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The Hon Barnaby Joyce MP
Deputy Prime Minister
Minister for Resources and Northern Australia
PO Box 6022
Parliament House
CANBERRA ACT 2600

Dear Deputy Prime Minister

I am writing in response to your predecessor's request for industry advice on a potential decision to invoke the Australian Domestic Gas Security Mechanism (ADGSM) for 2018. The Australian Industry Group (Ai Group) is happy to offer input based on discussions with our members and our own analysis. Ai Group represents thousands of businesses of all sizes across Australia, including food processors, renderers, makers of fertiliser and explosives, brickmakers, foundries and many others for whom gas is an important fuel or feedstock. Our entire membership is also impacted by the role of gas in shaping the price and reliability of electricity.

We have been concerned by developments in the gas market for several years, as it became clear that the commencement of Liquefied Natural Gas (LNG) exports from Eastern Australia would permanently raise energy prices and bring considerable collateral damage to the manufacturing, mining and agricultural sectors to reduce the expected benefits of export. Our concerns deepened in 2016 as it became clearer that prices would continue rising in Eastern Australia even as low international oil and gas prices undermined the value of the export projects. And in 2017 our members have become intensely alarmed by the extraordinary rise in the price, and reduction in the availability, of contractable gas.

Industry remains deeply worried about the state of the gas market. Contract prices and availability are poor; the market remains non-transparent; and while there have been some recent positive signs of action by gas exporters, it is far too early to know how effective these will be in rebalancing the market. The most sensible course of action is for the Government to maintain pressure on gas exporters by invoking the ADGSM export controls. This will require you to determine that 2018 is a shortfall year under Regulation 13GE of the *Customs (Prohibited Exports) Regulations 1958* (the Regulations). You have considerable leeway under the Regulations to amend such a decision subsequently if you decide circumstances warrant the tightening, loosening or removal of export controls. However you have no power to impose export controls on LNG in 2018 unless you make a shortfall determination by 1 November 2017. The asymmetry of these options further bolsters the case for making a shortfall determination in order to maintain your freedom to respond to developments in the gas market.

The state of the gas market

The Eastern Australian gas market is much less transparent than the electricity market and it is a great deal more difficult to observe meaningful prices. Most gas is sold through long-term and confidential bilateral contracts, not through open trading platforms. Most of the open platforms that exist are relatively new and all are largely used for balancing and dealing with transient shortfalls in demand and excesses of supply. There is no direct connection between these markets and the prices offered to retail gas customers.

Nevertheless, reported prices at Wallumbilla do show a substantial increase since the Hub began operating in 2014.

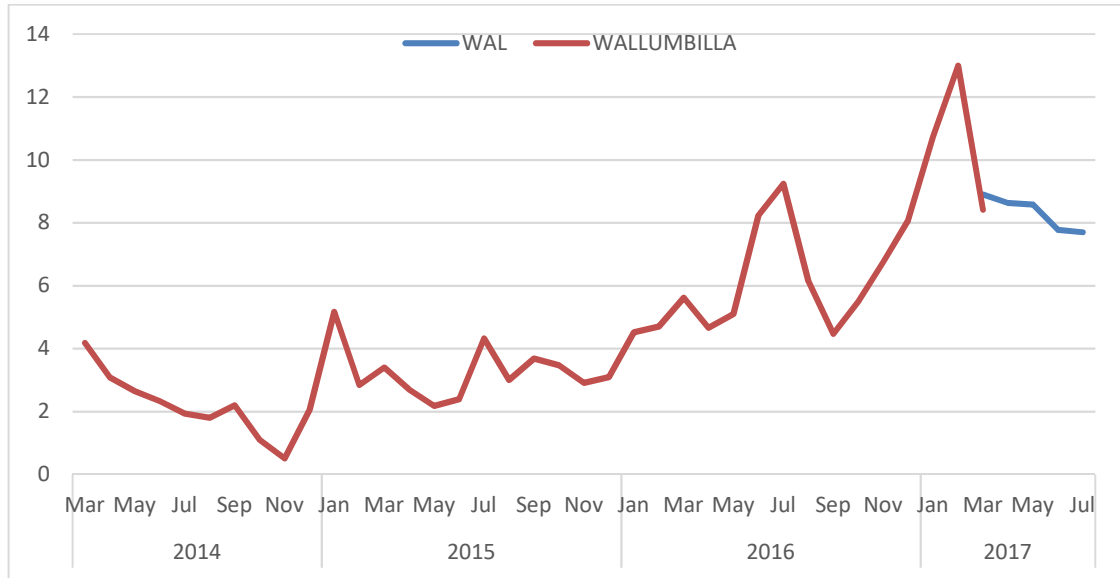


Figure 1 - Wallumbilla spot prices (AEMO)

The dip in late 2014 likely reflects the brief surge of uncontracted ‘ramp gas’ from wells coming into production to serve the not-yet-operating Queensland LNG export terminals. The spikes in July 2016 and January-February 2017 likely reflect surges in demand for gas-fired electricity when intense weather events coincided with problems for other generation sources. The dip since March likely reflects the easing of these seasonal pressures. The larger dynamics of the market – the volumes of gas sought and made available for long-term contracting – only lightly coincide with the pressures of this short-term market.

