

# CLIMATE AND ENERGY - THE GREAT DEBATE ON IMPACT

## TAI ARGUMENT

The rise of an east coast gas export industry roughly tripled the price of gas for local consumers and businesses. "... large increases in gas exports resulted in large increases in gas prices." (p. 14)

"Despite its large scale and emissions, Australia's gas industry employs a very small proportion of the workforce, around one in 500 jobs." (p. 1)

## FACT

"Gas continues to demonstrate its cost-competitiveness in the global energy landscape, and events of the last 12 months have served to make gas even more affordable." **International Gas Union 2020**, p. 17.

The most recent Gas Market Inquiry 2017-2025 August report by the **Australian Competition & Consumer Commission** confirmed for the eighth consecutive time there is no shortfall in the domestic gas market. The report also confirmed gas prices have continued to fall.

The LNG industry has also created thousands of jobs and pumped billions of dollars of investment into the economy.

LNG investment in Australia saw more than **\$200 billion** invested in seven new LNG projects, which all began operating between 2014 and 2019. The investment in these projects saw Australia's annual LNG nameplate capacity reach 88 million tonnes<sup>[1]</sup> and **beyond this impact, an ecosystem of companies dedicated to serving the industry has grown** in Perth, Brisbane and regional centres.

In addition, the use of LNG to displace more emissions intensive fuel sources **remains an important tactic to reduce emissions around the world**. Beyond 2020, China is expected to continue to be a key driver of global LNG demand growth. Chinese gas demand is expected to be supported by a policy-driven expansion of gas-fired power generation, aimed at reducing air pollution<sup>[2]</sup>.

"The impact of the resources sector [encompassing oil and gas development, mining, mining services and the people and communities around them] directly benefits workers. Since 2005, direct employment in the resources sector has more than doubled from 104 000 to 255 800." **Australian Government National Resources Statement 2019**, p. 9.

"Wages in the resources sector 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**, p. 9.

"Studies have shown that CSG development has led to the reversing of rural decline in CSG regions, including through increases in female employment and higher youth education levels." **Office of the Chief Economist, 2015** p. 2.

## TAI ARGUMENT

“The fossil gas industry in Australia tripled production from 1990 to 2010 and then from 2010 to 2019 production tripled again. Nearly all of the new production was exported. Australia has become the world’s largest exporter of liquified natural gas (LNG) and one of the world’s biggest gas producers.” (summary).

## FACT

The oil gas industry has invested more than \$450bn over last decade in oil and gas projects supporting jobs, businesses and communities in regional Australia. In 2018-19 it supported up to 80,000 jobs directly and indirectly and for every job in oil and gas, another 10 jobs were supported in Australia. The industry provided **4% of GDP in 2019-20, up from 3% in 2018-19 and paid \$77bn in tax to build roads, hospitals and schools.** 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**).

“As a result of gas production and LNG-related activities, the economies of Queensland, the Northern Territory and Western Australia have been transformed. In Queensland, LNG developments over the past 5 years have contributed billions of dollars to regional economies. They have resulted in direct employment opportunities, the development of skills and capabilities, investment in regional transport infrastructure, and the development of community and social infrastructure.” **McKinsey & Company 2016**, p. 11.

“Gas continues to play a vital role towards an economically and environmentally sustainable energy future.” **International Gas Union 2020**, p. 7.

In 2017-18, the industry paid over \$5.8b in total tax payments, which could build around five large hospitals, 30 schools or several hundred kilometres of regional roads.

The Australian oil and gas industry contributed 4% of GDP in 2019-2020. **Ernst & Young, 2020** p. 22.

“The gas industry and its supporters often argue that gas reduces emissions by displacing coal. Remarkably, these claims are made presented without any evidence.” (p. 48)

This claim by TAI is wrong and scientifically untrue.

“I think there’s no doubt that, if you look at the emissions associated with generating a unit of electrical energy—let’s call it a megawatt hour; that’s the standard unit—generating that from a gas fired generator, compared to a coal-fired generator, produces significantly lower emissions, even if you’re including all those upstream associated emissions..” Dr Finkel, Chief Scientist, Senate Estimates, 28 October 2020

“When I’ve talked about gas as being important to the transition, I’m talking about gas as being important to transition us into an electricity system where we have more solar and more wind, and we can bring it on faster by using gas to be a backstop to firm up the supply.” Dr Finkel, Chief Scientist, Senate Estimates, 28 October 2020

“Coal-to-gas switching avoided more than 500 million tonnes of CO<sub>2</sub> emissions over this period (2011-2018)”  
**International Energy Agency, 2019**, p.8.

