recommends that future iterations of the PGO scheme include:

Certification of renewable forms of LPG

A cost effective decarbonisation choice for many, and the only option for some, ensuring certification of renewable forms of LPG will support the transition to renewable forms of LPG.

Proponent-let PGO Method development

The PGO scheme could support certification of a wider range of renewable fuels by opening to Proponent-let PGO Method development in line with Recommendation 5 of the Chubb review into Australian Carbon Credit Unit (ACCU) scheme design.

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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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[3]. The LPG industry safely and securely supplies 43 petajoules of energy annually across industrial, commercial, and residential applications nationwide[4]. A further 120 petajoules of LPG is exported annually, with the LPG sector as a whole contributing over $5bn of GDP and 20,500 FTE to the Australian economy[5].

LPG stands out as a cleaner alternative to many traditional fossil fuels, producing 14% fewer greenhouse gas emissions than diesel[6]. The industry is actively embracing Australia's transition to net zero through the pursuit of renewable forms of LPG[7]. These include bioLPG (a co-product of Sustainable Aviation Fuel) and renewable LPG (rLPG) produced from hydrogen. These alternatives reduce scope 1 emissions by 99% while utilizing existing infrastructure and appliances.

One of LPG's most significant advantages is its superior energy storage capability in cheap, transportable LPG 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 the cost[8]. This storage capacity, combined with the portability of LPG tanks, 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.

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[3] 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

[4] Australian Federal Department of Climate Change, Energy, the Environment and Water, 2024, *Australian Energy Update 2024*, https://www.energy.gov.au/publications/australian-energy-update-2024

[5] ACIL Allen, 2022, *Economic contribution of the Australian gas economy in 2020-21*, https://www.gasenergyaus.au/get/2123/economic-contribution-of-australian-gas-economy.pdf

[6] Australian Federal Government, *2024, National Greenhouse and Energy Reporting (Measurement) Determination 2008*, https://www.legislation.gov.au/F2008L02309/latest/text

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

[8] Elgas, 2025, *LPG Gas Bottle Sizes*, https://www.elgas.com.au/elgas-knowledge-hub/residential-lpg/lpg-gas-bottle-sizes-gas-bottle-dimension-measurements/

Detailed feedback

Ensuring a Robust and Flexible Product GO Scheme

The proposed rules reflect a well-structured framework for the PGO scheme, accommodating a range of renewable fuels and products. The clarity of the definitions and the structured processes outlined in the draft rules will facilitate streamlined participation from stakeholders. Ensuring these rules remain adaptable and robust will strengthen their relevance and effectiveness as regulations continue to evolve.

Potential for Renewable forms of LPG

The proposed structure provides a sound foundation for future certification, allowing for the development of specific methodologies to track emissions associated with renewable fuels, including renewable forms of LPG. PGO certification for renewable forms of LPG is essential for fostering industry growth and supporting stakeholders as they transition toward more sustainable energy solutions.

Renewable forms of LPG represent a least cost decarbonisation option for many of todays' industrial, commercial, transport, residential and leisure LPG consumers. This is especially true in regional Australia where electricity can be unreliable or unavailable, making electrification of energy demand an impractical decarbonisation option.

Further, the value of LPG in a crisis such as recent weather events around the nation demonstrate the importance of retaining this fuel supply chain. For those customers who have few other decarbonisation options, and for energy use in a crisis, it is important that renewable forms of LPG are supported to decarbonise through effective PGO certification.

Proponent-led certification methodology development

There is a significant opportunity for the proposed rules to extend their applicability to renewable forms of liquefied petroleum gas (LPG) in the future. However, renewable forms of LPG are only one of a wide range of renewable fuel and product supply chains which could be supported by PGO certification. This creates a risk that DCCEEW may not have sufficient capacity to deliver certification methodologies for all pathways in a practical timeframe.

This issue has already been observed in DCCEEWs ability to deliver ACCU methodologies in the Chubb Review[9]. Recommendation 5 of the Chubb review proposes a fix to this issue in reframing how methodologies are developed, recommending proponent-led methodology design. This same approach can substantially reduce the certification development burden on DCCEEW while increasing the rate of certification development.

[9] DCCEEW, 2025, *Independent Review of ACCUs 2022*, https://www.dcceew.gov.au/climate-change/emissions-reduction/reviews-reforms-accu-scheme/independent-review-accus