

MEDIA RELEASE

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Domestic gas supply key to Australia's low carbon future

New research demonstrates that using natural gas within Australia represents the most greenhouse-friendly and energy-efficient use of the nation's natural gas reserves.

A study by the DomGas Alliance compared the lifecycle emissions of natural gas used to supply industry and power generation in Western Australia with the export of gas as liquid natural gas (LNG).

Unlike domestic gas, LNG requires gas to be liquefied, shipped long distances in tankers and then regasified – all energy intensive processes - before it can be used as a fuel.

Key findings include:

- When utilising domestic gas, less than 8 per cent of energy is lost in the supply chain.
- Transport through the Dampier to Bunbury Natural Gas Pipeline - the longest gas transmission system in Australia - uses less than 3 per cent of the total energy.
- For LNG, 26 per cent of the energy is consumed by the LNG supply chain.
- LNG produces 20 per cent more greenhouse emissions over its lifecycle on a gigajoule basis compared to domestic pipeline gas.

DomGas Alliance Chairman Stuart Hohnen said the study's findings underlined the importance of natural gas as the only conventional energy source that can underpin Australia's transition to a low carbon economy during the next 20 years.

"The problem we have is that Australia's current greenhouse policies discourage the supply and use of domestic gas," Mr Hohnen said.

"The Carbon Pollution Reduction Scheme provides gas producers with a financial incentive in the form of carbon credits to export Australia's clean energy reserves as LNG, rather than supply local industry and households."

“From a greenhouse policy perspective, it is illogical to compensate coal, mandate renewable energy use and incentivise gas exports, while ignoring domestic gas – the most greenhouse and energy-efficient fossil fuel.”

The study’s findings are consistent with other international studies which examined the lifecycle emissions of LNG and domestic gas supply.

A 2007 Carnegie Mellon University study found that LNG generated almost 25% more greenhouse emissions over its lifecycle compared to domestic natural gas. The study also found that the upper band of emissions associated with LNG approached that of coal.

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The DomGas Alliance

The DomGas Alliance was formed in 2006 in response to a serious shortage of gas supply for new developments in WA. Membership includes current and prospective gas users and gas infrastructure investors.

Alliance members represent around 80 percent of Western Australia’s domestic gas consumption and gas transmission capacity, including smaller industrial and household users of gas. The Alliance also represents a significant proportion of prospective demand for additional gas supplies.

Members include: Alcoa of Australia, Alinta, Burrup Fertilisers, Dampier Bunbury Pipeline, ERM Power / NewGen Power, Fortescue Metals Group, Horizon Power, Newmont Australia, Synergy and Verve Energy.

The Alliance works closely with State and Federal Governments and other industry stakeholders to promote diversity, affordability and security of gas supply for industry and households in WA.



BACKGROUND

DomGas Alliance Study (2009) ¹

For every 100 GJ of energy in the supply chain:

	Energy Delivered	Energy Consumed	Total	Energy efficiency
Dom Gas	92.3 GJ	7.4 GJ	100 GJ	92.3 %
LNG	73.7 GJ	26.3 GJ	100 GJ	73.7 %

Lifecycle greenhouse emissions for:

1 GJ LNG:	67 kg CO _{2-eq}
1 GJ domestic gas:	56 kg CO _{2-eq}

1 GJ of LNG generates almost 20% more greenhouse emissions than domestic pipeline gas over its lifecycle.

Carnegie Mellon Study (2007) ²

Lifecycle emissions (lb CO_{2-e} per megawatt hour)

	Dom Gas	LNG	Coal
Midpoint	1250	1600	2100
Upper Band	1600	2400	2550

¹ The 2009 DomGas Alliance analysis drew on a number of data sources including a 2006 study by Heede, R., 'LNG Supply Chain Greenhouse Gas Emissions for the Cabrillo Deepwater Port: Natural Gas from Australia to California', Climate Mitigation Services, May 2006. For the purpose of the Alliance's analysis, domestic gas refers to gas supplied to industry, power generators and households through the Dampier to Bunbury Natural Gas Pipeline.

² Jaramillo, Griffin and Matthews, 'Comparative Life-Cycle Air Emissions of Coal, Domestic Natural Gas, LNG and SNG for Electricity Generation', *Environ. Sci. Technol.* 2007, 41, 6290-6296.