



Briefer On Proposed Projects for Narrabri Inland Port

This report provides an economic analysis of the proposed use of gas from the Narrabri Gas Project (NGP) to the proposed Northern NSW Inland Port (N2IP) for industrial projects. It highlights Santos' problematic role in the gas market, the volatility of gas prices and the risks that that poses to the N2IP, and assesses the renewable opportunities in the region that could form an alternative basis for industrial activity.

The Narrabri Shire Council is intending to develop the N2IP as a logistics and industrial hub in Narrabri. It is envisaged that the NGP will be able to attract energy intensive industries and value-added manufacturing to the Narrabri Special Activation Precinct (SAP). Similarly, it is intended that would-be participants in the N2IP project will be able to leverage off the potential supply of gas from the NGP.

Pegasus Economics (Pegasus) has been commissioned by Lock the Gate to complete this analysis.

Gas prices and the domestic gas market

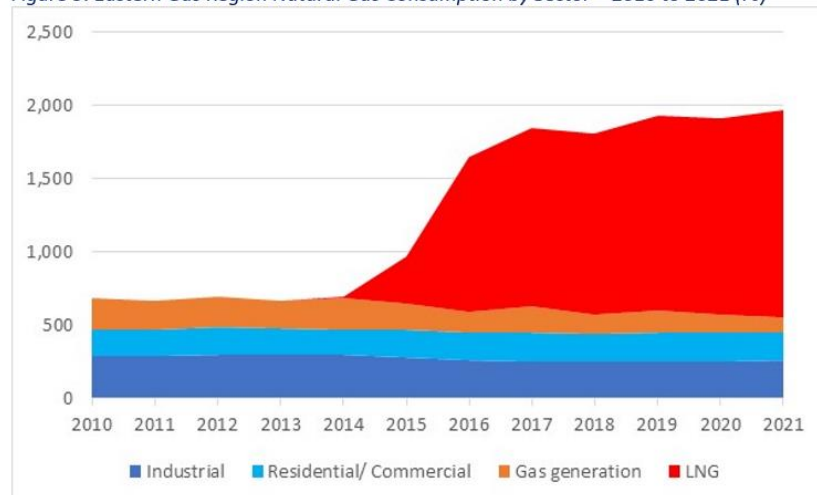
The NGP was approved in 2020 claiming it can deliver up to 200 terajoules (TJ) of gas per day, or 73 Petajoules (PJ) per year to the domestic market.

Estimated production costs for the NGP have been put at around \$7.90 per Gigajoule (GJ), placing it at the expensive end of gas resources. There are currently 9 other developed and undeveloped gas projects in Australia with lower estimated production costs than Narrabri.

Not only does NGP have higher production costs, but Santos has also played a key role in a long-term strategy to drive up the market cost of gas to the domestic market.

Gladstone in Queensland now hosts three Liquefied Natural Gas (LNG) export plants. These exports dwarf that of domestic consumption accounting for around 71.8% of total gas consumption in 2021.

Figure 5: Eastern Gas Region Natural Gas Consumption by Sector – 2010 to 2021 (PJ)



Source: Australian Energy Market Operator (2022a).

In 2016, the Santos-led Gladstone LNG plant began purchasing substantial volumes of gas from the domestic market to supplement production from its inadequate reserves. In particular it diverted gas from the Cooper Basin that historically had supplied NSW and South Australia. In turn, wholesale gas prices offered to domestic users began to rise.



From this point on, the Australian gas market has been transformed from a captive domestic “buyer's” market to an internationally-linked “seller's” market. Since 2015-16, gas prices have almost tripled in the Eastern Gas Region.

With control of close to 90% of the 2P reserves in 2021, the three Queensland LNG exporters, including Santos, began to attract warnings that they were abusing their market power and behaving as a *de facto* cartel, deliberately withholding and withdrawing gas from the Eastern Gas Region, thereby forcing up gas prices.

Contracted gas prices have recently reached as high as \$30/GJ and wholesale spot prices as high as \$45/GL.

These prices, and the failure to properly regulate the domestic gas market, represent a threat to any industry which seeks to rely on gas as an input, and a major threat to the success of the N2IP if it is based on gas supply.

In addition, these ongoing and persistently high gas prices for domestic users in the Eastern Gas Region is likely to lead to demand destruction. Contrary to a normal supply and demand cycle, demand destruction occurs when persistent high prices or limited supply for a product reduces demand leading to a *permanent, widespread abandonment* of the product, posing a further threat to Santos’ long-term ambitions.

