

# Shipping Away Our Competitive Advantage



**Australian Workers' Union**  
November 2017



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# Introduction

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Gas, as part of Australia's energy mix and as a direct business input, has provided a competitive advantage to Australia's manufacturing sector and broader economy for decades. Cheap energy has underpinned the international competitiveness of the manufacturing sector Australia-wide.

Not only has this advantage been lost – it has been willfully destroyed by government policy and the deceptive market practices of LNG producers.

Since 2015, three LNG Projects in Queensland – Gladstone LNG, Queensland Curtis LNG, and Australia Pacific LNG – began exporting three times more gas annually than what Australia's east coast demand requires. However, with each subsequent LNG train sent overseas, Australia continues to ship away its competitive advantage.

Indeed, Australia is the only gas-exporting nation that places no restriction on gas exports in favour of domestic consumption. Countries such as the US and Canada ensure that their domestic gas needs are met at an affordable price before permitting the export of LNG. Other countries such as Israel, Indonesia and Egypt reserve between 30 and 60 percent of gas production for domestic users. As noted by the Department of Industry, long term dedicated supply, particularly for industrial users such as manufacturers, is important as it provides certainty on the cost and availability of a critical business input.

Despite a relatively modest need for domestic gas, Australia's unrestricted gas export policy has seen prices explode from \$3 per gigajoule to at times as high as \$22 per gigajoule. As the second largest exporter of natural gas in the world – and soon to be largest – this is an obscene failure of government policy-making in Australia.

Australia's East Coast now finds itself in the midst of an energy crisis. A substantial rise in both electricity and gas prices threatens substantial job losses and rapidly rising household energy bills. Reflecting on Australia's recent political climate only further reminds us that energy prices as an economic interest can make for a considerable political problem.

In 2014 BIS Shrapnel predicted that without government intervention the looming gas crisis would result in economy-wide job losses of 235,800.<sup>1</sup> Since then, there has been a steady increase of site closures across the manufacturing sector.

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<sup>1</sup> BIS Shrapnel, 2014, The Economic Impact of LNG Exports on Manufacturing and the Economy.

- Incitec Pivot, a large-scale fertilizer producer, has indicated 1500 job losses at its Gibson Island plant, and has recently decided to build another manufacturing facility in Louisiana, United States – costing Australia 1,000 construction and 70 permanent jobs.
- Coogee Chemicals closed its Laverton site in Victoria costing 30 direct job losses, and is currently looking to build a new plant in the United States. France’s Air Liquide, a key supplier to Coogee Chemicals, is currently undergoing a restructure to minimise job losses.
- National Ceramics Industries Australia has indicated that sustained unaffordable energy prices will result in 320 job losses if it’s NSW Hunter Valley facility closes.

The ACCC revealed in its most recent Gas Inquiry that over one third of commercial & industrial gas users were considering either reducing production or closing facilities due to increased gas prices.<sup>2</sup> Whilst it’s true labour can be cheaper in other countries, the United States is not one of those countries. Unsustainably high gas prices are increasingly a unique trait of the Australian domestic market, perversely occurring in the same year we are expected to exceed Qatar in being the largest gas producer in the world.

With wholesale gas prices now affecting electricity prices, the McKell Institute have also forecast that, on average, households along the east coast could be paying up to \$600 more than what they should be paying in 2019.<sup>3</sup>

Remarkably, Australian industries are now paying more for wholesale gas than their overseas counterparts. In fact, countries such as Japan and China – Australia’s two main export countries – have been paying less for Australian LNG than domestic manufacturers.

Between 2015-17, Australian east coast capital cities have experienced price increases between 150%-325%. In contrast, Japan and China have experienced price decreases of 25%-50%. Compared to other gas exporting nations, Australia now has the highest domestic wholesale gas price in the world.

With the international oil price falling by more than half between 2013 to 2017, and all LNG producers understating expected costs of extraction by 300%-400%, our major gas companies found themselves facing unfavourable export commitments. They proceeded to gouge the east coast’s domestic gas supply to meet their overseas contracts, withdrawing substantial amounts of Australia’s gas away from households and industry. Some are selling excess gas on the international spot market at cheaper prices than available here.

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<sup>2</sup> ACCC, September 2017, Gas Inquiry 2017-2020.

<sup>3</sup> McKell Institute, 2017, The Cost of Inaction.

Unfortunately, Australia's manufacturing sector and household bank accounts are in the precarious position of subsidising the commercial negligence of major gas companies.

## A question of price, not supply

Australia is producing more gas than ever before in its history. Importantly, the market failure demonstrated by soaring gas prices relates to exports and market power of supplies rather than that of production scarcity. Australia has ample gas, it is a question of priority and allocation.

Gas producers and exporters have attempted to create the perception of a shortfall of gas in the public debate on our energy crisis. Such a shortfall does not exist in a meaningful sense as it relates to Australia's domestic gas market. To be clear, this is an engineered shortfall to suit the commercial needs of gas exporters and suppliers at the expense of Australian industry and consumers.

Government intervention to date has not been adequate in curbing gas prices. The introduction of the Australian Domestic Gas Security Mechanism – which granted the federal government the authority to limit gas exports – was designed in such a way that it would not actually compel producers to supply the domestic gas market. It was unsurprisingly not used. Indeed, the government's attempt to sign a supply agreement with LNG producers was a very indication of the ADGSM's ineffectiveness.

Even so, the supply commitment signed by LNG producers to increase supply to gas-powered generators has been criticized by industry analysts and the department of industry as unenforceable and with limited scope to ensure a material drop in wholesale gas prices.

To minimise any more damage this crisis will have on Australian industries and consumers, the government must establish a control that assures enough domestic supply to bring down prices. For a nation that produces more gas than any other in the world, our competitive advantage should be a prosperous manufacturing sector.

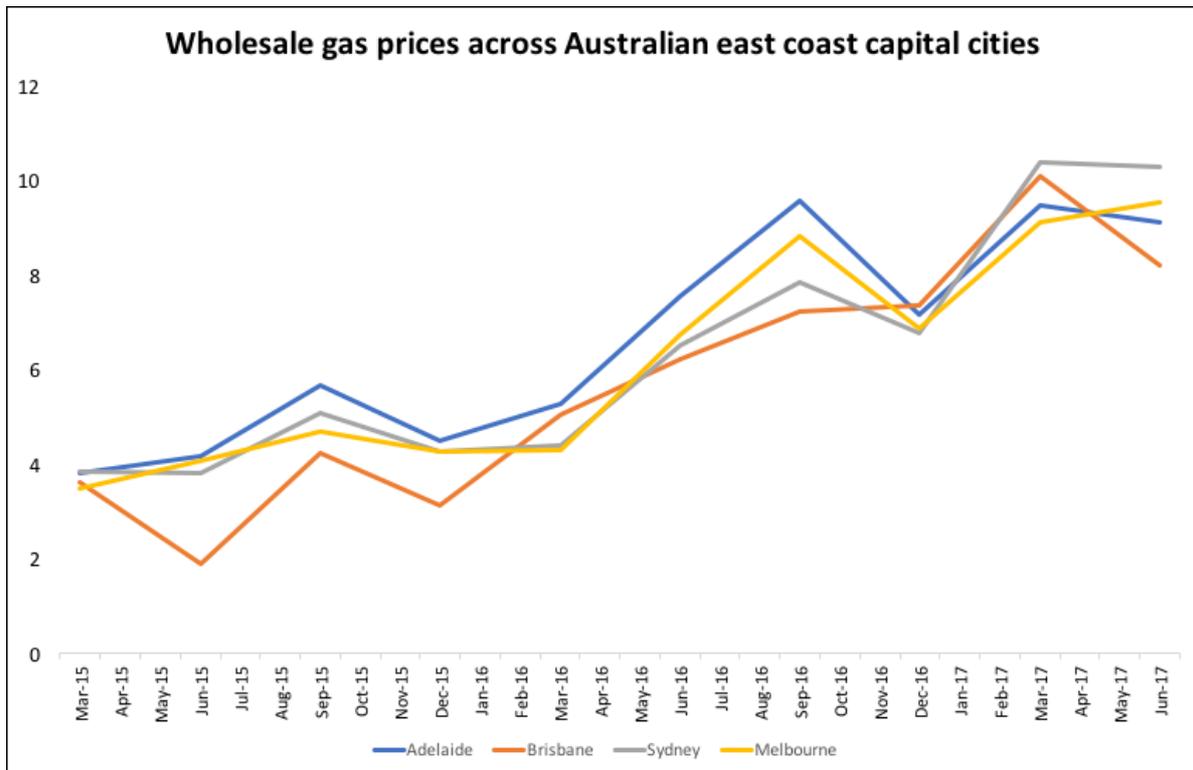
Without adequate controls, instead we will be increasingly defined by the deprivation of that advantage, and the preservation of oil and gas profits at the expense of small business and sustainable middle-income jobs.

# How gas prices are impacting the Australian economy

The price of gas and, by consequence, the price of electricity can have substantial effects on households and businesses alike. Whilst industrial users of gas will receive most of their supply through medium-long term contracts, the wholesale spot price has significant bearing on the prices embedded in those contracts. Naturally, the same logic applies to gas-powered electricity generators and subsequently, residential and industrial consumption of electricity. In short, the wholesale price of gas can have a significant and immediate impact on business investment and consumer spending.

Figure 1 depicts the average wholesale price of gas across east coast capital cities in Australia. Prices have increased between the range of 150%-325% in the years of 2015-17; the same years the LNG projects in Queensland began export production. Remarkably, Brisbane – the closest capital city to the Queensland LNG projects – experienced an increase of over 300%.

**Figure 1 – wholesale gas prices in Australian East Coast capital cities**



**Source: AER, ACCC, AWU calculations**

Whilst the increase in the average wholesale gas price has been substantial, even more concerning is that many industrial users of gas are receiving supply-

offers of up to \$22 per GJ.<sup>4</sup> These prices are double than what has been observed as the average wholesale price, and are significantly above netback prices (allowing for transport and distribution/retail costs) in the Southern states – estimated to be \$6.29-7.77/GJ for 2018.<sup>5</sup> In summary, prices offered to industrial users have, in many instances, reflected a tripling of what the ACCC advised the wholesale gas price should be at maximum.

The relationship wholesale gas prices have with the energy sector more broadly is important, and understanding how this affects different parts of the economy is integral to appreciating the implications of inadequate government intervention.

## Manufacturing sector

The manufacturing sector comprises many industries that significantly rely on energy as a primary input in the production process. The Department of Industry estimates that as many as 65,000 jobs rely on industries where gas often makes up more than 15 per cent of input costs (see Figure 2).<sup>6</sup> In some industries, gas as a direct and intermediate input cost can comprise up to 80 per cent of operational costs.

In 2014 BIS Shrapnel estimated that the total number of economy-wide jobs connected to the broader supply chain and therefore vulnerable to energy costs could be 235,800. It also warned that without adequate government intervention to curb gas price increases, there will be economy-wide net losses of \$110 billion.

Needless to say, substantial rises in energy prices over the last couple years have preceded a material destruction of the manufacturing sector.

Over one third of commercial and industrial gas users the ACCC consulted in 2017 were considering either reducing production or closing facilities due to increased gas prices.<sup>7</sup> Over the last 12 months we have seen some of these pressures materialise:

- Coogee Chemicals closed its Laverton plant in Victoria, costing 30 jobs. It is now looking to invest in a new plant in the United States. France's Air Liquide, a key supplier to Coogee Chemicals, is currently undergoing a restructure to minimise job losses.<sup>8</sup>
- Incitec Pivot, a large-scale fertilizer producer, has indicated 1500 job losses at its Gibson Island plant, and has recently decided to build another

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<sup>4</sup> ACCC, September 2017, Gas Inquiry 2017-2020.

<sup>5</sup> ACCC, September 2017, Gas Inquiry 2017-2020, Page 22.

<sup>6</sup> The Department of Industry, Innovation and Science, Regulatory Impact Statement, Australian Domestic Gas Security Mechanism, June 2017, Appendix A.

<sup>7</sup> ACCC, September 2017, Gas Inquiry 2017-2020.

<sup>8</sup> <http://www.afr.com/news/energy-gas-crisis-pushes-methanol-plant-to-us-20170308-gutfms>

manufacturing facility in Louisiana, United States – costing Australia 1,000 construction and 70 permanent jobs.<sup>9</sup>

- National Ceramics Industries Australia has indicated that sustained unaffordable energy prices will result in 320 job losses if it’s NSW Hunter Valley facility closes.<sup>10</sup>
- Hardware manufacturer Alchin Long Group in Sydney’s west has indicated it will reconsider shifting work from China back to Australia given the doubling of its electricity costs in the last year.<sup>11</sup>

Figure 2 reveals a broader picture of the dependency many industries in the manufacturing sector have on energy prices, and the number of direct jobs that will be lost if prices don’t subdue.

