The Australia Institute
Research that matters.

Impact of gas exports on Australian energy prices

Allowing unrestricted gas exports from the east coast of Australia has resulted in domestic wholesale gas prices more than tripling and electricity prices doubling.

Author: Mark Ogge, Matt Saunders, Rod Campbell
Date: April 2025

INTRODUCTION

Until the mid-2010s, wholesale gas prices in eastern Australia were low – generally below $5 per gigajoule (GJ). Gas production in Bass Strait off Victoria and in South Australia's Cooper Basin provided ample supply to consumers in these states as well as New South Wales, Queensland and later Tasmania.

The prices paid in these states were substantially below prices paid in other countries. This was because of the ample supply, modest demand and, crucially, gas companies were physically unable to transport Australian gas to international markets. There was no pipeline or shipping facility that could facilitate the export of gas to big markets like Japan, China, Taiwan and Korea. Gas companies were forced to accept the prevailing market price.

All this changed with the decision to build gas export terminals in Gladstone, Queensland, that began shipments in January 2015.[1] Suddenly, gas companies were able to sell into higher-paying markets. As was clear at the time, the effect of linking the east coast of Australia to international gas markets was to increase prices for Australian consumers.[2]

[1] ABC Rural (2015) *First shipment of natural gas leaves Gladstone in Queensland bound for Asia*, https://www.abc.net.au/news/rural/2015-01-07/first-lng-from-csg-ship-leaves-queensland/6002446
[2] Grudnoff (2014) *Fracking the future*, https://australiainstitute.org.au/report/fracking-the-future/

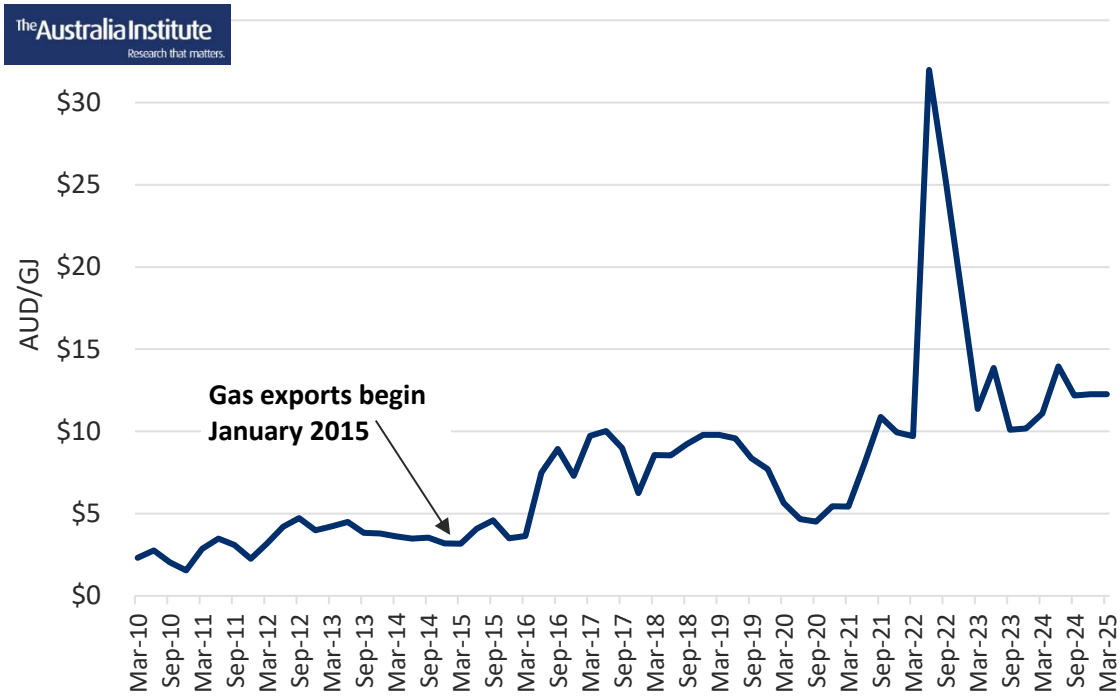
Gas price increases also impact on electricity markets because gas-fired electricity generators are often the price setters in Australia's National Electricity Market.

