

FACT SHEET: Gas Sourced Distributed Energy

Australian gaseous fuels - Liquefied Petroleum Gas (LPG), Liquefied Natural Gas (LNG) and Compressed Natural Gas (CNG) - are Australia's natural advantage.

With significant existing flexible distribution networks using virtual pipelines that are very responsive to changing demand without the need for expensive fixed pipelines, gaseous fuels have an important role to play in:

- *providing improved energy security for Australians;*
- *reducing energy costs for households, business and the community;*
- *improving environmental outcomes by reducing emissions; and*
- *supporting both direct and indirect jobs in the industry and manufacturing jobs more broadly.*

GAS SOURCED DISTRIBUTED ENERGY

Gas sourced distributed energy can provide energy security to localised grids, offshore islands, off grid/remote energy use and assist communities at the very ends of old unreliable networks.

The recent blackouts in South Australia, the Tasmanian energy security crisis and the closing down of the Hazelwood coal-fired power station all highlight the need for greater energy security across Australia.

Gaseous fuels can strengthen Australia's energy security by providing more low-emission power and more distributed energy, including through renewable energy hybrid options.

No other fuel source in Australia offers both existing and emerging technologies in conjunction with sufficient abundance and availability of resources to significantly displace higher emitting transport and stationary energy fuels.

ABOUT GASEOUS FUELS

Australian gaseous fuels - Liquefied Petroleum Gas (LPG), Liquefied Natural Gas (LNG) and Compressed Natural Gas (CNG) - are Australia's natural advantage. They are cleaner and cheaper, supporting cleaner air and deliver more control over Australia's energy security and economic future.

Gaseous fuels are lower emitting, lower polluting Australian made fuels - that secure local jobs and reduce Australia's reliance on foreign oil imports.



Not only are gaseous fuels cleaner than traditional fuels, especially when used with renewables, but they also offer reliable power to the roughly 400,000 Australian households and businesses not connected to the electricity grid that often rely on higher polluting, imported and often unreliable power sources.

However, much of the electricity for these entities comes from generators running on imported dirty diesel and increasingly from often subsidised unreliable renewable sources. Therefore, it is essential that we shift our offshore and other off-grid communities away from dirty diesel generation to cleaner gas generation/renewable hybrids.

Few people also realise that gaseous fuels are Great Barrier Reef friendly as they evaporate off water if they spill rather than sediment and slicking like oil based fuels.

'VIRTUAL PIPELINES' OF ENERGY

Gaseous fuels are currently transported by tanker to essentially create 'virtual pipelines' of energy without the high capital expense of fixed energy infrastructure.

This means that regional, remote and off-shore communities can have increased energy security and lower energy costs through the hundreds of thousands of kilometres of existing 'virtual pipelines' currently providing LPG, CNG and LNG.





GAS-FUELLED POWER GENERATION FOR THE MINING INDUSTRY

In the mining industry – which is either off-grid or requires supplementary generation - gaseous fuels can be used for a range of applications, including back-up generation, heating and catering for worker accommodation.

In 2012-13, the mining industry consumed 9% of the energy produced in Australia - but very little of that energy came from affordable Australian gaseous fuels.

Case studies show that gas and solar hybrid generators for off-grid power generation can actually provide a lower emitting, lower polluting and more cost-effective solution than the more common diesel solar hybrids.

CLEANER, CHEAPER AND READILY AVAILABLE ENERGY FOR AUSTRALIAN AGRICULTURE

As the community - and in turn farmers - demand more environmentally friendly production methods, LPG is a great choice for Australia's farming industry.

It enables farmers to farm efficiently, using LPG as a cleaner, green, versatile energy source for a broad range of farming applications.

Practical applications for LPG in agriculture include its role in crop-drying, poultry breeding, irrigation, thermal desiccation, incineration, insect repellent, greenhouse, animal shed heating and water heating.



A FLEXIBLE AND RAPID-RESPONSE ENERGY SOURCE DURING NATURAL DISASTERS

Natural disasters - fires, floods, cyclones and storms - are an all too familiar event across Australia. Large-scale energy infrastructure is prone to disruption during the course of these events. The time taken to repair this infrastructure, and restore access for households can be substantial, and can involve significant economic loss.

LPG - with its portability and mobile infrastructure - has the capacity to play a significant role in improving the energy resilience of households across Australia.

By diversifying energy use in the home, people can build a degree of self-sufficiency in regard to sourcing energy needs – both during and following natural disasters.

And by enabling remote communities to go off-grid, the use of gaseous fuels can reduce the risk of bushfires caused by interactions between electricity powerlines and the elements.

ACCESSIBLE AND SECURE SUPPLY

Australia is currently the second largest LNG exporter in the world - behind Qatar which we are poised to overtake in 2020 - and has 43 trillion cubic feet of natural gas reserves, or 200 years of known reserves.

Australia also has vast reserves of LPG, with around 80% of LPG produced in Australia coming from offshore and onshore oil and gas fields. Because most Australian LPG is sourced from natural gas processing, refinery closures will have little impact on the security of domestic supply.

With production levels well in excess of current market demand, LPG is exported, earning revenue and contributing even further to our local economy. We have almost 80 years supply of LPG, and that's just the sources we know about so far.

As Australia continues to produce more gas than it currently consumes, security of supply can be guaranteed.