**Figure 2 - Australian Industries most exposed to gas and energy price shocks**

| <b>Manufacturing and Other Product Group</b> | <b>Gas Share of Intermediate Inputs</b> | <b>Value Share of Intermediate Inputs Exposed to Energy* Price Shocks</b> | <b>Value Share of Total Production Costs Exposed to Energy* Price Shocks</b> | <b>Average Employment – Year Ending March Quarter 2017</b> |
|--|---|---|--|--|
| Basic Chemical Manufacturing                 | 25%                                     | 27%   | 18%  | 5,275  |
| Glass & Glass Product Manufacturing          | 13%                                     | 22%   | 11%  | 5,700  |
| Ceramic Product Manufacturing                | 11%                                     | 18%   | 10%  | 5,175  |
| Polymer Product Manufacturing                | 10%                                     | 18%   | 9%   | 31,675   |
| Petroleum & Coal Product Manufacturing       | 10%                                     | 17%   | 10%  | 5,650  |
| Plaster & Concrete Product Manufacturing     | 9%                                      | 14%   | 9%   | 12,425   |
| <b>Subtotal</b>                              |   |   |  | <b>65,900</b>  |
| Electricity Generation                       | 8%                                      | 39%   | 22%  | N/A  |

However, the table also excludes other highly-dependent industries such as aluminum, steel, and food-related product manufacturing.

For instance, Bluescope Steel, one of Australia’s largest manufacturers of steel and steel-based products, revealed that their electricity costs will have increased by over 90% between 2016-2018. Their total gas bill will also increase by over 30% throughout the same period.<sup>12</sup>

<sup>9</sup> <http://www.theaustralian.com.au/business/companies/incitec-warns-of-job-losses-as-gas-costs-rise/news-story/e0a6a10db251dd102446fab96ddf87ee>

<sup>10</sup> <http://www.afr.com/news/energy-gas-crisis-pushes-methanol-plant-to-us-20170308-gutfms>

<sup>11</sup> [http://www.afr.com/business/energy/electricity/manufacturers-slugged-by-power-price-hikes-20170306-gurflw?login\\_token=6npkAUL4\\_Af9PD3ehno7ta5IZYTdB1OFQ3bC7SGW0\\_tHKFtzeIUmFbEEANLIWI\\_qprJqjqvCKfJhPQhJzS2MyQ&expiry=1510207183&single\\_use\\_token=1ttZP69eZt\\_GK9WQ7G3qgKx5ZvclLC74SX0L4q0tbw7K7fBQ2BXkKumDTkOkvoAhA6VDprBi5YIPwWf55Mjj2A](http://www.afr.com/business/energy/electricity/manufacturers-slugged-by-power-price-hikes-20170306-gurflw?login_token=6npkAUL4_Af9PD3ehno7ta5IZYTdB1OFQ3bC7SGW0_tHKFtzeIUmFbEEANLIWI_qprJqjqvCKfJhPQhJzS2MyQ&expiry=1510207183&single_use_token=1ttZP69eZt_GK9WQ7G3qgKx5ZvclLC74SX0L4q0tbw7K7fBQ2BXkKumDTkOkvoAhA6VDprBi5YIPwWf55Mjj2A)

<sup>12</sup> Queensland Steel Conference, 2017.

Other large-scale manufacturers – employing thousands of people – have also indicated that their energy input costs as a proportion of operating expenditure will increase from 20% to 30% over the next year. With price increases in excess of 300% from only two years ago, these businesses will have to either relocate overseas or shut-down facilities to remain profitable.

As predicted by BIS Shrapnel in 2014, forecasts now endorsed by the government, the cost of government inaction would translate into a permanent deterioration of our manufacturing sector. Despite piece-meal attempts to deal with the rapid rise of wholesale gas prices since then, the Department of Industry in its most recent Regulatory Impact Statement concluded that the government's actions will continue to result in job losses.

## Residential sector

Whilst most households are connected to the grid to consume electricity, more than half of all Australian households use mains gas, including 63 per cent of households in capital cities.<sup>13</sup> However, the wholesale gas price continues to have significant bearing on both energy prices, and in turn a considerable effect on the cost of living for households in both regional and metropolitan areas. In particular, both household gas and electricity prices have seen unprecedented rises over the last few years, and recent modelling shows that under the government's current policy setting, this will continue.

For instance, the McKell Institute forecast in February 2018 that electricity bills on Australia's east coast will increase substantially as a result of high wholesale gas prices. In particular, they outline how much, on average, households will be paying in 2019 compared to what the ACCC advised they should be paying in 2017:

- Queensland households will be paying \$313 more,
- NSW households will be paying \$434 more, and
- Victorian households will be paying \$254 more.<sup>14</sup>

In some instances, these figures are drastically higher:

- In the electorate of Mitchell, NSW, households would be paying on average \$626.98 more in 2019.
- In the electorate of Forde, Queensland, households would be paying on average \$389.55 more in 2019.

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<sup>13</sup> The Department of Industry, Innovation and Science, Regulatory Impact Statement, Australian Domestic Gas Security Mechanism, June 2017, Page 8.

<sup>14</sup> McKell Institute, 2018, The Cost of Inaction.

- In the electorate of Indi, Victoria, households would be paying on average \$340.46 more in 2019.

Notably, many of these forecasts are not compared to what the wholesale gas price was at its lowest point, but instead the advised \$6.29/GJ figure suggested by the ACCC about what gas prices should at minimum be in today's market. Industry and government analysts have claimed that with today's wholesale gas prices, residential electricity bills are already inflated by, on average, more than \$150 across the East Coast.<sup>15</sup>

Similar observations have been made about household gas bills. In 2014 BIS Shrapnel estimated that government inaction would see annual household gas bills rise by \$260 (26 per cent) over the next four years.<sup>16</sup> Instead, for some states, that rise occurred within the first one to two years.<sup>17</sup> With the wholesale gas price having an even greater influence on household gas bills than electricity bills, conservative estimates suggest that the increases predicted by McKell indicate greater proportional increases in gas prices as well.

The increase of household energy bills collectively will have a material effect on household budgets across the east coast.<sup>18</sup> In particular, with gas and electricity price increases, many electorates with households in lower-socio economic areas will be paying \$750 a year more than they should, an extra 3 per cent of their disposable household budgets.<sup>19</sup>

In addition to household energy bills, the deterioration of the manufacturing sector is likely to have short-medium term impacts on the price of consumable goods in Australia. Materials used in the construction of housing and infrastructure, as well as the manufacture of food and toiletries, are intimately vulnerable to energy prices. If many of the risks indicated by some of the largest manufacturers in the country materialise, as well as industry forecasts proving right, industry supply chains will have to reconfigure both engineering and structural elements to begin importing or alternatively change the input-composition of consumable products. Whilst it is uncertain if businesses will be prepared to pass down these costs onto consumers, it is a considered possibility.

<sup>15</sup> McKell Institute, 2018, The Cost of Inaction.

<sup>16</sup> [https://d3n8a8pro7vhmx.cloudfront.net/nationalawu/pages/135/attachments/original/1411953009/The\\_Economic\\_Impact\\_of\\_LNG\\_Exports\\_on\\_Manufacturing\\_and\\_the\\_Economy\\_Final\\_260914.pdf?1411953009](https://d3n8a8pro7vhmx.cloudfront.net/nationalawu/pages/135/attachments/original/1411953009/The_Economic_Impact_of_LNG_Exports_on_Manufacturing_and_the_Economy_Final_260914.pdf?1411953009)

<sup>17</sup> <http://www.heraldsun.com.au/news/victoria/gas-and-electricity-bills-to-rise-by-up-to-250-in-2015-for-victorian-homes-and-small-businesses/news-story/b2d8c7bfd794fd56ae3c9df8bbdb3f8a>

<sup>18</sup> The Department of Industry, Innovation and Science, Regulatory Impact Statement, Australian Domestic Gas Security Mechanism, June 2017

<sup>19</sup> AWU estimates, note household disposable budget refers to equivalised disposable household income. Total increase in energy (gas and energy) bills using highest estimate = \$750, increase in energy bills per week = \$14.4, median equivalised disposable income (average of bottom two quintiles) = \$510, percentage of weekly disposable income is 2.8 per cent.

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## How we compare to overseas

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It is widely reported that Australia is the second largest exporter of LNG in the world, set to overtake Qatar by 2022. However, Australia is far from being the largest producer of natural gas in the world. Ranking 10th in the world for natural gas production, Australia extracted roughly 10% of what the United States produced in 2016.<sup>20</sup>

Markedly, the popularity Australia has earned in the global gas market is not singularly because of its gas production, but rather it's production in excess of domestic consumption. The reason Australia attracted an additional \$75 billion of both domestic and direct foreign investment in the last few years was for that very reason: Australia would be producing more gas than it needed. This story remains true today. The ACCC indicated that in 2018 the Australian East Coast would need just 642 of the petajoules it produced, comprising only 33% of total production on the East Coast.<sup>21</sup> Evidently, Australia has no shortage of gas supply. However, for what has now become a widely popular factoid in the media and with politicians alike, Australia has experienced some of the highest wholesale gas prices in the world.

The bars in Figure 3 show the number of times a country produced more than it consumed in 2016. Russia, China and the US all produced more gas than Australia in 2016, however the enormity of their population mass and industries mean that most of that production goes to domestic consumption. Australia as an outlier produced almost 250% of the gas it consumed. This figure is also set to rise significantly in the coming year.

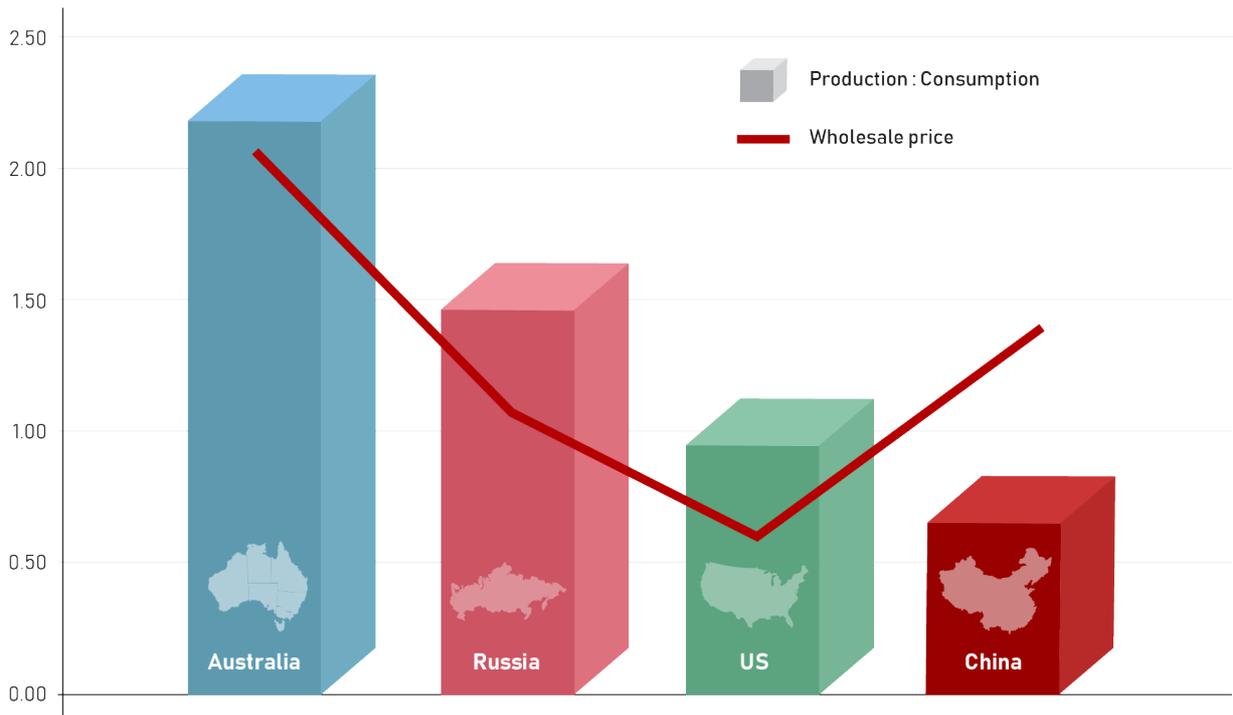
Counterintuitively, the line in Figure 3 indicates the average wholesale gas price in 2016 for each country. Australia, despite producing more gas exports than any other large gas producer in the world, had an average wholesale price at double and, in some instances, triple what other countries experienced. To be clear, Australia as the second largest gas exporter in the world has had the highest wholesale gas prices amongst its peers. There is no longer a rational relationship between gas production and price.

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<sup>20</sup> <https://www.bp.com/content/dam/bp/en/corporate/pdf/energy-economics/statistical-review-2017/bp-statistical-review-of-world-energy-2017-full-report.pdf>

<sup>21</sup> These numbers exclude the production of natural gas and LNG in Western Australia.