This briefing note shows the price rises that have occurred following the start of east coast gas LNG exports from Queensland. The analysis is based on wholesale gas prices for the Declared Wholesale Gas Market (DWGM), the Victoria segment of Australia's east-coast interconnected gas system, and National Electricity Market (NEM) wholesale electricity prices.[3]

GAS PRICE INCREASES

Figure 1 below shows wholesale gas prices from 2010 to early 2025, with the start of gas exports January 2015 indicated.

Figure 1: East coast wholesale gas prices 2010 – 2025



Source: AEMO (2025)

As shown in Figure 1, prices began to rise almost as soon as the export terminals began operation, quickly tripling to approach world prices. The dip in price in 2020 coincides with the COVID epidemic and the major spike in 2022 to $31.98/GJ, coincides with the worldwide energy price spike following Russia's invasion of Ukraine. If there had been

[3] AEMO (2025) *Declared wholesale gas market prices*, https://aemo.com.au/energy-systems/gas/declared-wholesale-gas-market-dwgm/data-dwgm/vic-wholesale-price-withdrawals : OpenElectricity (2025) *NEM dashboard*, https://openelectricity.org.au/

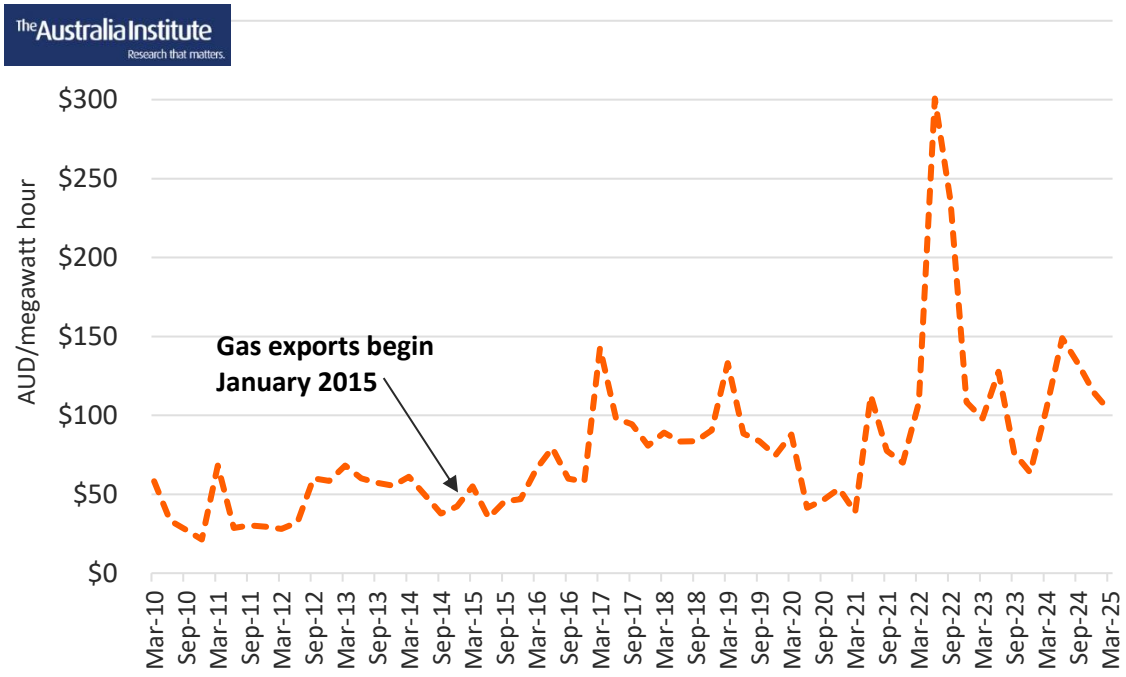
no gas exports, Australian consumers would have been sheltered from this price spike, as well as from the overall trend towards wholesale prices above $10/GJ.