Seeking data directly from energy users is a more promising window into the market. One obvious source is the ABS Producer Price Indexes, which includes a measure of gas prices paid by businesses, including manufacturers. This index shows a gradual rise since around 2008, a short-lived price spike around the introduction and removal of the former carbon price, and only a modest uptick in the past year.

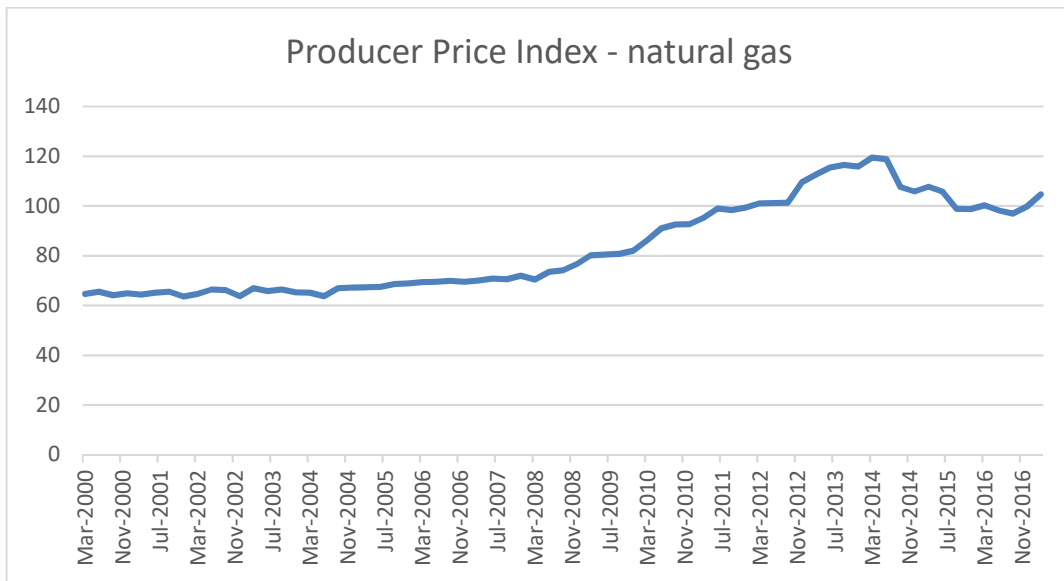


Figure 2 - producer prices for gas (ABS)

However, while the PPI is survey-based and substantial, there is a strong reason to believe that it is not a useful descriptor of the situation confronting most industrial gas users. As we understand it, the ABS includes LNG producers in their definition of manufacturers. LNG consumes vast volumes of natural gas – in Eastern Australia, LNG now uses twice as much gas as all other users combined – and much of this is produced by related entities and priced on an internal basis. The PPI is also a national index, encompassing the unconnected WA and NT markets where prices have differed greatly from the East. As a result, we think the PPI movements reflect the increased production of LNG and its internal pricing decisions, rather than anything visible to power, industrial and residential gas users.

Our best guide to trends in gas pricing is the reports we receive from individual businesses. This is necessarily anecdotal and also needs to be treated with care; but the story from businesses of all sizes across many sectors has been very consistent, and is illustrated in the chart below.