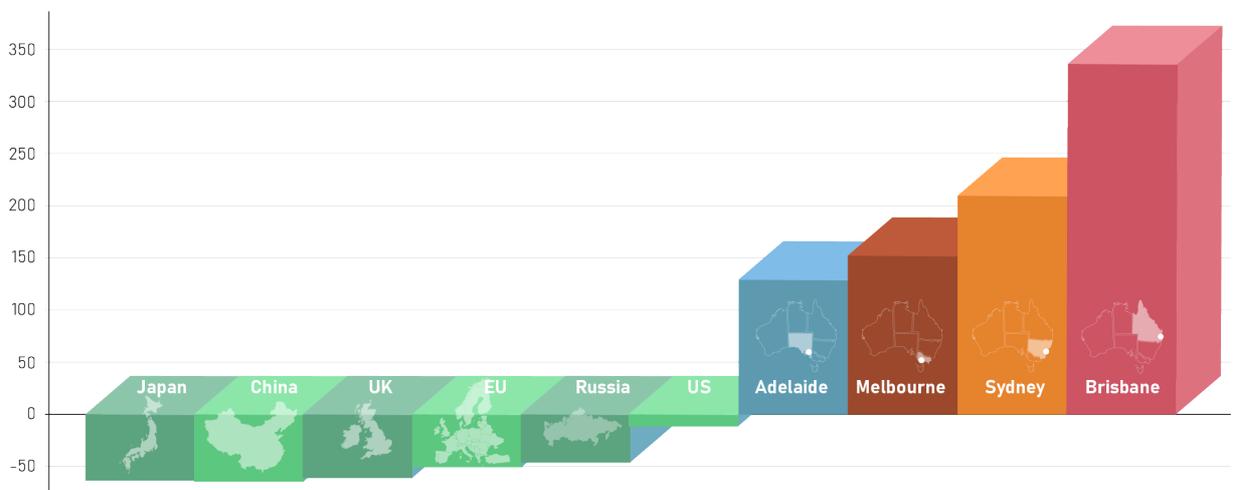
**Figure 3 - excess production compared to price**  
**# of times production exceeded consumption, wholesale gas price**



**Source: World bank, BP, AWU calculations**

Between 2015-17, when most of the East Coast’s LNG projects began full-scale production, Australia’s wholesale gas prices began rising rapidly. Similarly, Australia’s customers (mainly Japan and China) began experiencing falling prices. Figure 4 shows the difference (as a percentage) in wholesale gas prices from June 2015 to June 2017 for a range of gas importing and producing countries, compared to Australia’s East Coast capital cities. Remarkably, Brisbane experienced an increase of almost 350% despite it’s close proximity to the LNG Projects themselves.

**Figure 4 - wholesale gas price increases by percentage Wholesale gas price increases between 2015-17 (%) Gas Producing and importing nations compared to capital cities**

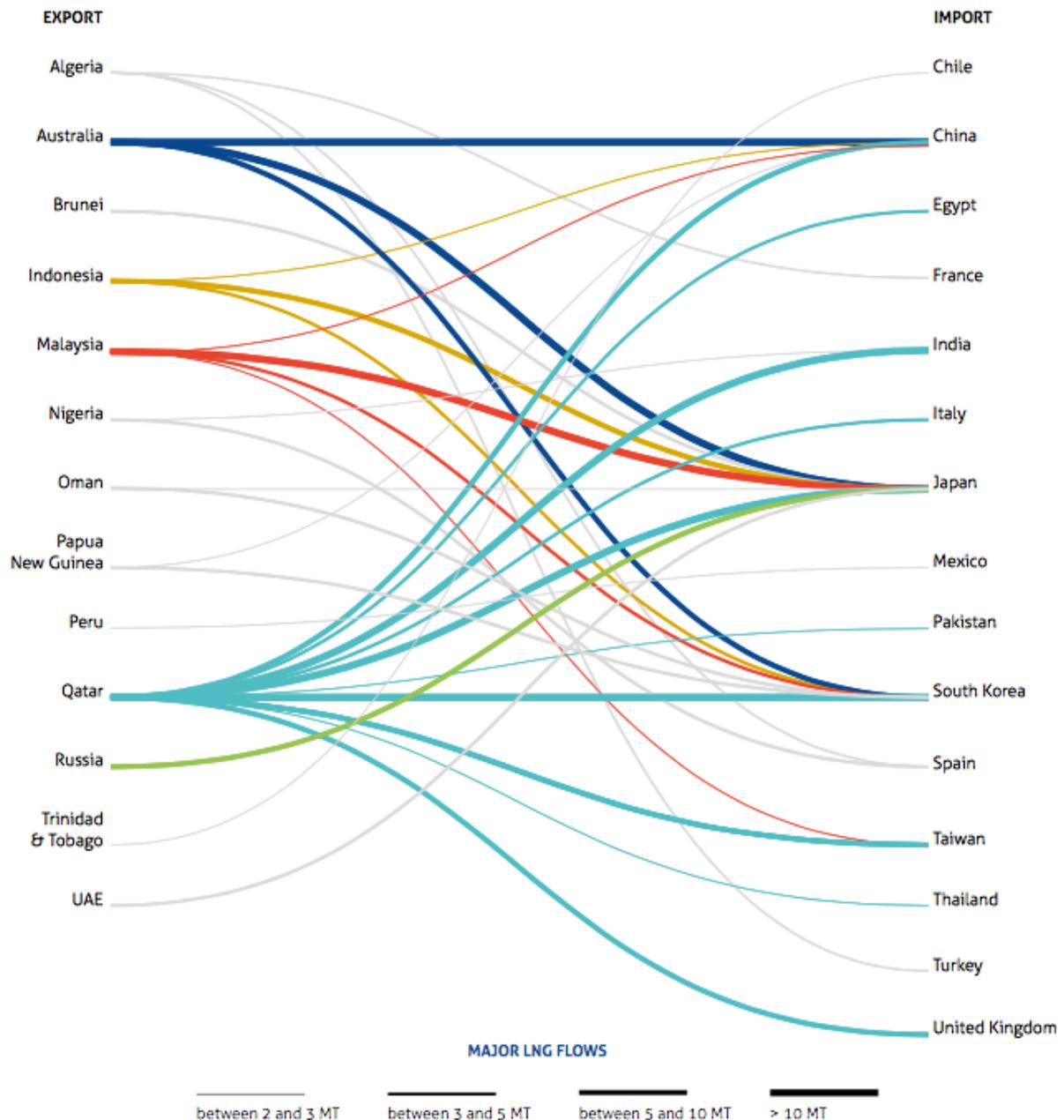


**Source: World bank, BP, AWU calculations**

Compared to the largest exporter – Qatar – Australia doesn’t distribute gas to many regions. In particular Australia’s LNG exports go strictly to Asia, namely

Japan, but also to China and South Korea. Qatar, for instance, exports to China, Egypt, India, Italy, Japan, Pakistan, South Korea, Taiwan, and the United Kingdom (see figure 5).

**Figure 5 - import-export map**



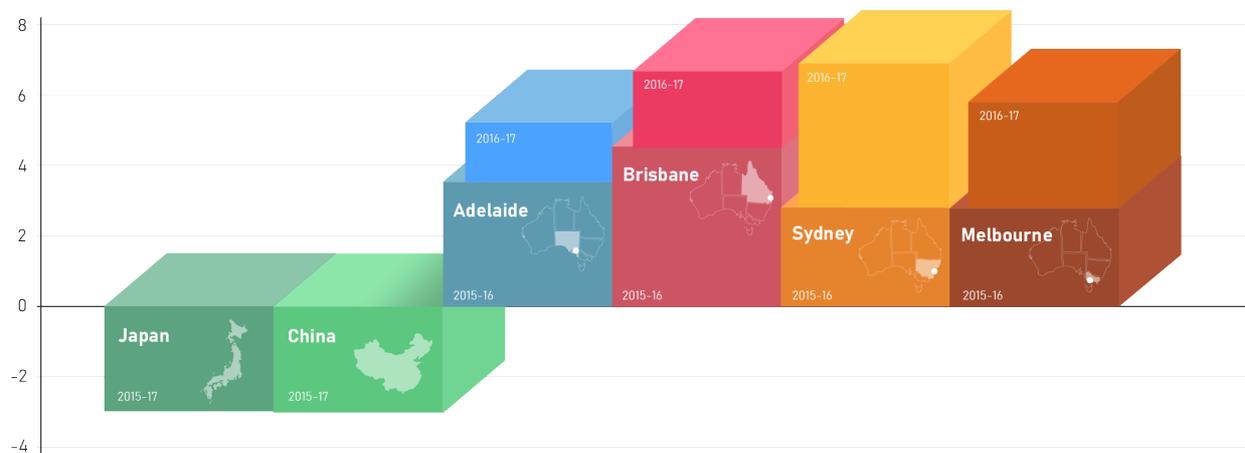
The LNG relationship Australia shares with Japan largely originates from the direct investment many Japanese companies have made into Australia's LNG Projects, and the long-term contracts other Japanese companies have with East Coast producers. It's important to note, however, that Japan shares this relationship with many gas-exporting nations, particularly Russia, the US, Qatar, Indonesia, and Malaysia. The dependency Japan and neighboring nations have on LNG deepened after the 2011 Fukushima Tsunami which destroyed three nuclear plants which were historically pillars of Japan's energy supply. The number of imports increased substantially post-2011 to fill this void, however scant consideration of Australia's energy security by policy-makers, and

subsequent gouging of LNG producers of domestic supply, resulted in substantial increases in Australia’s wholesale gas prices.

## A closer look at prices

Compared to its largest customers, Australia’s wholesale gas prices over the last two years have underperformed. Figure 6 shows how over the last two years wholesale gas prices have increased by in some cases \$6, whereas wholesale gas prices in China and Japan have improved by approximately \$3. Whilst having an abundance of natural gas resources, Australia has not only reduced the spread between itself and its customers by \$9, it has for the last year been operating at higher prices.

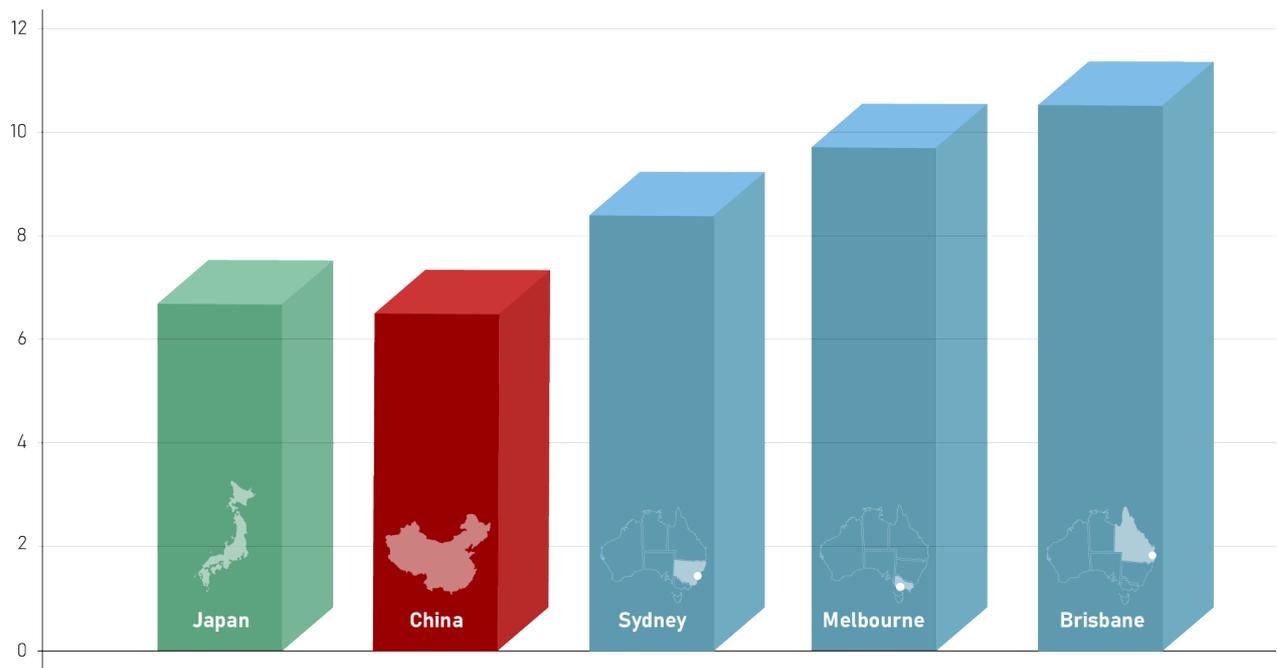
**Figure 6 - cumulative changes in wholesale gas prices between 2015-17**



**Source: World bank, BP, AWU calculations**

Figure 7 shows that wholesale gas prices (using year-end figures) are now higher than both of its main customers. With the wholesale gas price at \$9-\$10, and many Australian industrial users being offered prices between \$16 and \$22, Japan and China have averaged prices below \$7 off the back of Australian LNG imports. The significance of these price differentials however must be considered within the production context. In 2016 Australia produced almost 250% of what it consumed, while China produced less than it consumed, and Japan produced none at all.

