

FACT SHEET:

Gas-Sourced Distributed Energy



Australian gas fuels - Liquefied Petroleum Gas (LPG), Liquefied Natural Gas (LNG) and Compressed Natural Gas (CNG) - have an important role as a reliable component in a lower carbon energy setting.

They are also cleaner, Australian, support thousands of local jobs and are a more readily available source of energy than conventional fuels.

GAS-SOURCED DISTRIBUTED ENERGY

Gas-sourced distributed energy is decentralised, modular and located close to the energy need it meets - providing greater reliability and increasing energy security. Therefore, it can provide reliable energy security to localised grids, offshore islands, off grid/remote energy use and assist communities at the very ends of old unreliable networks.

Of course, a country as large as Australia also has a heavy reliance on off-grid generators running on imported dirty diesel and increasingly from often subsidised unreliable stand-alone renewable sources.

Therefore, it is essential that we shift these regional, remote and off-grid communities away from dirty diesel generation and unreliable sources to cleaner reliable gas generation and gas-renewable hybrids.

This approach doesn't just offer the prospect of more reliable and cleaner power for these communities, but by taking some load off far flung electricity networks and reducing overall grid costs, it benefits other communities as well.

Off-grid distributed energy systems provide a cost-effective alternative to often more expensive, yet less reliable - especially in bushfire prone regions - single wire earth return (SWER) 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.



Not only are gas 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.

Few people also realise that gas 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

Gas fuels are currently transported by tanker to essentially create 'virtual pipelines' of energy without the need for capital expense of fixed energy infrastructure. These 'virtual pipelines' move readily with demand and already create thousands of local jobs - not only in our capital cities, but in our provincial and regional communities.

In contrast centralised electricity generating facilities such as coal and gas fired power stations, hydroelectric dams and large-scale wind/solar farms, all typically require electricity to be transmitted over long distances.

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.

ABOUT GAS FUELS

Australian gas fuels - Liquefied Petroleum Gas (LPG), Liquefied Natural Gas (LNG) and Compressed Natural Gas (CNG) address the triple drivers of reliability, cost and the environment - while securing local jobs and reducing Australia's reliance on foreign oil imports.

It is therefore critical to take the necessary steps to ensure that these fuels become a bigger part of Australia's energy mix - which will help create even more Australian jobs.





CLEANER, RELIABLE, AUSTRALIAN ENERGY FOR OUR AGRICULTURE INDUSTRY

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 clean, 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 repelling, greenhouse/ animal shed heating and water heating.

GAS-FUELED POWER GENERATION FOR THE MINING INDUSTRY



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

In 2016-17, the mining industry consumed almost 11% of the energy produced in Australia - but very little of that energy came from affordable Australian gas 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.

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 gas fuels can reduce the risk of bushfires caused by interactions between electricity powerlines and the elements.

DID YOU KNOW...

- ✓ GEA Members have almost \$4.3 billion invested in LPG facilities, trucks and cylinders.
- ✓ Gas delivers 44% of Australia's household energy - but only 13% of household greenhouse gas emissions.
- ✓ Australia's gas infrastructure can store the same amount of energy as 6 billion Powerwall batteries.
- ✓ Half of the gas used in Australia is for mining and manufacturing - contributing \$196 billion to the national economy and employing over 949,000 Australians.
- ✓ 70% of homes use mains or bottled gas - that's 6.5 million homes and growing.
- ✓ Replacing 10% of diesel used on heavy on-road transport with gas fuels could reduce imported diesel by 1,018 million litres per annum - reducing CO₂ emissions by up to 597,000 tonnes.
- ✓ LPG, LNG and CNG fuels can reduce carbon emissions by up to 25% and virtually eliminates particulates along with NO_x and SO₂.