Stranded asset risks

New gas projects such as the NGP run the risk of becoming stranded assets due to regulatory requirements that constrain carbon dioxide emissions as well as improvements in alternative energy technology. The report finds that Santos would be up for an additional \$35 million per annum to meet the requirements of the safeguard mechanism coupled with the purchase of Australian Carbon Credit Units (ACCUs) to offset the CO₂-e emissions from the project.

The Albanese Commonwealth Government has committed to reducing Australia’s greenhouse gas emissions by 43% by 2030 to achieve net zero by 2050. Furthermore, the federal government joined the Global Methane Pledge in October 2022, a voluntary commitment to reduce global methane emissions across all sectors by at least 30% below 2020 levels by 2030.

Developing the N2IP and SAP predicated on gas supply from the NGP, exposes participants dependent upon gas to the heightened risk of having their assets stranded as well.

Specific projects proposed at N2IP

To date three projects have been tentatively announced as seeking to develop an industrial business within the N2IP and the SAP, on the basis of the Narrabri Gas Project proceeding:

1. Perdaman Fertiliser/Explosives Plant

In late February 2019, Santos announced that it had entered into a non-binding agreement with Perdaman for the supply of 14.5 PJ of gas per annum over 20 years, for a proposed new ammonium nitrate plant near Narrabri to produce fertiliser for agribusiness.

Globally, ammonium nitrate is largely used in the manufacture of nitrogen-based fertilisers. However, the use of ammonium nitrate as a fertiliser in Australia has been significantly restricted by regulation related to national security. While ammonium nitrate can be used as a fertiliser in agricultural applications, the market for this application in Australia is relatively small.



The majority of ammonium nitrate produced in Australia is used in the manufacture of explosives, for the mining industry. Existing ammonium nitrate production facilities are located close to the main mining areas of the Hunter Valley, in NSW, the Bowen Basin in Queensland, the Kalgoorlie region of Western Australia and, more recently, the Pilbara region in Western Australia.

It is far more likely that Perdaman is intending to build an explosives manufacturing facility at Narrabri to service the mining industry, rather than for the production of nitrogen-based fertilisers.

A combination of declining demand for ammonium nitrate explosives, high barriers and substantial sunk costs plus the need to lock in long term supply contracts makes the Perdaman proposal an extremely high risk commercial proposition.

Whilst green ammonia production could be a feasible alternative in the N2IP, providing cheaper, lower emissions fertiliser based on renewables, to the agricultural industry, water is a constraining factor.

2. Brickworks Brick Factory

In May 2019 Santos announced that it had signed a non-binding memoranda of understanding with Brickworks for the supply of 3 PJ of gas per year for 7 years from 2025 from the NGP.

Brickworks uses gas to fire kilns to dry bricks. In September 2018 Brickworks signed a supply agreement with Santos for it to supply its other east coast operations through to the end of 2024. In June 2022 it was reported that Brickworks' contract gas price with Santos was averaging \$10 per gigajoule (GJ), locked in for two years, compared with the then government-mandated price cap of \$40 per GJ. Paying more than the \$10/GJ for the new contract would have forced Brickworks to shut its plants.

Brickworks is already investigating alternative fuels to fire its bricks in order to reduce its carbon emissions. It is entirely possible that a new Brickworks brick factory could operate at N2IP in the absence of the NGP, providing it has access to alternative fuel sources such as methane gas from landfills or sawdust.

3. Natural Soda Baking Soda Factory

In July 2020 Santos signed a Memorandum of Understanding with Natural Soda to use salt removed from produced water to manufacture sodium bicarbonate.

33,600 tonnes a year of salt waste from the NGP still has no formal plan for its disposal. The MOU committed Natural Soda to undertake a concept study however this appears to have progressed no further than a "thought bubble".

The Queensland CSG industry has been producing this waste for decades and as yet has failed to come up with a solution. A recent report has deemed its use for baking soda as "infeasible" due to a lack of suitable technology at a commercial scale, high upfront and lifecycle costs, significant energy consumption requirements and low excess demand in the current market.

It appears that Santos is using the Special Activation Precinct planning process and the development of the Northern NSW Inland Port to create a new, fabricated demand for its gas, which is expensive and polluting. The community is at risk that government funds are spent on propping up businesses based on fossil gas that ultimately end up as stranded assets.