**Figure 7 - June 2017 wholesale gas prices in (\$)**

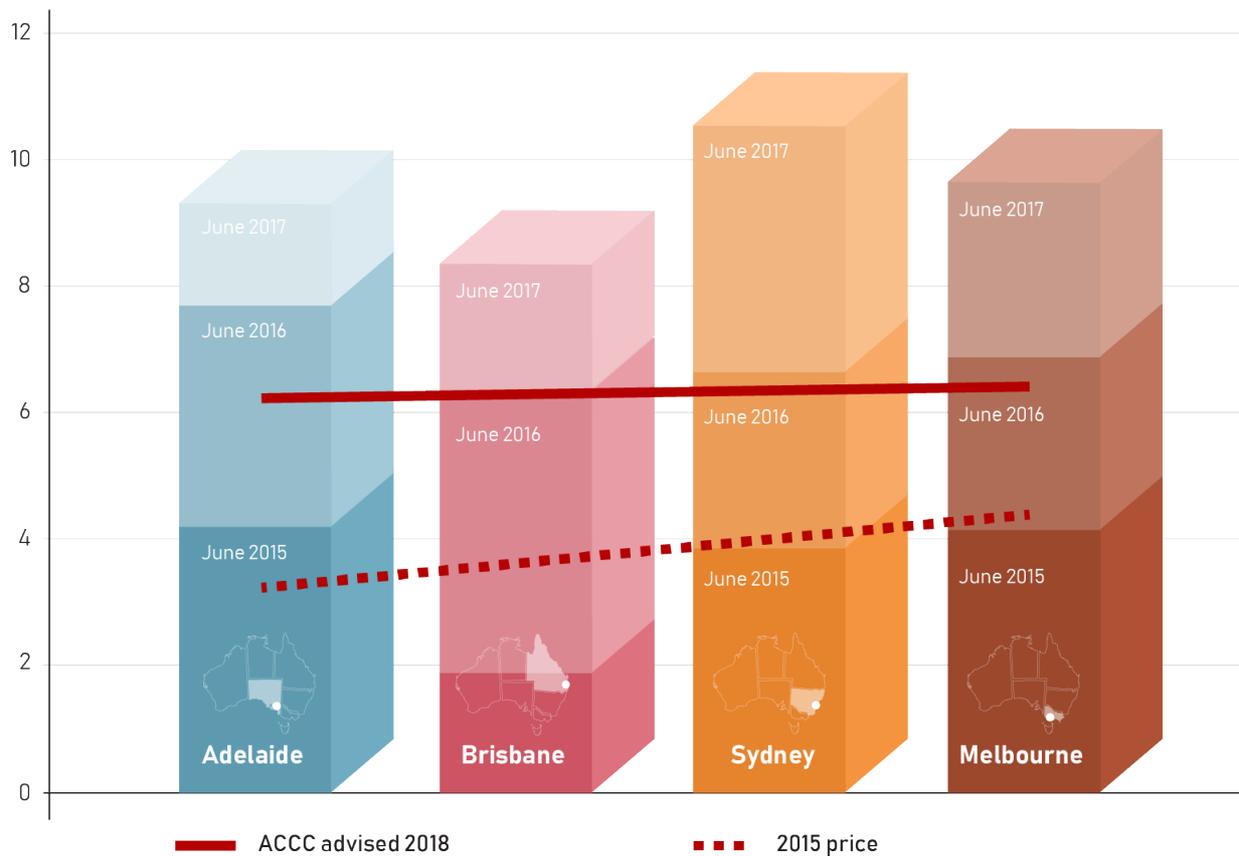


**Source: World bank, BP, AWU calculations**

In its Gas Inquiry report, released September 2017, the ACCC indicated that wholesale gas prices across the east coast should – based on calculated netback prices of LNG – be at least \$6.29.<sup>22</sup> Whilst this figure would change slightly depending on the region, the price reflects the worst-case scenario Australia’s East Coast is now experiencing as a result of failed government policy and market manipulation by the LNG producers. As depicted in Figure 8, whilst the ACCC’s advised price is almost half of the price experienced in some Australian cities, only two years ago the wholesale gas price was even lower. The trend line in Figure 8 for 2015 wholesale gas prices show that only two years ago the price was about one-third of that today.

<sup>22</sup> ACCC, September 2017, Gas Inquiry 2017-2020.

**Figure 8 - wholesale gas price increases, historical, and advised**



**Source: World bank, ACCC, BP, AWU calculations**

In summary, compared to other large LNG export countries, Australia does not have a unique trade relationship. Most countries export to the same customers, and do so with substantially lower prices domestically. Conversely, all of Australia's customers, given available data, have experienced lower wholesale gas prices off the back of Australian imports.

Countries such as the United States, Russia and Canada have used their abundant natural gas reserves to increase the international competitiveness of industrial sectors such as manufacturing. Note that each of these countries have, in some form, provisions in place to ensure that the future production of any gas reserves complies with the national interest – in contrast Australia has no national interest test.

Indeed, the lack of safeguards in the energy market and the monopolistic practices of the LNG Producers on the East Coast (see next section) have created a scenario where Australia's energy market works against its national interest. As the soon-to-be largest exporter of LNG in the world, Australia's legacy is increasingly proving to be a peculiar case of promoting the national interest of foreign nations.

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# LNG-Projects

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The discovery of large coal-seam gas (CSG) reserves off the coast of Queensland over a decade ago prompted consideration by state and federal governments, and energy producers alike, to conduct feasibility assessments of the viability of large-scale LNG production facilities. Before then, no country in the world had developed an LNG export industry based on CSG, and only Qatar has experienced a similar speed and scale of export capacity expansion.<sup>23</sup>

Traditionally LNG prices in export contracts are pegged to the international crude oil price, which surged from approximately USD\$60 in 2006-07 to over USD\$100 in 2007-08 (these equate to AUD\$75 to AUD\$130 respectively). Whilst CSG wells proved more expensive to extract than conventional Natural Gas, an increase in the crude oil price of over 65% seemingly accounted for the expected increase in production costs.

Given the high crude oil price the returns of potential projects substantiated significant investment, which prompted the construction of export terminals. Of the four gas tenements granted, three joint-ventures (JVs) built facilities with forecast production to proceed by 2014-16. The fourth tenement remains with Arrow Energy, and no production facilities have yet been built.

**Figure 9 – LNG Projects ownership breakdown**

| Joint-venture                 | Ownership   |
|-------------------------------|---|
| Gladstone LNG (GLNG)          | Santos 30%, Petronas 27.5%, Total 27.5%, and Kogas 15%  |
| Queensland Curtis LNG (QCLNG) | Shell (100%)  |
| Australia Pacific LNG (APLNG) | Origin (37.5%, ConocoPhillips (37.5%, and Sinopec (25%) |

**Source: various**

A substantial portion of the \$75 billion invested into building the production facilities was sourced from overseas investors, underpinned by long-term LNG export agreements. With strict gas delivery conditions, each JV is required to satisfy sufficient levels of production to meet export obligations.

As such, each JV relies on three factors to fulfil both their export contract volumes and return a profit;

1. movements in the price of crude oil (and the contract price)
2. the cost of developing the LNG Projects (capital costs),
3. their marginal cost-extraction forecasts (operational costs).

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<sup>23</sup> <https://www.industry.gov.au/Energy/EnergyMarkets/Documents/EasternAustralianDomesticGasMarketStudy.pdf>

By 2015-16, the year production was forecast to begin for most of the Queensland LNG projects, crude oil was trading between USD\$37-43 per barrel.<sup>24</sup> This reflected more than a 60% drop in price from 2007-08, which in turn reduced the contracted sale price of gas by the same amount (see Figure 10).

**Figure 10 – Crude Oil historical price movements**



Source: NASDAQ

Whilst forecasting international oil prices is an integral component of cost-benefit forecasting for LNG Projects, they have and will continue to be inherently difficult to predict. However, there is no imposition to use a standard measure of forecasting industry-wide, which allows for investment decisions and, more importantly, government policy to be predicated on an aggregation of different commercial expectations. For example, despite a history of substantial failures in predicting oil prices, energy producers continue to be optimistic (see Figure 11).

<sup>24</sup> [https://inflationdata.com/Inflation/Inflation\\_Rate/Historical\\_Oil\\_Prices\\_Table.asp](https://inflationdata.com/Inflation/Inflation_Rate/Historical_Oil_Prices_Table.asp)

**Figure 11 - Different Crude Oil Forecasts**

|                               | 2017 | 2018 | 2019  | 2020  | 2021  | 2022  |
|-------------------------------|------|------|-------|-------|-------|-------|
| Santos                        | 60   | 70   | 80.77 | 82.79 | 84.86 | 86.98 |
| Origin                        | 59   | 59   | 69    | 74    | 77    | 78.6  |
| Office of the Chief Economist | 56.3 | 58.6 | 62.3  | 66.6  | 69    | 71.5  |

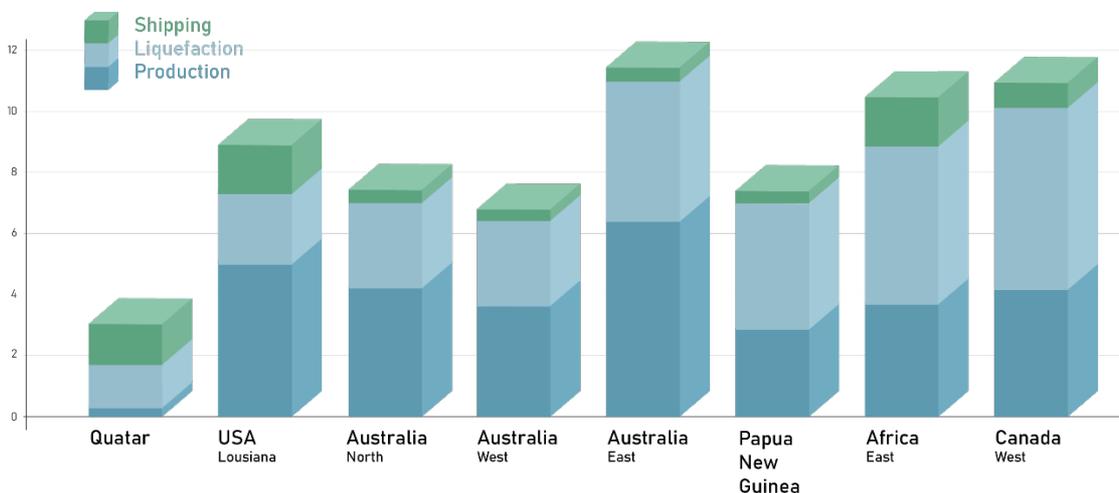
**Source: IEEFA The Risks Mount, June 2017**

In addition, all three LNG Projects experienced substantial overruns on their development costs. The Queensland CSG Projects have become the most expensive gas reserves to produce indicating both an historical anomaly and forecasting negligence by the producers (see Figure 12). Some examples include:

- Santos wrote down the value of its GLNG investment by \$2.6 billion pre-tax in 2016.
- Origin wrote down the value of its APLNG investment by \$1.5 billion pre-tax in December 2016.
- For BC Group the QCLNG project contributed to a \$5.4 billion write-down in early 2015.

The overruns in development costs coincided with the revelation that the marginal extraction-cost of supply (or wellhead cost) was higher than expected. The LNG Projects on the east coast are now widely recognised as the most expensive in the world.

**Figure 12 – Cost stack from various sources of supply**



**Source: EIA<sup>25</sup>**

In its 2008 Environmental Impact Statement (EIS), Santos’ GLNG stated that

<sup>25</sup> <https://www.eia.gov/conference/2016/pdf/presentations/mikhael.pdf>

“industry-wide operating and development costs for CSG are in the order of \$2.20/GJ to \$2.70/GJ, however as resource quality declines and recovery becomes more difficult, these costs are expected to increase.”<sup>26</sup>

Only two years after production, analysts predict that extraction costs at GLNG are approximately \$12.40.<sup>27</sup> Origin also estimated in their 2016 annual report that wellhead costs have increased by 12.7%.<sup>28</sup> In summary, the inaccuracy of the forecasts across all Queensland LNG projects left all stakeholders unprepared for the losses they would be willing to bear. It also left all stakeholders desperate for earnings growth.

## Gas Prices soaring – how it happened

The commercial decisions by each LNG Producer to meet the conditions in their export contracts and minimise their losses have resulted in increased gas and electricity prices in the domestic market. Whilst arguments for a domestic price at parity with international prices are sound, the phenomenon of paying significantly higher prices for Australian gas in the domestic market compared to overseas countries constitute an economic and market failure.

Additionally, the ACCC notes that some of the commercial decisions made by the LNG Producers are counterintuitive, whereby they’re opting for cheaper prices overseas rather than selling at a higher price domestically.<sup>29</sup> However, each project has endured different challenges and any appreciation for the policy challenge requires a closer look at each one. In particular, the reactions by each project to minimise losses have exposed both a travesty of government policy, and the manipulative tactics of LNG projects to shift the burden of their commercial negligence onto domestic consumers.

## Gladstone LNG

All of GLNG’s forecast gas production is contracted overseas.<sup>30</sup> In addition, it’s production and operating costs are higher than both APLNG and QCLNG, making it the worst-performing venture of all three.

Credit Suisse estimates that if the GLNG project was to deliver gas to the domestic market, southern states would be paying more than \$14/GJ.<sup>31</sup> In contrast, average

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<sup>26</sup> **GLNG Environment Impact Statement, Chapter 6.**

<sup>27</sup> <http://www.afr.com/business/energy/gas/gas-buyers-fear-prices-still-unaffordable-with-lng-export-controls-20170530-gwg6k1>

<sup>28</sup> Origin Annual Report 2017.

