

## Cleaner Fuels Program Policy Design Consultation

Gas Energy Australia (GEA) thanks the Department of Infrastructure, Transport, Regional Development, Communications, Sport and the Arts (DITRDCSA) for the opportunity to contribute to the Cleaner Fuels Program Policy Design Consultation. We appreciate the invitation to lodge our submission beyond the original due date.

GEA is the national peak body representing the downstream gas fuels industry encompassing LPG and its renewable alternatives. Our membership spans major, medium and small businesses across the LPG supply chain, collectively bringing deep technical, operational and policy expertise. This submission is informed by practical, on-the-ground experience, as well as GEA's long-standing engagement with governments on energy transition, emissions reduction and energy security.

### Context

The Australian Government's Cleaner Fuels Program presents a critical opportunity to support decarbonisation pathways for regional and remote communities. However, current program design risks excluding renewable liquid gases (rLGs), including BioLPG, which serve as one of the few viable decarbonisation options for approximately 2 million Australian households – more than half of whom are located in regional areas – and a multitude of regional business and industry reliant on LPG.

LPG provides energy access and security beyond reliable grid access, with storage economics approximately one thousand times more cost-effective than battery alternatives. BioLPG, as a drop-in fuel, enables these communities to achieve near-zero Scope 1 emissions without infrastructure upgrades or capital costs – yet biorefinery economics currently favour consuming BioLPG internally rather than producing it for market.

Cleaner Fuels Program has the opportunity to support regional Australia by prioritising support for those projects that choose to produce BioLPG where technology pathways permit – fostering Future Made in Australia Act Community Benefit Principles (c) and (e).

## Key Recommendations

### Program Eligibility

Adopt a fuel-agnostic approach to Low-carbon Liquid Fuel (LCLF) eligibility, explicitly including renewable liquefied gases (rLGs) such as BioLPG to avoid excluding critical regional decarbonisation pathways.

## Targeted Prioritisation

Prioritise government support for biorefinery projects that commit to producing BioLPG where their technology pathway permits (HVO/HEFA or Alcohol-to-Fuel), addressing the risk of policy-driven market failure which could disincentivise BioLPG production.

## Community Benefit Alignment

Recognise that prioritising BioLPG production structurally aligns with Future Made in Australia Act Community Benefit Principles (c) and (e) by delivering decarbonisation options to regional communities which have limited alternatives.

More detailed responses to consultation questions are included below. To discuss any of the above feedback further, please contact me on +61 422 057 856 or via [jmccollum@gasenergyaus.au](mailto: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<sup>1</sup>. The LPG industry safely and securely supplies 43 petajoules of energy annually across industrial, commercial, and residential applications nationwide<sup>2</sup>. 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<sup>3</sup>.

LPG stands out as a cleaner alternative to many traditional fossil fuels, producing 14% fewer greenhouse gas emissions than diesel<sup>4</sup>. The industry is actively embracing Australia's transition to net zero through the pursuit of renewable liquid gases (rLGs)<sup>5</sup>. These include BioLPG (a co-product of Sustainable Aviation Fuel and Renewable Diesel) 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 advantages is its superior energy storage capability in cheap, transportable LPG tanks – key in regional areas where mains power may be unreliable or unavailable. A standard residential LPG tank installation can store as much energy as 42 Tesla Powerwall 3 home battery systems at around one one-thousandth the cost<sup>6</sup>. This storage capacity makes highly portable LPG tanks an invaluable resource for energy security and emergency resilience through the transition when paired with rLG.

The LPG industry is uniquely positioned to support Australia's energy transition. 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 rLG, Australia can ensure a diverse and resilient energy mix that retains energy security while achieving its climate goals.

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<sup>1</sup> 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>

<sup>2</sup> 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>

<sup>3</sup> 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>

<sup>4</sup> Australian Federal Government, 2024, *National Greenhouse and Energy Reporting (Measurement) Determination 2008*, <https://www.legislation.gov.au/F2008L02309/latest/text>

<sup>5</sup> Frontier Economics, 2023, *Pathways to Zero Emissions for LPG*, <https://www.gasenergyaus.au/get/2016/pathway-zero-emissions-for-lpg-frontier.pdf>

<sup>6</sup> Elgas, 2025, *LPG Gas Bottle Sizes*, <https://www.elgas.com.au/elgas-knowledge-hub/residential-lpg/lpg-gas-bottle-sizes-gas-bottle-dimension-measurements/>

# Feedback to Consultation Questions

## Question 1

### **Question 1.1: Which LCLF should be eligible under the program and why?**

GEA endorses a fuel-agnostic approach to LCLF support. Limiting program scope to sustainable aviation fuel (SAF) or renewable diesel (RD) alone would exclude renewable liquefied gases (rLGs), including BioLPG – a critical decarbonisation pathway for regional Australia.