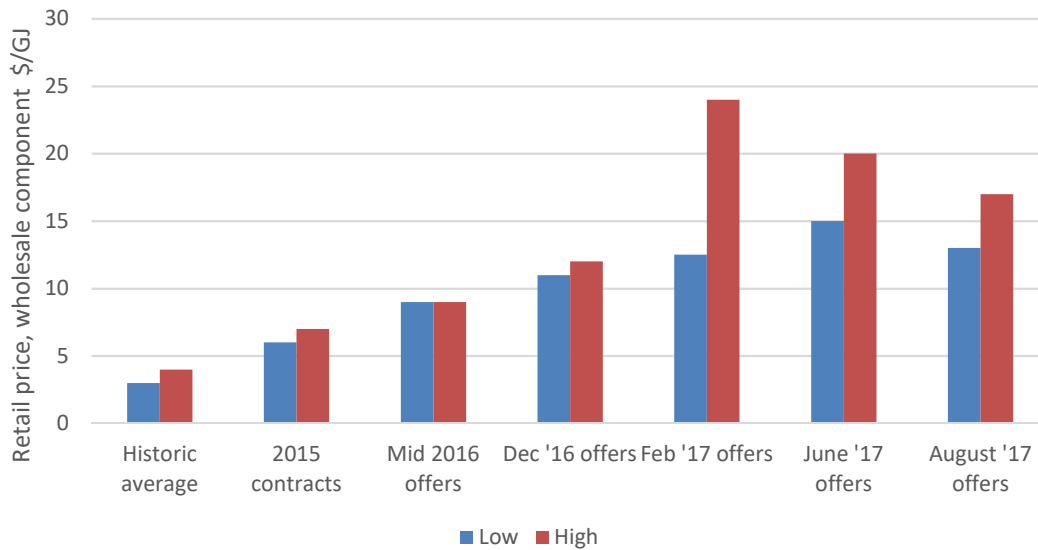


Figure 3 - Anecdotal reports of industrial gas prices - wholesale component

In south-eastern Australia, the wholesale element of industrial gas bills used to be around \$3-4 per gigajoule. Contracts concluding in 2016 often had prices around \$6/GJ. Like-for-like prices offered have increased rapidly and dramatically since then, with high-end offers of up to \$24/GJ emerging in February 2017 and average offers above \$15/GJ in June. The highest prices have receded somewhat since February; we understand that the retailer who signed some customers up at above \$20/GJ has subsequently acquired more gas and re-contracted with those customers at a modestly lower price. The latest input from our members is that prices offered range from \$13-17/GJ and that contracts remain difficult to get. Businesses large enough to deal with producers directly often find that discussions go nowhere or that uncommercial terms are offered around volumes or duration; smaller gas users find that there are typically only two retailers at most in a position to offer contracts to industrial gas users, Origin and AGL, and no room for negotiation. The frequent message to industrial gas users of all sizes is that there is little gas to be contracted for, and that they need to take what is offered or risk missing out.

Meanwhile, global gas and LNG markets are strongly supplied and domestic prices are low in relevant major economies. As the chart below highlights, there is good alignment between spot gas import prices in Japan and Europe, the Wallumbilla spot price and a simple calculation of Eastern Australian oil-linked netback pricing. Recent Eastern contract prices are double that benchmark, and nearly four times higher than prices in the United States.

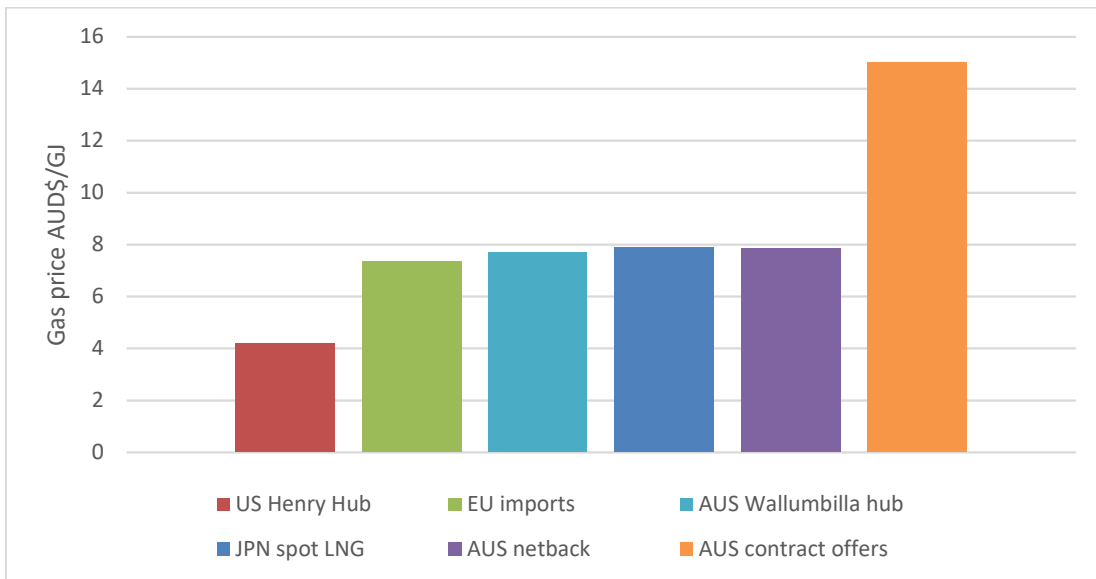


Figure 4 - Average gas prices in selected spot markets in July 2017¹

Thus while domestic prices do appear to have eased modestly since February, they remain far above international levels. Industrial energy users are experiencing enormous cost increases as a result. Network charges tend to be a much smaller proportion of the bill for industrial gas users and their overall price is lower than for residential customers. Contracts have tended to be multi-year. Thus many industrial gas users are experiencing a threefold increase in their gas prices from one contract to the next – a rise from around \$6 to around \$18 – or to report a four- or five-fold increase on the basis of a longer term comparison to the prices in older contracts.