<sup>29</sup> ACCC, September 2017, Gas Inquiry 2017-2020.

<sup>30</sup> <https://www.macrobusiness.com.au/2017/06/santos-spouts-rubbish-market-dumps/>

<sup>31</sup> <https://www.macrobusiness.com.au/2017/05/credit-suisse-cuts-export-curbs/>

daily prices in Victoria, Sydney and Adelaide spot markets in 2017 were \$9.52/GJ – an increase of more than 100% when compared to early 2016.<sup>32</sup>

However, the price discrepancies have given GLNG the opportunity to transfer its commercial loss to domestic consumers. To recover its cost overrun, GLNG have been purchasing gas from the domestic spot market to fulfil its export contracts. Kevin Gallagher, CEO of Santos, said in April 2017 that GLNG had purchased 59 per cent of the gas it processed into LNG for export in the March quarter from third parties.<sup>33</sup>

Analysts have predicted that GLNG will rely on third party gas (gas sourced from the domestic market) to supply almost 40% of its gas feedstock for the next five years to fill its production trains for export. This comprises approximately 20% of the east coast gas supply, which otherwise would have been available to the domestic market.<sup>34</sup>

In contrast, the GLNG venture claimed in its 2012 EIS that it would 'not divert gas from local markets to export markets... [and would have] no direct implication for domestic gas prices'.<sup>35</sup>

By purchasing gas from the domestic market to recover its losses on its overseas contracts, GLNG have materially reduced domestic gas supply and in turn put upward pressure on prices. Whilst this has made for a considerable economic problem, it has also made for a political one;

“In short, they’re sucking gas out of the domestic market to fulfil export contract shortfalls. They got their own planning and forecasting wrong. And NSW families and businesses are the ones suffering.”<sup>36</sup>

Deputy-Premier of NSW, John Barilaro

## Australian Pacific LNG (APLNG) and Queensland Curtis LNG (QCLNG)

APLNG and QCLNG supply approximately 20 per cent and 10 per cent of the gas in the east coast market, respectively.<sup>37</sup> Whilst gas shortages in the domestic market have been identified, APLNG and QCLNG have been exporting gas onto the international spot market for prices lower than offered domestically.

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<sup>32</sup> ACCC, September 2017, Gas Inquiry 2017-2020, Page 43.

<sup>33</sup> <http://www.theaustralian.com.au/business/mining-energy/santos-filling-export-orders-with-domestic-gas/news-story/7698843e5cbb21ec9ef7b7fa0b2d11c1>

<sup>34</sup> <https://www.gladstoneobserver.com.au/news/gas-levels-in-crisis-mode-as-santos-sucks-domestic/3157477/>

<sup>35</sup> BIS Shrapnel, 2014, The Economic Impact of LNG Exports on Manufacturing and the Economy.

<sup>36</sup> <https://www.dailytelegraph.com.au/news/opinion/john-barilaro-there-is-no-gas-shortage-just-a-shortage-of-good-will/news-story/8a351b2742c0b1df6b6b09157f61c301>

<sup>37</sup> <http://www.afr.com/business/energy/gas/aplng-test-completion-raises-hopes-of-increased-east-coast-gas-20170727-gxkh8s>

Most recently, the ACCC noted that the two ventures were expecting to sell up to 63.4 petajoules on the Asian LNG spot market.<sup>38</sup> In contrast, the expected shortfall in the east coast gas market is 55 petajoules.<sup>39</sup>

A substantial portion of these overseas sales were motivated by a condition in the ventures' lending agreements – a critical performance test – requiring them to sell on the overseas market.<sup>40</sup> However, it's not true for all of the gas sold on the international spot market by these ventures, and both projects still intend to continue selling on the international spot market in the coming year.

The ACCC stated in its most recent Gas Inquiry interim report that it is unclear why such significant volumes are forecast to be sold in international spot markets in 2018 given that similar, if not better, prices are obtainable in the domestic market.<sup>41</sup> It recognised that such a shift would require an agreement being reached between the joint venture parties of the LNG projects, which may have different interests.<sup>42</sup>

Some industry analysts have been more blunt, accusing both projects of intentionally driving up the price to achieve greater returns on domestic contracts.

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<sup>38</sup> ACCC, September 2017, Gas Inquiry 2017-2020, Page 17.

<sup>39</sup> ACCC, September 2017, Gas Inquiry 2017-2020, Page 10 and 14.

<sup>40</sup> <http://www.afr.com/business/energy/gas/aplng-test-completion-raises-hopes-of-increased-east-coast-gas-20170727-gxkh8s>

<sup>41</sup> ACCC, September 2017, Gas Inquiry 2017-2020, Page 32.

<sup>42</sup> ACCC, September 2017, Gas Inquiry 2017-2020, Page 32.

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# Gas in the National Electricity Market (NEM)

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“[Rising gas costs] are the single biggest factor in the current rise in electricity prices”

**Prime Minister, Malcolm Turnbull**

The National Electricity Market (NEM) interconnects five regional market jurisdictions – Queensland, New South Wales (including the Australia Capital Territory), Victoria, South Australia, and Tasmania.<sup>43</sup> Western Australia and the Northern Territory are not connected to the NEM.

In the NEM generators dispatch electricity to retailers and large industrial consumers, and are paid for the energy they supply. High and low prices pose a risk for retailers and generators respectively, prompting most parties to enter into contracts with each other to manage their risk.

All electricity is traded through the wholesale market even though most of it is under contract, but prices in those contracts remain linked to the wholesale ‘spot’ price.

The NEM comprises of electricity generated from coal – both black and brown – natural gas, liquid fuel, and renewables including Hydro, Wind, and Solar PV generation. Coal has traditionally been the source of over 80 per cent of electricity in the NEM. However, the closures of Hazelwood power station in 2017 and Northern and Playford power stations in South Australia in 2015 and 2016 have put further constraints on coal-powered generation in the NEM.

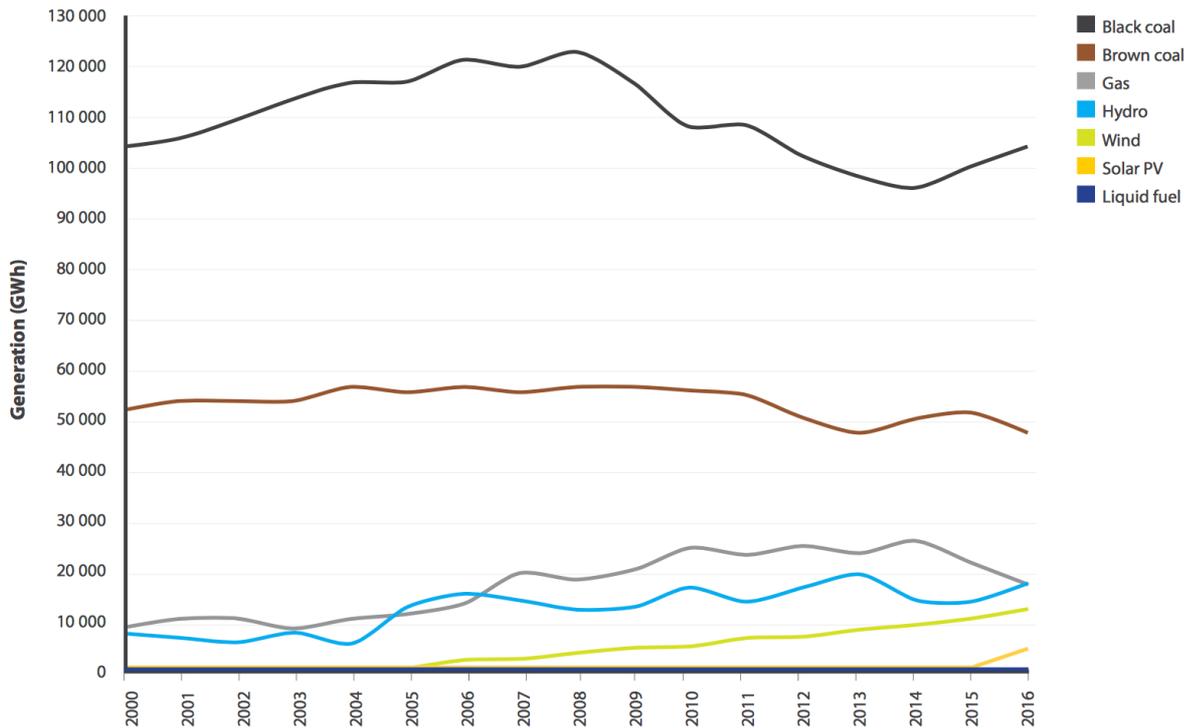
The Queensland Government encouraged significant investment in new gas generation from 2005 to 2013 by requiring electricity retailers to obtain 15 per cent of electricity sold or used in Queensland from power generated using natural gas.<sup>44</sup> By no longer imposing such a restriction, along with a substantial increase in the role of renewables, the generation mix in the NEM has changed (see Figure 13).

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<sup>43</sup> <https://www.aemo.com.au/Electricity/National-Electricity-Market-NEM>

<sup>44</sup> The Grattan Institute, September 2017, Next Generation: the long-term future of the National Electricity Market.

**Figure 13 – NEM generation 2000 to 2016 by fuel type**



**Source: NEMwatch review data, 30 May 2017**

In recent years, the contribution of gas to electricity generation has declined largely due to higher gas prices and tighter supply availability.<sup>45</sup>

### Independent review into the Future Security of the National Electricity Market June 2017

Just under 10 per cent of the National Electricity Market’s energy supply is produced by gas-powered electricity generators. However, the ACCC notes that the impact of wholesale gas prices in the NEM is larger than the amount of gas that contributes to the total generation of electricity would suggest. Understanding this relationship between gas and electricity prices is critical to appreciating the implications of policy inaction.

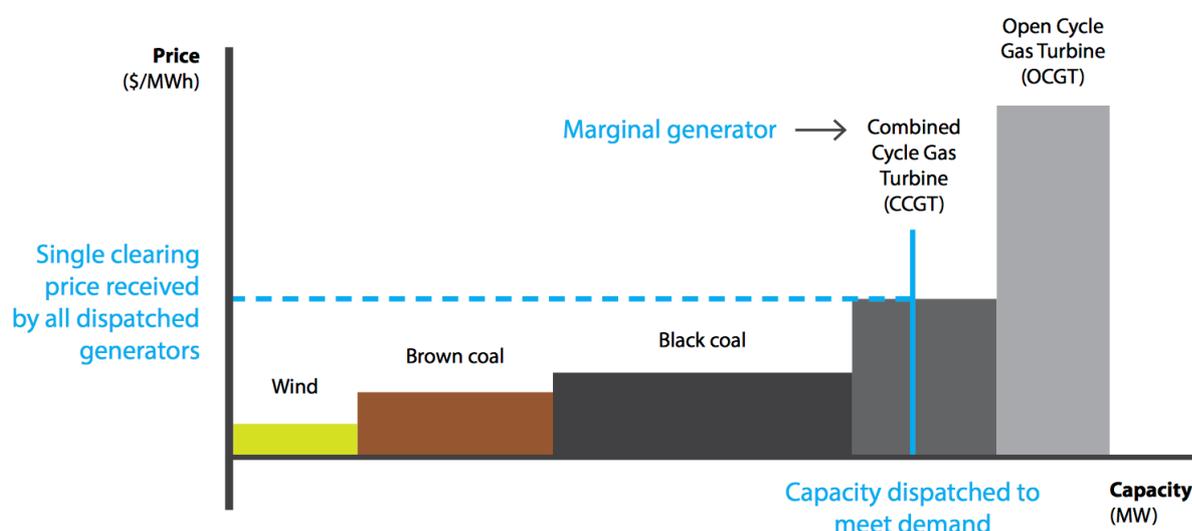
<sup>45</sup> Blueprint for the Future, June 2017, Independent review into the Future Security of the National Electricity Market.

## How do gas prices affect electricity prices?

The spot price in the NEM, which is a determinable variable for prices in most private contracts, is determined by a bidding system. Generators bid the quantity and price of electricity they are willing to supply in 5-minute dispatch intervals, and a single clearing price that is paid to all generators dispatched is determined by the average of all bids.<sup>46</sup>

Whilst gas-generators are far-less expensive to switch on and off compared to coal-generators, they are the most expensive energy supply on a marginal-cost basis. This means the marginal-cost (or bidded cost) by gas-powered generators has significant bearing on the single clearing price calculated and paid to all generators dispatched (see Figure 14).<sup>47</sup>

**Figure 14 – stylised illustration of price setting in the wholesale market**



**Source: Independent review into the Future Security of the National Electricity Market June 2017**

Naturally, determinants of the marginal-cost will include the operational efficiency of various gas-powered generators (GPG), but also the price at which GPG's can secure gas in the wholesale gas market. The significance that gas has on electricity prices means that the supply and demand forces in the wholesale gas market, as well as the policy-settings that define its parameters, materially affect the energy prices paid by households and businesses alike. To put it plainly, higher wholesale gas prices mean higher electricity prices.

