

NATURAL GAS AND MANUFACTURING – THE TRUTH ON THE MAKE

TAI ARGUMENT

“Almost four fifths of Australian gas production is either exported as LNG or used in the process of doing so.”

“The idea that increasing gas production reduces gas prices also ignores the reality that Australia’s relatively low-cost gas resources have largely been either already used, or more recently exported by the LNG industry. The remaining resources are becoming increasingly expensive.”

FACT

The LNG export model has led to a very successful industry in Australia that in 2018-19 supported up to 80,000 jobs and paid wages more than double the average wage. This led to \$47 billion in revenue for Australia in 2018-19, providing significant economic strength to the economy. While LNG export volumes and earnings are forecast to decline in 2020-21 due to the impacts of COVID-19, recovery is predicted from 2021-22 to around 80 million tonnes at \$37 billion **(Department of Industry, Science, Energy and Resources, September 2020).**

Gas prices change in response to demand and supply conditions and there is little merit to The Australia Institute’s cost analysis. LNG exporters have diverted significant amounts of gas to the domestic market that has resulted in gas prices being at their lowest since late 2015 **(ACCC Gas inquiry Interim Report July, 2020).**

“Wages in the resources sector [encompassing mining, oil and gas development, mining services and the people and communities around them] are the highest of all Australian industries, more than double the average wage, and the average in resources sector is about 40 per cent higher than the industry with the next highest wages.” **Australian Government National Resources Statement, 2019**

The effectiveness of the LNG export model and continued global demand ensures that the economic benefits for Australia are sustainable.

“Technological innovation and abundant supply are making LNG more accessible to new importers. With the increasing commoditisation and new market developments, LNG can remain a cost competitive energy supply option into the long-run.” **International Gas Union Global Gas Report, 2020**

Gas prices vary due to supply and demand but the most recent ACCC Gas Market Inquiry 2017-2025 report confirmed for the eighth consecutive time, there is no shortfall in the domestic gas market. However, extracting gas is more expensive than it used to be, and that is why natural gas can no longer be supplied at \$4 per gigajoule. The wholesale price of gas in Australia has not been below \$4 since 2006 **(Oakley Greenwood, 2018).**

About 90 percent of all proven and provable reserves in the east coast have a lifecycle cost of more than \$6 per gigajoule **(ACCC, 2018).** Further investment will lead to more supply which will put downward pressure on price. Sensible and consistent government policy helps with investor confidence and leads to continued and increased investment.

TAI ARGUMENT

“Australia’s energy market operator expects gas to decline in importance in Australia’s electricity markets.”

FACT

Natural gas is a vital part of our everyday lives in Australia, **from cooking and heating to facilitating industry development**. It also remains an important energy source in Australia’s electricity markets.

Australia has abundant supplies of natural gas, both offshore and onshore. It is also Australia’s **second largest source of electricity generation**, after coal, and is a crucial part of Australia’s energy mix, providing 21 percent of the nation’s supply.

To put the use of natural gas into perspective, a joule is a measure of thermal energy – one petajoule is 10¹⁵ joules (1 million billion). According to the Victorian Gas Program’s **Progress Report No.4** (2020) there could be between 128-830 petajoules of commercially feasible gas that’s yet to be discovered in the state – which is equal to enough gas to supply 500,000 Melbourne homes with natural gas cooking and instantaneous hot water systems for 100 years*.

Today, and into the future, demand for natural gas will continue across industries and uses, including manufacturing.

“There will be some opportunities for electrification, but gas will still be required for manufacturing – which requires high energy heat that only gaseous fuels can provide – and household heating like hot water, cooking and space heating.” **Energy Networks Australia, 2020**

According to the latest statistics from the Department of Industry, Science, Energy and Resources, total electricity generation in Australia in 2019 was around 265 TWh, with fossil fuels contributing 79 percent of total electricity generation in 2019, including 56 percent from coal, 21 percent from natural gas and a further two per cent from oil. As coal generators are retired, natural gas is expected to play a larger role in meeting any gaps in demand (**Energy.gov.au, 2019**).

Natural gas’ functionality as a baseload power source is becoming more recognised as our electricity consumption changes from traditional steady demand to more swings and fluctuations. Unlike coal, gas generators can quickly ramp up and down to match demand changes.

Gas’ flexible generation and reliability make it an ideal partner for intermittent renewable energy sources such as wind and solar to match supply and demand. Natural gas also allows for more renewables to be integrated into the grid due to its short response time. **Learn more about the role of natural gas in the Australian electricity market on our blog.**

Natural Gas

The Government's Australian Energy Statistics **Australian Energy Update 2020** showed that natural gas-fired generation rose in calendar year 2019, to 21 percent of total generation. Beyond its role in electricity generation, natural gas produced for the domestic market is also used for a variety of other purposes. We've outlined some below, or **you can learn more here**.

"Petrochemicals, which turn oil and gas into all sorts of daily products – such as plastics, fertilisers, packaging, clothing, digital devices, medical equipment, detergents or tyres – are integral to modern societies. In addition to products critical to our daily lives, petrochemicals are also found in many parts of the modern energy system, including solar panels, wind turbine blades, batteries, thermal insulation for buildings, and electric vehicle parts." **International Energy Agency, 2018**

"Petrochemical products provide substantial benefits to society, including a growing number of applications in various cutting-edge, clean technologies critical to a sustainable energy system." **International Energy Agency, 2018**

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"Plans for a 'gas fired recovery' are impractical, and ignore opportunities in cleaner, cheaper energy."

The performance of Australian manufacturing is not solely determined by energy costs, but natural gas does have an important role in manufacturing as a feedstock and source of energy. The Australia Institute's argument lacks insight into how the manufacturing sector works. Plans for a 'gas fired recovery' consider a realistic, and wholistic, view of Australia's energy future in which natural gas will continue to have an important role. A true gas fired recovery is not only about manufacturing. It is about every part of Australia's economy; regional jobs, international trade and major infrastructure investment. The oil and gas industry is uniquely positioned to drive this recovery because it has:

- A multiplier effect across the economy that very few other industries have, playing a role in almost all Australian industries. Government research centre National Energy Resources Australia (NERA) found that every direct job in the oil and gas industry sustains 10 elsewhere in the economy (**NERA, 2018**).

- A track record of attracting international investment. In the last decade, the oil and gas industry invested **\$350 billion in Australia** in projects for both domestic supply and export to our trading partners in Asia.
- Limited direct investment or subsidy requirements from government. The Productivity Commission found that the industry (along with mining), actually has the lowest levels of direct government support, with among the highest contribution to the economy (**Productivity Commission Annual Report Series, 2018-19**).

Future of Natural Gas

“Gas technologies can play a major role in the low-carbon transition. As countries and regions pursue a low-carbon transition, technologies such as biomethane, hydrogen and gas with carbon capture could play an important role, serving to decarbonize sectors of the economy that are currently seen as ‘hard to abate’, and providing opportunities for long-term growth for the gas industry.” **International Gas Union Global Gas Report, 2020**

A gas led recovery is also the only way to achieve a cleaner energy future. The World Energy Outlook, released in October, found that increased natural gas use in the Asia Pacific region (up by 52 per cent) is part of a future energy mix consistent with the greenhouse gas emissions reduction objectives of the Paris Agreement (**World Energy Outlook, International Energy Agency, 2020**).

“There will be times when supply from renewable electricity generators will be inadequate to meet demand and occasionally such periods will last many days and affect adjacent jurisdictions. Natural gas fired electricity can pick up where batteries and pumped hydroelectricity run short.” **Dr Alan Finkel, 2020**

*Average annual gas use of 17GJ per home per year (link)