

## AEMO Draft 2025 Inputs, Assumptions and Scenarios Consultation Stage 1

The LPG industry safely and securely supplies 43PJpa of energy to industrial, commercial and residential consumers nation-wide, including around 30% of all regional Australian households<sup>1</sup>. Gas Energy Australia (GEA) represents Australia's liquid gas supply chains including Liquefied Petroleum Gas (LPG) and associated gases with members spanning from producers to retailers and everything in between.

GEA welcomes the opportunity to provide a submission to the Australian Energy Market Operator (AEMO) Draft 2025 Inputs, Assumptions and Scenarios Consultation Stage 1.

Australia's liquid gas industries support Australia's net zero transition. LPG produces 14% less Scope 1 emissions than diesel today, and stores energy at 100x lower cost than batteries. As drop-in renewable forms of LPG emerge consumers can continue to use LPG while producing 99% less greenhouse gas<sup>2</sup>. Lower emissions today and net zero tomorrow, LPG is the perfect partner for renewable electricity in the cities and the bush.

### Absence of LPG goes against the National Electricity Objective (NEO)

The IASR and its associated studies shows no evidence of recognizing LPG as an energy source for residential, commercial, and industrial consumers into the future. This is despite 15.8PJpa of LPG being used across 1.8 million households today, and a further 27.5PJpa being used across range of industrial and commercial consumers.

No jurisdiction proposes to ban LPG. Emerging drop-in renewable forms of LPG will allow LPG to continue being used in a net zero future. Proceeding without considering LPG and its renewable alternatives risks over-estimating electrification. Doing so risks increased electricity costs due to higher than necessary transmission investment influenced by an IASR absent LPG – an IASR not be compliant with the NEO.

**GEA recommends** the IASR consider LPG and its renewable alternatives to comply with the NEO. Not doing so risks influencing overinvestment in electricity transmission.

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<sup>1</sup> DCCEE, 2024, Australian Energy Update 2024,

<https://www.energy.gov.au/publications/australian-energy-update-2024>

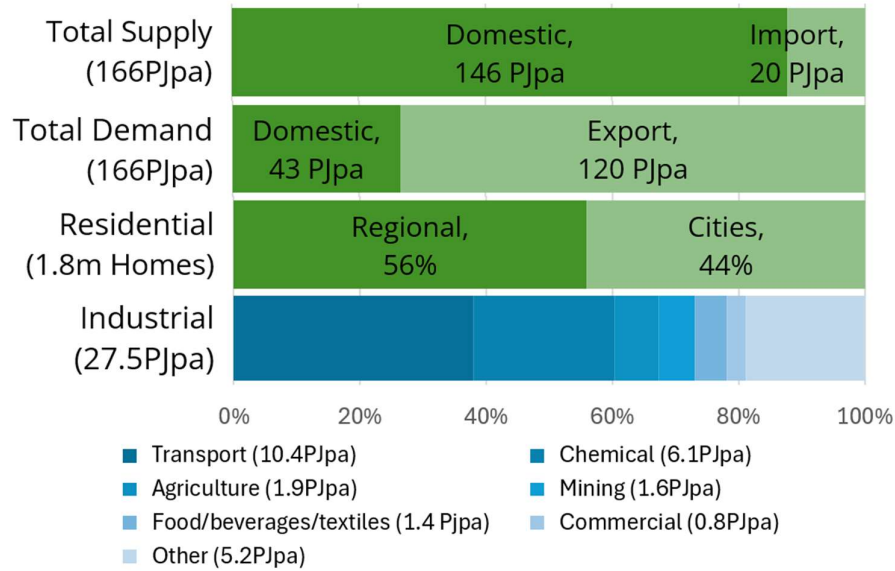
Australian Bureau of Statistics, 2014, Environmental Issues: Energy Use and Conservation,

<https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4602.0.55.001Main+Features1Mar%202014>

<sup>2</sup> Frontier Economics, 2023, *Pathways to Zero Emissions for LPG*,

<https://www.gasenergyaus.au/get/2016/pathway-zero-emissions-for-lpg-frontier.pdf>

**Figure 1: LPG supply and demand statistics**



### Renewable gas analysis a win for consumers, but risk remains

Introducing ACIL Allen renewable hydrogen and biomethane cost and availability analysis is a big step forward in ensuring the IASR does not overestimate electrification. Renewable gas can be more cost effective than electrification for some consumers. Past overestimation of renewable gas pricing risked the IASR over-prescribing electrification. An IASR which over-prescribes electrification would not comply with the NEO as it would risk overinvestment in electricity transmission, unnecessarily increasing electricity price.

However, the task is not over. To avoid over-prescribing residential electrification, it is critical that CSIRO ClimateWorks align its modelling assumptions with the IASR. This would require CSIRO ClimateWorks use ACIL Allen renewable gas price and availability analysis as its basis for renewable gas assumptions. Not doing so risks the IASR using two misaligned sets of renewable gas assumptions.

**GEA recommends** AEMO require CSIRO ClimateWorks use ACIL Allen renewable gas analysis within IASR related modelling. ACIL Allen should also introduce cost and availability modelling for renewable forms of LPG in its analysis.

GEA welcomes further discuss on the above feedback and any other topics relevant to liquid gas. 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>3</sup>. The LPG industry safely and securely supplies 43 petajoules of energy annually across industrial, commercial, and residential applications nationwide, contributing \$70bn to GDP<sup>4</sup>.

LPG stands out as a cleaner alternative to many traditional fuels, producing 14% fewer greenhouse gas emissions than diesel<sup>5</sup>. The industry is actively embracing Australia's transition to net zero through the pursuit of renewable forms of LPG<sup>6</sup>. These include bioLPG (a co-product of Sustainable Aviation Fuel) and renewable LPG (rLPG). These alternatives produce 99% lower scope 1 emissions while utilizing existing infrastructure and appliances.

One of LPG's most significant advantages is its superior energy storage capabilities in cheap, transportable LPG bottles and 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 100x lower cost<sup>7</sup>. This storage capacity, combined with LPG's portability, 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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<sup>3</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>4</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>

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>5</sup> Australian Federal Government, 2024, *National Greenhouse and Energy Reporting (Measurement) Determination 2008*, <https://www.legislation.gov.au/F2008L02309/latest/text>

<sup>6</sup> Frontier Economics, 2023, *Pathways to Zero Emissions for LPG*, <https://www.gasenergyaus.au/get/2016/pathway-zero-emissions-for-lpg-frontier.pdf>

<sup>7</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/>