The construction of gas-export terminals on the east coast has exposed the domestic gas market to international gas markets, further complicating the outlook for gas in the NEM's future generation mix. The recently active LNG projects in north-east Queensland – Gladstone LNG (GLNG), Australian Pacific LNG (APLNG), and Queensland Curtis LNG (QCLNG) – have substantially changed the forces driving supply and demand for gas on the East Coast of Australia.

<sup>46</sup> Blueprint for the Future, June 2017, Independent review into the Future Security of the National Electricity Market, Page 78.

<sup>47</sup> Blueprint for the Future, June 2017, Independent review into the Future Security of the National Electricity Market, Page 78.

Whilst linking the domestic gas price with that paid on international spot markets was a risk policy-makers were well aware of, scant consideration of the commercial practices by those LNG Producers, and the integrity of their production forecasts, has provoked what is now widely recognised as Australia's 'gas crisis'. Not only has the government forecast gas shortages over the short-medium term, but the energy prices paid by the domestic market in many cases exceed those prices paid for Australian gas on the international market. The case for action is not one for ideological pursuit, but rather an economic challenge facing Australian jobs and households. Understanding what policy options are both equitable and available to the government requires a deeper understanding of the policy developments in the LNG sector over the last decade.

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## Didn't the Government fix this already?

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In 2017 the government made numerous attempts to formalise a policy that would bring wholesale gas prices back down to an affordable level. These solutions have included the introduction of export controls, voluntary-agreements with LNG producers, and a mandate for dispatchable electricity post-2020. Indeed, industry analysts – as well as a number of government departments – have indicated that the actions taken by the government will not be sufficient to solve the east coast gas crisis.

### The Australian Domestic Gas Security Mechanism

In June 2017, the Australian government introduced the Australian Domestic Gas Security Mechanism (ADGSM), a delegated authority to the energy minister as a gas export control. The ADGSM allows the energy minister to seek advice from the Australian Energy Market Operator (AEMO) and the Australian Competition and Consumer Commission (ACCC) on the likelihood of a shortage in domestic gas supply in the coming year.

In the event of a predicted shortfall, the ADGSM guidelines empower the minister to then make a determination on whether the shortfall can be attributed to the market practices of LNG producers in Australia. The ADGSM guidelines state that a domestic gas shortfall should be predicated on the principle that Australians should pay no more for their gas than the value of that same gas if sold for export.<sup>48</sup>

In the case that such a determination is made, the Minister can activate the ADGSM which prohibits all LNG producers connected to the market of that shortfall (ie east coast is not connected to the west coast) from exporting. The government then calculates the portion of that liability attributable to the LNG producer market, and issues an Exporter Market Security Obligation (EMSO) to each producer that is liable. However, an EMSO can only be issued to net-deficit projects;

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<sup>48</sup> The Australian Domestic Gas Security Mechanism, Section 9 Subsection 7.

An LNG Project will be regarded as being in net-deficit in the forthcoming calendar year if its Total gas used is greater than the sum of its Own gas and Third-party export compatible gas.<sup>49</sup>

## ADGSM Guidelines, page 10

Own gas and third-party export compatible gas largely relate to gas required to be exported under contractual obligations predicated by capital investment into the LNG project. Total gas used is the amount of gas forecast to be exported.

The EMSO quantifies the liability each producer must satisfy. Those projects that are deemed net-deficit would receive an EMSO issued by the government. The EMSO can be satisfied in three ways:

1. Reducing export quantities by the amount of the EMSO,
2. Making additional gas available to the domestic market, or
3. A mixture of both.<sup>50</sup>

## Unpacking the ADGSM

### The net-deficit project

There is a lot of debate around how the ADGSM is designed, the inequities and distortions it will impose on the gas market, and whether it will help save Australia's manufacturing sector. Concerns have been raised by industry associations, the manufacturing sector, consumer advocacy groups, unions, financial and economic analysts, and the private sector more broadly.

There is however only one question that needs to be asked of the ADGSM, which is on its ability to deliver energy prices low enough to restore confidence in our manufacturing sector and consumer prices in general. And whilst there are various discretionary provisions outlined in the ADGSM guidelines that can only be assessed when in practice, some facts remain starkly skeptical of its current architecture.

There is only one net-deficit producer on the East Coast: Gladstone LNG (GLNG). As outlined earlier (section LNG Projects), GLNG is the worst performing project of the three off-shore projects in Queensland. Indeed, GLNG exports gas at a higher contract price than all other East Coast gas producers. Also, GLNG do not sell any gas to Japan – where the famed factoid of higher prices in customer countries originates – and will

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<https://www.google.com.au/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0ahUKEwit6NahmMjXAhUBp5QKHW7QAnwQFggoMAA&url=https%3A%2F%2Findustry.gov.au%2Fresource%2FUpstreamPetroleum%2FAustralianLiquefiedNaturalGas%2FDocuments%2FADGSM-Guidelines-2017.docx&usq=AOvVaw0EcUg36DjedSTEmd4UhSgo>, page 10

<sup>50</sup> The Australian Domestic Gas Security Mechanism, Section 10 Subsection 16.

not produce more than its contracted volumes over the next few years unlike LNG Producers (meaning they do not sell surplus gas on the international spot market).<sup>51</sup>

Some analysts have determined that GLNG's export-parity price would equate to more than AUD\$14 in southern states. <sup>52</sup> To be clear, an average wholesale gas price of \$14 would see unprecedented rises of Australia's electricity bills and decimate the manufacturing sector in Australia, costing hundreds of thousands of jobs.<sup>53</sup> If the ADGSM was triggered, it would be forcing the most expensive gas to be diverted back into the East Coast market.

Needless to say, the ADGSM is a control on exports, not prices. The options an LNG producer have to satisfy their EMSO make that remarkably clear. This means that the exporter could theoretically stop exporting gas from their project, fulfil their contractual obligations to overseas customers by purchasing gas on the spot market, and successfully meet their obligations to the ADGSM.

Would GLNG actually preserve their gas and wait for higher prices? Whilst any answer would be speculative, many industry representatives and commentators believe they might. A particular peak body has said that if there was such a commercial incentive to sell to the domestic market because of the high prices, then Santos (GLNG) would have caved in to the Federal government by now. The ACCC have noted that selling gas domestically would require the coordination of various stakeholder interests, particularly a number of foreign companies, whom might be pursuant of alternative strategies.<sup>54</sup> Industry analysts such as Mark Samter from Credit Suisse have noted that forcing GLNG to sell gas to the domestic market would make the project unprofitable.<sup>55</sup>

**It is based on forecasts that we continually get wrong and are likely to continue to get wrong.**

The ADGSM Guidelines require the Minister to make a determination on a shortfall year on the basis of forecasts received from the ACCC and AEMO. However, regulators frequently get their forecasts wrong, and by a large margin. If either organisation fail to determine a shortfall, or the shortfall does not account for delivering a surplus to hedge peak demand, then the Minister has to wait for the remainder of the calendar year before reinitiating the process again. This time-frame constraint can leave the government substantially unprepared to support the economy when it needs it most.

For instance, in April 2016 the ACCC established an inquiry into the East Coast gas market, where it stated:

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<sup>51</sup> <https://www.santos.com/media/3653/ceo-amcham-speech-150617.pdf>

<sup>52</sup> <https://www.macrobusiness.com.au/2017/05/credit-suisse-cuts-export-curbs/>

<sup>53</sup> BIS Shrapnel, 2014, The Economic Impact of LNG Exports on Manufacturing and the Economy.

<sup>54</sup> ACCC, September 2017, Gas Inquiry 2017-2020.

<sup>55</sup> <https://www.macrobusiness.com.au/2017/05/credit-suisse-cuts-export-curbs/>

“Sufficient gas production is currently forecast in the east coast gas market to meet domestic demand and existing LNG export commitments until at least 2025.”<sup>56</sup>

Not even a year later (March 2017), the ACCC Chairman Rod Sims said this at the Annual Australian Domestic Gas Outlook Conference:

“[Since then] we held more than 30 private hearings and considered over 73,000 individual documents... [and] we found that eastern Australia’s gas market has been upended by a triple whammy that has important ramifications for all Australians.”<sup>57</sup>

Since then, AEMO have revised their forecasts for the gas market several times. By contrast energy-intensive businesses such as those in the manufacturing sector rely on 3-5 year contracts with energy providers for capital investment decisions.

## There is significant scope for LNG Projects (or GLNG) to game the mechanism.

As outlined in the ADGSM guidelines, the process by which the Minister activates the ADGSM begins by requesting forecast reports from the ACCC and AEMO on the likelihood and extent of a domestic gas shortfall. When satisfied that a shortfall will occur, the Minister requests data from all LNG Projects that are connected to the market predicted of experiencing a shortfall.

The Minister uses the data from industry to determine which projects are net-deficit projects. The data inputs collected to determine these categories are sourced from the LNG Projects directly, which industry commentators believe may be manipulated.

The restriction the Minister imposes on the net-deficit projects lasts for the relevant calendar year. If the Minister decides it wants to roll-over the restriction, he/she must undergo the same process of assessment on the market and all relevant stakeholders.

GLNG can comply with the obligation by reducing exports from its project without supplying the domestic market. Once it becomes a ‘net-contributor’, it technically does not have to comply with the restriction for the remainder of the year.

## The supply agreement

In September 2017, the Australian Government signed an agreement with the two LNG Producers not liable under the ADGSM – Australia Pacific LNG (APLNG) and Queensland LNG (QLNG) – to supply the domestic market with more gas. However, the agreement was only effective in getting gas producers to guarantee that they would supply

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<sup>56</sup> ACCC, September 2016, Inquiry into the east coast gas market.

<sup>57</sup> <https://www.accc.gov.au/speech/recognising-australias-east-coast-gas-crisis>

enough gas to the NEM in times of peak demand, and they were unable to make a broader guarantee that the domestic market would be supplied with sufficient gas.<sup>58</sup>

In addition, the supply quantity and controls were not modelled off a desired price for the wholesale market, notwithstanding the lack of enforceability of the agreement which was predicated on good faith. The department of industry indicated in its regulatory impact statement that the government would not be in a position to intervene if exporters did not provide the domestic market with enough gas. Indeed, by the time a shortfall was apparent;

“the risk of an export-driven supply shortfall (and the associated flow-on effects) would still be borne by domestic gas consumers”.<sup>59</sup>

Industry analysts – such as NAB and UBS – have both predicted that the supply agreement will make no material impact on wholesale gas prices in the short-medium term.<sup>60</sup> In addition, the department of industry noted that export schedules are also fixed into tight shipping schedules with buyers, which limits exporters ability to flexibly divert gas to the domestic market during periods of tight supply.

## The National Energy Guarantee

On October 2017, the Commonwealth government announced a major initiative into energy policy, the National Energy Guarantee (NEG). The NEG is in substitute of a Clean Energy Target, which was recommended by Chief Scientist Alan Finkel in a major review of Australia’s energy policy. Few details have been announced by the government at the time of writing, however, the key aims of the NEG are to require energy producers to meet two guarantees. The first requirement is a reliability guarantee: the NEG will determine that power providers maintain a certain level of dispatchable power in the energy mix. The NEG also mandates that energy providers hold a certain amount of renewables in their portfolios. This will be mandated to ensure Australia meets its international climate obligations.

While there is minimal detail to date on the specifics of the NEG, what is clear is that it does little to provide certainty in the immediate future – particularly surrounding gas prices. The NEG is expected to come into force by 2020, but is yet to be legislated. In the interim, the government’s recent interventions and agreements with gas providers, which many argue are insufficient, are the only policy interventions in the energy market. At the time of writing, these interventions have done little to lower household power prices, nor secure certainty for large-scale consumers of gas.

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<sup>58</sup> The Department of Industry, Innovation and Science, Regulatory Impact Statement, Australian Domestic Gas Security Mechanism, June 2017.

<sup>59</sup> The Department of Industry, Innovation and Science, Regulatory Impact Statement, Australian Domestic Gas Security Mechanism, June 2017, Page 15.

<sup>60</sup> <http://www.theaustralian.com.au/business/mining-energy/gas-prices-to-remain-high-warns-ubs/news-story/259ce84a7c62727e9d065844f9612374>

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## Isn't intervention a bad thing?

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Sovereign risk has historically been a hallmark consideration of any trade-related or market-intervention-based policy measure. As a free-market economy that relies significantly on overseas investment and trade, Australian policymakers can and therefore should consider the impact interventions will have on ensuring a low sovereign-risk market sector. The government manages this risk by ensuring the introduction of regulation and/or legislation does not retrospectively discriminate against commercial decisions made under an historical policy setting, or imposed without fair warning.

Expectedly, sovereign risk has been raised as the main proponent to intervention in the LNG sector. We see three principal reasons why an Australian government intervention in the LNG sector should not be constrained by concerns of sovereign risk.

1. The Australian Government's current policy setting – the Australian Domestic Gas Security Mechanism (ADGSM) – suppresses market confidence and enhances sovereign risk more than what a definitive policy approach would.
2. For many reasons, the intervention in the LNG sector is not solely motivated by a failure of government policy, but also a response to bad market practice and a violation of supply commitments made by some LNG Producers.
3. Inherent in the careless destruction of the local manufacturing industry by policy-makers is that foreign investors see the Australian economy as unstable.