The average price in Figure 1 before exports began is $3.33/GJ. The average price since exports began is $9.67/GJ, almost triple the pre-export price. Current prices, apart from the Russian caused spike in 2022, are at record highs of around $12.20/GJ, which is 3.7 times the pre-LNG average price.

ELECTRICITY PRICE INCREASES

Figure 2 below shows average quarterly wholesale electricity prices in National Electricity Market (NEM) have followed a very similar path to wholesale gas prices.

Figure 2: Wholesale electricity prices in the NEM, 2010 – 2025

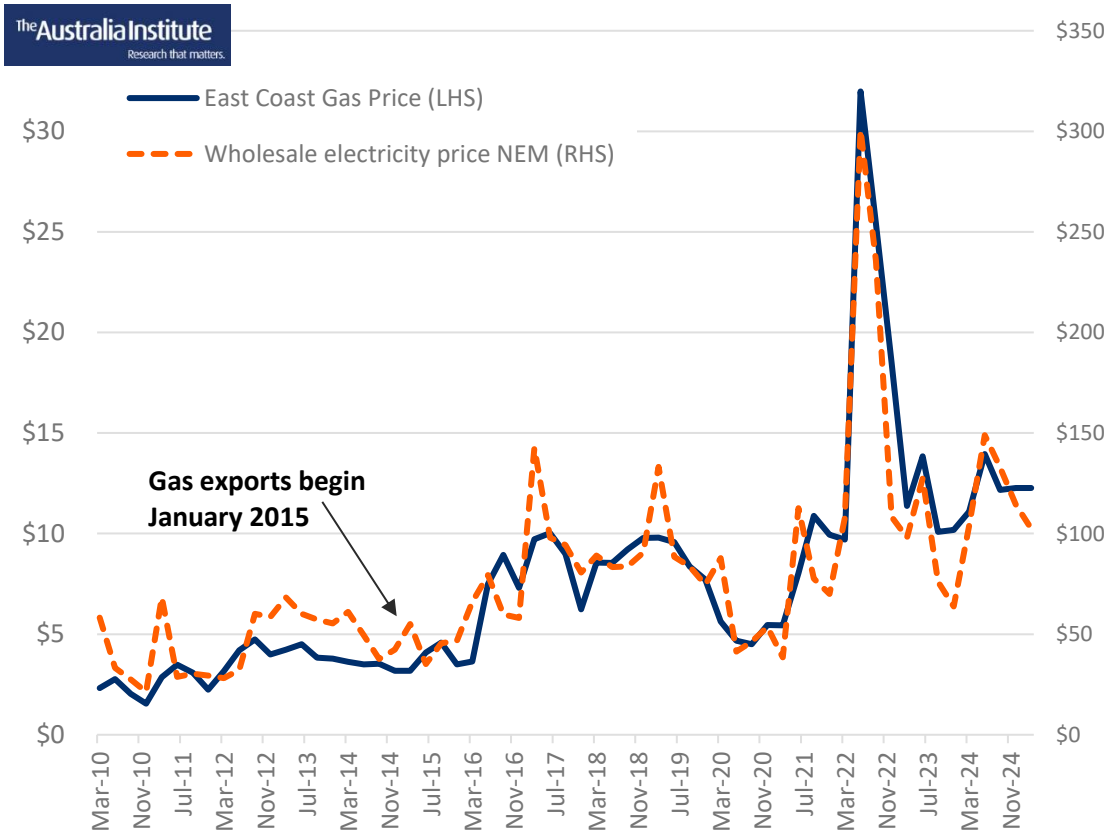


Source: OpenElectricity (2025)

Figure 2 shows how wholesale prices National Electricity Market (NEM) have increased in a similar way to gas prices. Prior to LNG exports, wholesale electricity prices averaged $62.32/MWh. Since the start of LNG exports, wholesale electricity prices have averaged $107.67/MWh, a 73% increase. With the spike in global energy prices following the Russian invasion of Ukraine wholesale electricity prices spiked as well, topping out at $332.47/GWh in June 2022. Current prices over the last 12 months, apart from the Russian caused spike, remain near record highs at $124.84/GWh, double the pre-LNG average price.