For approximately 2 million Australian households and businesses reliant on LPG – particularly in regional and remote areas where energy supply can be unreliable or unavailable – rLGs represent one of the few feasible or cost-effective decarbonisation options. The European Renewable Energy Directive (RED) recognises BioLPG in part due to the importance of the low volume, high impact LPG supply chain to regional energy customers.

### **Question 1.2: Should certain types of LCLF be prioritised over others?**

GEA does not support prioritisation of certain types of LCLF. However, government support should prioritise biorefinery projects which choose to produce BioLPG when their production pathway has the ability to produce BioLPG.

Biorefineries using HVO/HEFA and some Alcohol-to-Fuel production technologies can co-produce BioLPG alongside their primary fuel outputs. Yet producing BioLPG requires additional capital investment beyond baseline biorefinery infrastructure to separate BioLPG from waste or other process streams.

Without targeted incentives, biorefineries are at risk of defaulting to flaring or consuming this potential BioLPG stream for internal heat or hydrogen production. This would effectively eliminate one of the only decarbonisation pathways available to regional LPG customers, many of whom have no other feasible or cost-effective decarbonisation option.

If allowed to occur, this would represent policy-driven market failure. Biorefineries which decline to invest in BioLPG production would not making this decision based on technical inability – they would be responding to policy signals that undervalue the role which BioLPG could play in regional energy equity.

Policy directing government funding should avoid this market failure by prioritising support for biorefineries which commit to producing BioLPG where their technology pathway permits.

## Question 2

GEA defers to biorefinery representatives on the majority of these matters.

Any LCLF support mechanism should account for fundamental variations in fuel characteristics to ensure equitable outcomes. Different fuels and LCLFs produce different levels of emissions and emission abatement. Different fuels also have substantially different 'Heating' or 'Calorific' values – meaning equal volumes or masses of fuel do not represent equal energy content or equal carbon abatement.

Support calculated purely on volumetric or mass basis would create perverse incentives and disproportionately favour certain fuel types over others, regardless of their actual emissions reduction or energy delivery. At minimum, support should be normalised on an energy content basis (per joule/megajoule/gigajoule), though an emissions intensity or carbon abatement basis would better align with policy objectives.

Considering support on an energy content basis would align with NGER legislation. Schedule 1 Part 3 or the NGER Measurement Determination – *Fuel combustion—liquid fuels and certain petroleum-based products for stationary energy purposes* – includes an *Energy content factor* column in GJ/kL energy units and *Emission factor* column in kg CO<sub>2</sub>-e/GJ for this very reason.

Without this rationalisation, the program risks inadvertently prioritising fuels that deliver less emissions reduction per dollar of government investment.

## Question 3

GEA defers to biorefinery representatives on this matter. Reference to European standards is generally advised, noting that some broader Australian renewable fuel policy has taken a more restrictive approach to European approaches.

## Question 4

**Question 4.2: Recipients under the Program will need to deliver benefits according to the Community Benefit Principles under the Future Made in Australia Act (see Appendix D). How do you consider the Community Benefit Principles in relation to LCLF projects? Are there specific Community Benefit Principles that are more or less relevant?**

GEA strongly supports the Future Made in Australia Act Community Benefit Principles. Principles (c) and (e) are directly advanced by prioritising government support for biorefineries that produce BioLPG.

LPG disproportionately serves regional Australia. More than half of the nearly 2 million Australian households using LPG are in regional areas – despite regional residences representing only one-sixth of residences nationally. For these communities, LPG is not merely a cooking or heating fuel. At the extremes of Australia's energy networks and in off-grid locations, LPG provides energy security and access where grid electricity and natural gas are unreliable or unavailable.

This reliability stems from LPG's exceptional energy storage economics. A standard residential LPG installation (2x 45kg bottles) stores 1.25MWh of energy at a rental cost of \$100-200 per annum – approximately one thousand times cheaper than residential battery storage. This makes LPG irreplaceable for regional energy resilience.

BioLPG is a drop-in fuel – chemically identical to conventional LPG. It requires no new appliances, no infrastructure upgrades, and no behaviour change from users. Regional households currently relying on LPG for energy security can achieve near-zero Scope 1 emissions without sacrificing reliability or incurring upfront capital cost to transition. For communities with limited decarbonisation pathways and limited free capital, this is transformational.

By prioritising funding for biorefineries that produce BioLPG over those that consume it internally, the program would:

- Deliver decarbonisation benefits to regional and remote communities that have fewer alternatives (Principle C: supporting those at risk of being left behind)
- Strengthen energy security in areas beyond reliable grid access (Principle E: building resilient regional communities)

This alignment is not incidental – it is structural. BioLPG is one of the few scalable decarbonisation solutions to the energy security challenges facing regional Australia.