**The Australian Government's current policy setting – the Australian Domestic Gas Security Mechanism (ADGSM) – suppresses market confidence and enhances sovereign risk more than what a definitive policy approach would.**

The ADGSM was designed to allow the Minister to respond to shortages in the domestic gas market by imposing export controls on LNG Producers. Determining which projects would be subject to exports controls would require targeting those projects that are categorized 'net-deficit'. As per the ADGSM guidelines, 'an LNG Project will be regarded as being in net-deficit... if its Total gas used is greater than the sum of its Own gas and Third-party export compatible gas.'<sup>61</sup>

These provisions would, based on 2017 trading volumes, exempt two of the three relevant LNG Producers from being subject to export restrictions. This would mean the domestic shortage would be imposed on Gladstone LNG (GLNG) and no other project.

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<sup>61</sup> The Australian Domestic Gas Security Mechanism.

If GLNG were to bear the brunt of the current domestic shortfall, it has been estimated that they would either;

- 1) Violate the conditions of their export contracts, and/or
- 2) Become so unprofitable they would be required to close.

As such, industry commentators believe that if the government were to activate the ADGSM, it would have to change the assessment in the guidelines. Indeed, we have witnessed something strikingly similar. The government opted not to activate the ADGSM in 2017, but instead sign a voluntary agreement with other LNG producers to supply the domestic market with more gas. Whilst this agreement has substantial flaws, outlined earlier, it reflects the uncertain nature of the ADGSM. In summary, maintaining a government policy that won't work only indicates to the market that when the government will respond, it will do so without a clear indication to the market on how it will do it.

Even as is, the indeterminate nature of the many discretionary assessments made by the Minister in the ADGSM also create significant market uncertainty.

**For many reasons, the intervention in the LNG sector is not solely motivated by a failure of government policy, but also a response to bad market practice and a violation of supply commitments made by some LNG Producers.**

The energy sector is unusually unique in its complexities and dependency on government regulation. The significant capital investment required to build both production and transport facilities for LNG, as well the risk of environmental degradation, mean that commercial incentives and government intervention can take unusual forms.

The granting of tenements and licenses are therefore inherently predicated on the scientific and financial forecasts established by LNG Producers, as ensuring security of Australia's energy supply is determined by the number and nature of projects allowed to proceed.

As mentioned in previous sections, all LNG Projects on the East Coast significantly understated the operating and development costs of extracting LNG. Additionally, the GLNG venture claimed in its 2012 EIS that it would 'not divert gas from local markets to export markets... [and would have] no direct implication for domestic gas prices'.<sup>62</sup> Naturally the actions of GLNG have violated this commitment. Accusations of price gouging by APLNG and QCLNG have similarly been made.

Government intervention in response to bad market-practice and a failure of supply commitments is and cannot be considered sovereign risk. Not intervening would be

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<sup>62</sup> BIS Shrapnel, 2014, The Economic Impact of LNG Exports on Manufacturing and the Economy.

indirectly endorsing malpractice and compromising the integrity of the public-interest tests established to ensure Australia's energy security.

Reclaiming what has been signed due to a scope failure is equitable, and consistent with the public-interest principle that underpins the assessment process required of prospective LNG Producers to be granted tenements.<sup>63</sup>

**Inherent in the careless destruction of the local manufacturing industry by policy-makers is that foreign investors see the Australian economy as unstable.**

Foreign investors seek economic stability from governments to ensure external factors priced into their risk assessments remain as foreseeable as possible. Indeed, much of what investors consider as risk is in fact the diversion of a government's prerogative to support their existing legislation and its intention. For instance, foreign investors cannot expect that domestic businesses or people will not commit crimes, but they do expect law enforcers to respond to those crimes accordingly.

With that in mind, a government failing to respond to market gouging by LNG producers is in fact a risk itself. In making the case for intervention exposing the economy to greater sovereign risk one would have to be satisfied that a future government would be unnerved by:

- Substantial pressure on household budgets in the form of rapidly rising electricity and gas prices.
- Substantial pressure on the business sector by means of increasing business input costs, and in turn reducing the scope for real wage increases and consequently lower economic consumption.
- Sit idly by whilst a sector employing 850,000 people is decimated.

Sovereign risk is often assessed on the basis of the industry itself. However, it remains the case that the risk of inaction provoking economic instability, including the loss of jobs and subdued economic consumption, is in fact a far greater sovereign risk itself. After all, who would invest in an economy where its proponents cannot afford to purchase goods and services?

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<sup>63</sup> <https://www.macrobusiness.com.au/2017/03/credit-suisse-delivers-answer-east-coast-gas-crisis/>

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# What options do we have?

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Amidst the extensive debate on energy policy occupying the media, academia, industry, and policy-makers more broadly, a range of solutions have been proposed to put downward pressure on energy prices and ensure energy security. To date, the majority of these solutions have been inadequate. The prevailing drawback is timing, where most of the solutions will come into effect post-2020. The risk to Australia's manufacturing sector is far more immediate, with industry analysts and government departments predicting substantial job losses in the next two years if prices remain high.

Another prevailing drawback is that many of these solutions focus on ensuring supply rather than delivering affordable prices to industrial users. The supply solutions, as indicated by industry analysts, will largely orient around delivering high-priced gas to the domestic market. With the implications of sustained wholesale gas prices at historical highs becoming more evident, any proposed solution without a focus on delivering lower prices will serve as a political distraction more than it will contribute to the efficacy of the debate.

## Import terminal

AGL have proposed that the construction of an import terminal on the East Coast of Australia would enable them to enter into long-term contracts with industrial users in the domestic market. It would require capital expenditure of \$200-\$300 million dollars, and it has been proposed that it could import gas from either Western Australia, Papua New Guinea, or potentially the US.<sup>64</sup>

Industry analysts suggest that an import terminal would be an overall economically inefficient avenue to obtain additional supply, given that a solution involving the re-distribution of gas produced on the east coast would be less costly.<sup>65</sup> More importantly some analysts have forecast that even using contracted gas prices off Henry Hub (US market) at a long-run price of US\$3/mmbtu, it would be landing in Australia at more than A\$10/GJ. These figures exclude transportation costs to domestic industrial users and Australian capital cities. Such prices would ultimately be higher than the current wholesale gas price, and in turn remain far higher than what is required to mitigate the risk of substantial job losses in the manufacturing sector.

In addition, to date the construction of an import terminal has not been formalised by any energy company – particularly AGL. This would mean that with consideration to forecast construction schedules an import terminal could only be running by 2019-20. As previously noted, waiting 2-3 years for such a solution – even in the event that it

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<sup>64</sup> IEEFA, June 2017, Australia's Export LNG Plants at Gladstone: The Risks Mounts.

<sup>65</sup> <http://www.energynewsbulletin.net/energynewsbulletin/news/1138961/wood-mackenzie-pans-agl-import-plans>

could ensure affordable supply, which it likely won't – will see the structural deterioration of Australia's manufacturing sector.

## Lifting Moratoriums

Many commentators have attributed liability of Australia's gas crisis to moratoriums in the East Coast states. Specifically, the prevailing argument suggests that restricting new sources of supply have attributed to the shortfall of natural gas in the domestic market today.<sup>66</sup>

Whilst moratoriums do restrict new sources of natural gas supply, they have not singularly attributed to the rampant increase in wholesale gas prices in Australia. Indeed, a failure of safeguards to ensure that East Coast LNG producers wouldn't gouge the market, and direct a violation of commitments made by GLNG in their EIS to not materially withdraw gas from the domestic market, have attributed to the domestic shortfall.

More generally, attributing blame to moratoriums similarly contains an inherent underlying accusation of the federal government's policy-making process. Energy policy is predicated on those projects currently approved and those currently operating, as well as the forecasts that underpin our expectations of those projects. Conversely, those that subscribe to blaming moratoriums are also suggesting that our energy policy was predicated on the expectations of future political climates, and the decisions made by current and in some cases successive state governments. This appears somewhat unlikely.

The most startling observation amongst the proponents of lifting moratoriums is in the absence of cost-consideration. For example, the Northern Territory government is currently reviewing its moratoriums on discovered natural gas deposits. In a report commissioned by the South Australia Department of State Development's Energy Resource Division, extraction costs have been estimated at \$7.50/GJ. Withstanding the fact that these estimates almost always prove to be optimistic, it has been estimated that the cost of delivering that gas to the Wallumbilla Hub of Queensland would be in excess of \$11/GJ.<sup>67</sup> Needless to say, this price is slightly above the already-inflated wholesale gas price the East Coast manufacturing sector currently endures.

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<sup>66</sup> <http://www.theaustralian.com.au/news/inquirer/why-australias-not-cooking-with-gas/news-story/ddf8747cc0da995eaa603abbd3e2037e>

<sup>67</sup> IEEFA, June 2017, Australia's Export LNG Plants at Gladstone: The Risks Mounts.]

**Figure 15 - Delivered costs of Northern Territory gas**

| Gas Play               | VTS <sup>64</sup>     | Adelaide | Sydney | Wallumbilla | Mt Isa |
|------------------------|-----------------------|----------|--------|-------------|--------|
| Ironbark               | 8.03 plus NVI tariff  | 7.75     | 8.03   | 5.63        | 8.34   |
| APLNG Eastern Walloons | 8.91 plus NVI tariff  | 8.63     | 8.91   | 6.51        | 9.22   |
| Cooper (Infill)        | 7.55 plus NVI tariff  | 7.27     | 7.55   | 7.45-7.95   | 8.36   |
| Roma                   | 9.59 plus NVI tariff  | 9.31     | 9.59   | 7.19        | 9.90   |
| NT Gas                 | 11.86 plus NVI tariff | 11.58    | 11.86  | 11.76       | 9.05   |

**Source: IEEFA, Risks Mount**

Similarly, analysts have noted that moratoriums in Victoria are irrelevant to how much gas will be delivered to Australia's eastern seaboard in the next 5-10 years.<sup>68</sup>

More importantly, however, is that lifting moratoriums would suffer from the same inherent limitation of an import facility, which is that of timing. No LNG producer could complete the capital development of an LNG Project, if a moratorium restricting gas exploration was lifted, before 2020. As such, the lifting of any moratoriums across the east coast would not put downward pressure on gas prices in the short- to medium-term, which is when the existential threats to Australia's manufacturing sector resides.

## Western Australia Pipeline

In April 2017, the Federal Government indicated that it was considering a pipeline from Western Australia's North-West Shelf as a potential solution to the eastern seaboard gas crisis.<sup>69</sup> The Federal government has engaged consultants to conduct a pre-feasibility study on a Western Australian gas pipeline to be reported back by March 2018.<sup>70</sup>

Whilst the construction of such a pipeline has potential benefits of delivering more affordable gas to the East Coast, it remains unlikely that the pipeline will be built within the next two years. Firstly, the Federal Government would have to receive approval from the Western Australian state government, which have indicated that they would use the approval to negotiate a better share of the GST. In conjunction with political obstacles, the government will need to engage in a formal feasibility study and tender process after it receives the pre-feasibility study in March 2018. It is unlikely that, in addition to these processes, the construction of the pipeline would be completed before 2019.

The construction of a Western Australian pipeline would also impose the cost of the manipulative tactics of LNG Producers onto Australian taxpayers. Attributing the costs of the current gas crisis to those not responsible, in particular to those that also do not stand to benefit (such as states not connected to the NEM) is inequitable. Additionally, the carelessness of building a pipeline without addressing tactics such as third-party

<sup>68</sup> <http://www.smh.com.au/business/energy/pipelines-next-target-in-energy-crisis-blame-game-20171010-gyxylt.html>

<sup>69</sup> <http://www.abc.net.au/news/2017-04-19/cormann-confirms-federal-government-examining-west-to-east-gas-/8454820>

<sup>70</sup> <https://www.iseekplant.com.au/blog/wa-east-coast-gas-pipeline/>

purchasing of gas, and price gouging the domestic market, only offers LNG producers more scope to profit maximise with a greater supply of gas from Western Australia at the expense of the Australian public.

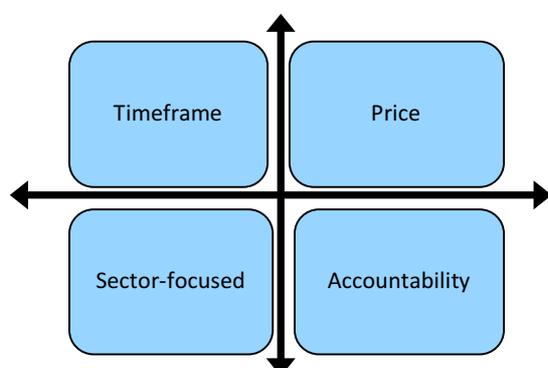
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## Solutions that make sense

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An effective solution to solving the current gas crisis requires careful consideration of the parameters of the problem. In this section, we define four parameters that offer a framework for assessing solutions and determine which actions fit within the parameters that will deliver an effective solution.