Figure 3 combines the data from Figures 1 and 2 on the same chart to show just how closely movements in wholesale electricity prices track changes in wholesale gas prices.

Figure 3: Wholesale gas and electricity prices, 2010 – 2025



Sources: AEMO (2025), OpenElectricity (2025)

WHY ARE THE PRICES SO CLOSELY RELATED?

Gas and electricity prices are closely correlated because in the NEM the price of gas-powered electricity generation often sets the wholesale price of electricity, even though gas is used for only a small amount of total electricity generation.

Price setting in the NEM works similar to an auction. In simplified terms, bids are received from the fleet of generators at different prices. The lowest priced bids are accepted first, followed the by the next cheapest until the expected level of electricity

demand is met. The most expensive generator, or the marginal generator, sets the wholesale price, the price received by all generators.[4]

Gas-powered generation is often the most expensive, so it regularly sets wholesale prices. Therefore, as gas prices increase so to wholesale electricity prices.

But it gets worse. Due to various reasons including a lack of competition, even when gas is not setting the price of electricity, other electricity generators nonetheless bid at similar high prices that the gas generators would have done so otherwise. Why offer a low price, when you can get a much higher price at just a fraction below what the gas generators would otherwise offer? This pricing strategy is known as *shadow pricing*.[5] Shadow pricing is a market strategy typically used by coal and hydro generators who have the flexibility to bid shadow prices at key times throughout the day, compared to wind and solar who bid when the winds blows and the sun shines.[6] While complex, the key point is that *shadow pricing* strengthens the relationship between expensive gas and expensive electricity.

The close relationship between gas and electricity prices, and the price setting mechanism of the NEM, makes clear that higher gas prices drive higher wholesale electricity prices. It also makes clear, as is now commonly reported, that renewables are not the cause of higher electricity prices.[7]

CONCLUSION

The decision to allow unrestricted gas exports from the Australian east coast gas market has led to a tripling of domestic wholesale gas and electricity prices. It has left Australians exposed to not only higher world energy prices, but also the wild fluctuations that events like the Ukraine war cause.

[4] McArdle (2018) *Beginner's Guide to how dispatch works in the NEM, and hence how prices are set*, https://wattclarity.com.au/articles/2018/08/beginners-guide-to-how-dispatch-works-in-the-nem-and-hence-how-prices-are-set/

[5] For more details on shadow pricing see: Nolan, Gilmore, Munro (2022) *The role of gas price in wholesale electricity price outcomes in the Australian National Electricity Market*, https://www.griffith.edu.au/__data/assets/pdf_file/0034/1639348/No.2022-08-Gas-Price-and-Electricity-price-Relationship.pdf

[6] Clean Energy Investor Group (2025) *The cost of no renewables – The unaffordable alternative*, https://www.ceig.org.au/wp-content/uploads/2025/03/2025-03-CEIG-The-cost-of-no-renewables.pdf

[7] Saunders (2024) *We don't need nuclear power – the path to cheaper electricity is renewables,* https://australiainstitute.org.au/post/we-dont-need-nuclear-power-the-path-to-cheaper-electricity-is-renewables/ : Bowyer (2025) *What's really driving high power bills (hint, it's not renewables) and how can we reduce them?*, https://reneweconomy.com.au/whats-really-driving-high-power-bills-hint-its-not-renewables-and-how-can-we-reduce-them/

It is important to realise that this was not an accident. Increasing energy prices for Australians was the stated goal of gas companies like Santos. Santos told investors in 2014 that "its aim in [developing its Gladstone export terminal] was always as much about raising the domestic gas price…as it was about the [gas export] project."[8]

The only way to bring down Australian gas prices is to reverse the mistakes of earlier in the century – restrict gas exports.

[8] Credit Suisse (2014) *Santos: The seven-year itch?*, Credit Suisse Equity Research, copy available on request.