To put this in context, this is almost equal to Australia’s total annual emissions.

“In Australia, if Surat Basin natural gas was used to displace domestic coal fired electricity generation, GHG emissions intensities would be 0.66 t CO<sub>2</sub>-e/MWh (open cycle gas turbine) or 0.48 t CO<sub>2</sub>-e/MWh (closed cycle gas turbine) representing a reduction in emission compared with coal of 31% and 50%, respectively.”

**CSIRO Energy 2019**, p. 28.

“Natural gas has a clear greenhouse gas benefit over coal when combusted. Natural gas produces around 52 kg CO<sub>2</sub>-e per gigajoule compared to around 90 kg CO<sub>2</sub>-e per gigajoule from black coal.” **Australian Government Department of the Environment and Energy, 2019**, p. 25

“Domestically, the abundance of low-cost natural gas has resulted in a substantial shift away from coal to natural gas in the U.S. power generation sector. This shift has substantially reduced carbon dioxide emissions from the power sector.” **Breakthrough Energy, 2019**, p. 25.

“The U.S. has experienced a significant decline in CO<sub>2</sub> emissions in six of the last 10 years. The shift from coal to natural gas in power generation resulted in 1,254 million metric tons of avoided CO<sub>2</sub> emissions from 2005 to 2014, or about 61 percent of total avoided emissions over that period.” **Breakthrough Energy, 2019**, p. 31.

“Unleashing the pollution from Australia’s full gas reserves would make it almost impossible for the world to meet Paris agreement goals.” Australian Conservation Foundation chief executive, Kelly O’Shanassy.

“Our projections show that natural gas can play a role in bringing down emissions by displacing more polluting fuels in certain countries, sectors and timeframes.” – **World Energy Outlook 2020**, p. 277.

“Many studies have shown rates of methane emissions far higher than set out in official national emission inventories. This is a problem because a relatively small increase in methane emissions can dramatically increase the emissions footprint of fossil gas.” (p. 6)

“...taking into account our estimates of methane emissions from both gas and coal, on average, gas generates far fewer greenhouse-gas emissions than coal when generating heat or electricity, regardless of the timeframe considered.” **International Energy Agency, 2017**, p. 1.

“Methane emissions from natural gas as a fraction of global production have declined from approximately 8% to 2% over the past three decades.” **CSIRO Energy 2019**, p. 1.

## TAI ARGUMENT

“There is clearly little need for increased gas extraction to ‘transition’ Australia’s electricity system.” (p. 53)

## FACT

“When I’ve talked about gas as being important to the transition, I’m talking about gas as being important to transition us into an electricity system where we have more solar and more wind, and we can bring it on faster by using gas to be a backstop to firm up the supply.”  
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“Gas demand is expected to see an average annual growth rate of 1.4% from 2018 to 2040 – according to the IEA’s World Energy Outlook, Stated Policies Scenario. With a transition in global energy consumption patterns, the share of natural gas in the energy mix grows from 23% to 25% over the period, amounting to 5.2 trillion cubic meters in 2040. By then, natural gas is expected to overtake coal as the world’s second-largest energy source.” **International Gas Union 2020**, p. 32.

“Asia Pacific will be the main engine of natural gas demand growth to 2040, led by China and India. Economic growth, expansion of gas pipeline networks, construction of LNG regasification terminals, market reforms and environmental policies will all support gas demand across the region.” **International Gas Union 2020**, p. 35.

“Domestically gas will play an important role in balancing renewable energy, ramping up and down to match supply and demand.” Australian Government Department of Industry, **Science, Energy and Resources, 2020** p. 18.

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[1] <https://www.offshore-energy.biz/australia-lng-exports-to-drop-by-17-billion-for-2020-21/#:~:text=The%20wave%20of%20LNG%20investment,capacity%20reach%2088%20million%20tonnes.>

[2] <https://publications.industry.gov.au/publications/resourcesandenergyquarterlyseptember2020/documents/Resources-and-Energy-Quarterly-Sept-2020-Gas.pdf>