**Figure 16 - gas crisis solution matrix**



**Source: AWU**

### Parameter 1 – timeframe

The systemic implications of a continuing gas crisis concern itself with the sustainability of Australia’s manufacturing sector. With over 850,000 people working in the manufacturing sector, and a further one million indirect jobs economy-wide reliant on manufacturing, the threat is substantial.<sup>71</sup> Further, the capital-intensive nature of the industry suggests that the relocation or deterioration of Australian manufacturing sites will either be permanent, or take a long-time to recover.

With inflated wholesale gas prices continuing to put significant pressure on the sector, we have begun seeing both closures and a fundamental change in investor risk-pricing across the east coast of Australia. As such, the **first parameter** stresses that unless a solution can deliver lower gas prices within the next 12 months it is not an effective solution.

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[https://www.aph.gov.au/About\\_Parliament/Parliamentary\\_Departments/Parliamentary\\_Library/pubs/rp/rp1516/Quick\\_Guides/EmployIndustry](https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp1516/Quick_Guides/EmployIndustry)

Needless to say, a government policy solution could be effective even in the form of a commitment. For instance, political parties committing to a policy pre-election could substantially restore investor confidence and persuade manufacturing businesses to bear a greater burden for the short-term.

## Parameter 2 – price

The **second parameter** stresses that a solution also concerns itself with price, and not just supply. A solution that focuses on supply would have to deliver enough supply to materially bring down the wholesale gas price. Indeed, as noted by the ACCC, the *minimum price* objective should be the netback price of LNG producers, currently estimated at \$6.29. The sole focus of a *shortfall* is misleading, where in fact a surplus of supply is required to put downward pressure on the wholesale gas price. No solution without price relief will avert ensuing job losses.

As noted by industry, commentators, and government departments, the government's actions in 2017 have and will continue to be inadequate in putting downward pressure on wholesale gas prices. This is largely due to its focus on supply, where the ADGSM allocates liability in terms of each LNG project's contribution to the problem after a categorisation of the net-contribution each project makes. Whilst the categorisation of each project's eligibility to be liable is a reasonable pursuit, determining that only one project is liable (as defined by its current form) is both inadequate and substantially flawed. Undeniably, all main LNG projects in Queensland have in some form engaged in gouging the domestic market.

Additionally, the government's supply agreement focuses on domestic supply to the National Electricity Market (NEM). Whilst there are no provisions in place to ensure that these industry stakeholders deliver this outcome, there remains no commitment to increase supply to the manufacturing sector.

## Parameter 3 – sector-focus

As such, the **third parameter** concerns itself with sector-focus. Whilst gas prices have significant bearing on electricity prices – also a drag on the manufacturing sector – a solution must deliver lower wholesale gas prices to industrial users of gas. As noted by the department of industry, over 65,000 jobs work in an industry where more than 15% of business input costs are gas. It's important to note that this excludes all sectors indirectly reliant on these industries, better reflected in BIS Shrapnel's estimate of 235,800 job losses economy-wide. In summary, a solution has to ensure that lower wholesale gas prices are accessible to the manufacturing sector.

## Parameter 4 - accountability

Lastly, the **fourth parameter** concerns itself with accountability, where any commitment or obligation satisfied by LNG projects is delivered under a framework of accountability. The ADGSM in its current form cannot ensure that LNG projects will be held accountable for increasing supply to the domestic market. The government's supply agreement also cannot ensure that LNG projects are held to account – only that they answer to deliver supply in good faith. To ensure LNG Producers increase

domestic supply enough to reduce the wholesale gas price, our policy framework must extend beyond the blind faith of corporate social responsibility and subject those liable to a legal framework of accountability.

## An effective solution

An effective solution requires government policy that shifts the balance of power of Australia's resources back to the nation. The only way to ensure Australia does not pay more for its own natural gas is to require LNG projects make the case for exports rather than have the Australian public make the case for accessing its own resources. Here we outline four recommendations that together satisfy all four parameters of an effective solution. They are:

1. Third-party purchasing and international spot selling can only proceed with a permit
2. The domestic market must be satisfied first
3. Use it or lose it

**Recommendation 1: third-party purchasing and international spot selling can only proceed with a permit** – LNG projects must be granted permission annually to buy third-party gas and sell on the international spot market, where the government would assess a project's eligibility based on the willingness of companies to supply project information, and indications of their intentions to withdraw or withhold gas supply from the domestic market.

Two market practices by the LNG projects have contributed to the gas price increase, namely the purchasing of third-party gas from the Bass Strait to fulfil export contracts, and the selling of excess gas onto the international spot market.

The right to both of these liberties should be retracted and LNG projects should apply to regain their permission to do so annually. Gaining permission should be subject to an ongoing condition that the LNG projects supply information on the marginal extraction costs at their sites, production forecasts, and pertinent information from their private contracts.

Under this model, comprehensive extraction and expenditure forecasts would be submitted to the ACCC who will report on risks and concerns from that analysis publicly and to the relevant Minister. These risks may present in the form of forecasts to purchase a material amount of third-party gas, disparities between netback prices and domestic contract prices, or selling excess gas overseas for non-contractual reasons and for prices lower than available domestically.

Cabinet will then make a determination about whether particular LNG Projects should be retracted of their liberty to sell on the international spot market, or purchase third-party gas. The permission could also be granted in the form of a cap, which would be determined in a similar way in which the Exporter Market Security Obligation (EMSO) is

currently determined in the ADGSM.<sup>72</sup> In this sense, the government can grant permission to third-party purchasing or international spot-selling to an LNG Producer but for only a certain volume.

When considering how much liability to apportion to Projects, the ACCC should establish an order of considerations that help determine which projects should be penalised. We recommend that third-party purchasing of domestic gas should be of first order priority, with the second being international spot-selling. The third priority would measure an LNG producer's intention to sell the cheapest (lowest cost to produce) non-contract gas to the domestic market.

However – as distinct from the ADGSM – consideration of liability apportioned to Projects should also factor in the extent to which a project will remain feasible. For instance, one of the reasons stopping the government from using the ADGSM is that, in its current form, it would have to apportion total liability onto GLNG which would more than likely make the project no longer feasible.

Such a process would allow the government to respond to a forecast increase in the wholesale gas price above netback prices in real time. Unlike the ADGSM, it would also allow the market to operate more efficiently and allow the government to recognise threats before they materialise. It would also suppress the scope for LNG projects to game the regulation, and allow the government to allocate responsibility on an equitable basis – rather than waiting until one project commit enough travesties that all projects must bear the burden. Additionally, it will also ensure that those contributing to the domestic shortfall will be liable for their contribution to the problem, rather than impose it onto one project as the ADGSM is designed to do. By assessing each project on an annual basis, the ACCC would be able to take each Project's specific contracts and circumstances into account rather than impose one mechanism agnostic to such considerations.

The permission should be allocated within parameters such that projects predicting a forecast production shortfall for the year – determined by production compared to total export contract obligations – cannot make up the difference by purchasing third-party gas if that difference will materially affect the domestic wholesale gas price. Indeed, our tenement-grant processes currently embody this principle, however we have been unable to cast responsibility back onto LNG projects (particularly GLNG) in the case that they violate it.

**Recommendation 2: the domestic market must be satisfied first** – the government impose a flexible minimum gas supply requirement both retrospectively and for future projects, whereby the total expected future demand forecast by AEMO is satisfied by LNG Projects.

The Australian government should allocate responsibility of domestic gas demand directly to LNG Producers based on their obligation to an engineered shortfall (as

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<sup>72</sup> **Exporter Market Security Obligation** means the proportion of the Total Market Security Obligation to be applied to a particular LNG Project.

**Total Market Security Obligation** means the proportion of a gas shortfall that the Minister considers is attributable to LNG Projects in net-deficit, and may be remedied by imposing export controls on net-deficit LNG Exporters.

inferred by Recommendation 1). Called a minimum gas supply requirement, the obligation by an LNG Producer to supply the domestic market will be determined as a portion of the total forecast domestic demand. Such a framework would ameliorate market inefficiencies typically created by a blanket reservation policy of a fixed percentage. For instance, the total amount of gas required by an LNG Producer is subject to forecast demand, and not irrespective of it.

In its regulatory impact statement the Department of Industry note that a gas reservation policy would impose obligations on projects not liable for a domestic shortfall. In short, this is true when LNG Projects that haven't engaged in market gouging are suddenly subject to a domestic supply requirement that exceeds their current sales composition. For example, a project currently supplies 10% of its gas to the domestic market, and a blanket reservation rate of 15% is imposed. Whilst a minimum gas supply requirement would not take the same form as a blanket rate, and therefore avoiding a large portion of the inefficiencies created by such an imposition, it would in total allocate greater responsibility to some projects.

However, energy policy has historically and should continue to be considered in the context of the market itself, rather than preoccupy itself with theoretical implications. With this in mind, assuming a gas reservation policy would impose on projects not contributing to the domestic shortfall is ignorant of the domestic LNG market. Why?

It's well known that the (lack of a) regulatory framework around the development of the three main LNG projects in Queensland contributed substantially to the current gas crisis. However, two of those projects, APLNG and QCLNG, already supply a substantial portion of gas to the east coast market. Recommendation 1 will apply a framework around how much they can gouge the domestic market, or sell excess product overseas, but a reservation policy will not materially affect their product flows. On the other hand, GLNG may be materially affected by a reservation policy. Nevertheless, as noted by many industry analysts and the ACCC, their violation of the commitments they made in their EIS to not materially gouge the domestic market is what contributed to the domestic shortfall. Reducing their market-gouging actions by a small amount (approximately 50% of their export contracts are fulfilled by third-party purchasing from the Bass Strait) would be enough to fulfil the gap between total domestic supply and demand.

Additionally, the other large LNG projects in the Bass Strait already supply well over 50% of their gas to the domestic market. Therefore, a minimum gas supply requirement would not affect the product flows of their natural gas. However, it may affect the demand for their gas as projects like GLNG will no longer be able to purchase third-party gas, which in turn could reduce the sale price of their gas.

Most importantly, a minimum gas supply requirement could give the government more scope to ensure a sufficient volume of gas reaches the manufacturing sector. This could be achieved in a number of ways, particularly by granting concessions in the minimum gas supply requirement if an average wholesale price of a project contracted to the manufacturing sector drops to a certain level. This would allow the government to have greater oversight over how the minimum gas supply requirement is achieving results for the manufacturing sector.

Another consideration is that of new projects, and whether a minimum gas supply requirement would deter investment in new LNG projects and disincentivise further exploration. For many of the reasons covered above – in particular the majority of LNG projects already satisfying that requirement – a minimum gas supply requirement would have an immaterial effect on future project consideration. Australia also has some of the most generous tax concessions for oil and gas companies in the world – with Petroleum Resource Rent Tax concessions substantially more favourable than overseas tax obligations.

**Recommendation 3: use it or lose it** – Tenements to be resold or retracted by the government if they are not used for extraction.

To ensure our system remains consistent with the national-interest assessment most natural gas producing countries have, the granting of tenements should be conditional on capital-investment. More specifically, if a tenement has been granted to an entity, that entity must invest in capital works that indicate its intention to extract natural gas. In the case that the entity does not invest or extract gas, or indicates its intention not to extract gas, the tenement must be resold onto the market or retracted by the government.

This condition should be retrospective, as tenements such as Arrow’s gas reserves in Queensland have been used as collateral to invest in other projects rather than developed for extraction. However, retrospective application should be approached with consideration to subsequent investments. For instance, offering scope for companies to compensate via increasing domestic natural gas supply by other means would be less discriminatory to those companies that made decisions legally under an old regulatory framework.

**Recommendation 4: expand scope of ACCC’s investigative powers, establish a contract hub, and introduce a national interest test** – LNG Producers must submit all existing contracts and contract offers to a contract hub managed by the ACCC which would have legal authority to investigate LNG Producers and monitor project netback prices in real time.

The ACCC should have the legal authority to demand product flow data from LNG Producers to ensure excessive margins are not being charged by producers feigning transport costs.

A contract hub should be established by the ACCC whereby all LNG Producers would submit all supply contracts to be accessible by the ACCC and relevant government authorities. All supply contract offers would also be registered onto the contract hub so that the ACCC could, in real time, monitor and scrutinise the average contract price offers to domestic customers compared to international customers. Investigative powers must be given to the ACCC to then enquire and request further documentation from LNG Producers to substantiate unscrupulous market behaviour.

# Ticking the boxes

**A COMMITMENT BY THE GOVERNMENT OR POLITICAL PARTIES TO THE ABOVE RECOMMENDATIONS WILL ESTABLISH GOVERNMENT POLICY THAT FITS WITHIN ALL FOUR PARAMETERS REQUIRED TO SOLVE THE GAS CRISIS.**



## **Timeframe**

With adequate information available from LNG projects in real time, and the ability to control exports, the government would be able to proactively ensure sustainable wholesale gas prices in the relevant timeframe.



## **Price**

The government would be delivering a level of supply to the market that ensures the wholesale gas price is at export-parity price.



## **Sector-focus**

Unlike the government's supply agreement, the above recommendations will ensure that the manufacturing sector receives prices at affordable levels that will once again restore industry competitiveness.



## **Accountability**

All LNG projects would be held to account in real time, minimising market distortions and the imposition of enforcing liability onto projects not contributing to the shortfall.