Our best explanation for the extreme rise in gas contract prices – not closely reflected in spot market outcomes – is that the market is out of balance. There is a looming and significant shortfall in uncontracted gas supply relative to the sum of pre-existing domestic demand and the new LNG industry's requirements. Given the marginal role of the spot markets compared to bilateral contracting, it is perfectly possible for longer term shortage to coexist with a spot market with very different dynamics. Demand destruction potentially means that spot market prices never match the highs of current contract prices for any sustained period.

On this theory, some mix of supply- or demand-side change is needed to rebalance the market. Extreme prices may eventually encourage new production, but their main effect would be to rapidly destroy gas-using industries that would be viable at more reasonable internationally-linked prices.

Alternative theories of current gas contract prices may invoke market power behaviour by pipeline operators and/or gas retailers. While both transport and retail have problems worthy of reform, we do not find these convincing explanations for the current situation. The competitiveness of these segments of the gas market has not notably declined in recent years – except for the apparent inability of retailers other than AGL and Origin to secure any gas to offer to industrial customers. It is the supply-demand balance, in a market with an unprecedented surge in demand growth and an apparently disappointing performance by new production, that seems to be the most plausible source

¹ Underlying data: US Energy Information Administration (Henry Hub); World Bank (European gas imports); AEMO (Wallumbilla); Ministry of Economy, Trade and Industry (Japan Spot LNG); Ai Group (simple Australian netback calculated as 14% of the spot oil price, minus \$1/GJ for avoided liquefaction and transport costs); Ai Group (average anecdotal Eastern Australian contract offer).



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of the current crisis. The ADGSM is an appropriate stopgap measure in this context, and it makes sense to estimate the supply-demand balance based on an assessment of what demand would be at internationally linked prices, rather than prices shaped by local scarcity.

There have been several recent announcements of action by gas exporters and suppliers to improve supply to the domestic market. Of particular interest are Santos' agreements to supply 15PJ over two years from 2018 to South Australia's Pelican Point power plant, and its framework agreement to supply at least 54PJ over 3 years to southern states through a swap agreement, possibly with Shell. These developments are positive. The ADGSM was intended to inspire pre-emptive action by the gas sector to rebalance the domestic market, and the latest actions appear to go in this direction. However, detail is lacking and it is unclear whether the announcements represent a net improvement in the supply situation, or a reshuffling of existing domestic supply that will leave some individual gas users with greater security without helping users overall. There is unlikely to be enough time to observe effects in the murky contract market before the deadline for decisions under the ADGSM.

Impacts on industry

Industry varies widely in its energy intensity and the role of gas in its energy mix. Some very large gas users have very long term contracts which will meet the bulk of their needs for some time. However, gas prices at double export parity will have a substantial impact on many businesses.

Over the past year a wide range of businesses have discussed their energy concerns with us and expressed their fears for the future if current pressures continue. Most do not distinguish between the impacts of gas and electricity issues, which are in any case closely connected. Nearly all are highly exposed to international trade, whether as exporters or as import competitors. By and large they have little ability to pass on cost increases to their customers beyond the going traded price. Soaring energy prices have the strong potential to make these businesses less competitive.

Some members believe that they will be able to weather very high gas prices, including through investments in efficiency, fuel switching and self generation. Some say they will be able to manage in the near term, but cannot reinvest unless gas returns to export parity. Some businesses have indicated that current gas prices will close parts of their supply chain and put their own immediate viability in doubt. A few may not be viable even at international price parity. Small and medium sized manufacturers, who are less likely to have long-term supply agreements and who have a weaker hand in supply negotiations, are the most at risk.

It is notable that the most recent publicly available AEMO gas forecasts project that by 2020 industrial gas demand will have dropped to 238PJ, down from 297PJ in 2014.² The expectation of significant industrial demand destruction underpins AEMO's estimate of the short and medium term gas market balance.

In 2014 Ai Group and others commissioned modelling from Deloitte Access Economics of the impact of the gas price rise that seemed plausible at the time. The modelled outcomes in the table below show a dramatic loss of economic output from manufacturing, mining and agriculture, but should be regarded as extremely conservative. The scenario modelled has since proved to be overly optimistic: it assumed prices only rose to around \$9/GJ, reflecting international gas prices and a profitable LNG export industry, rather than prices at double export parity and an LNG sector facing major asset writedowns.

² See <http://forecasting.aemo.com.au/Gas/AnnualConsumption/Total>.

Sector	Cumulative loss of output 2014-2021 (NPV)
Manufacturing	\$118 billion
Mining	\$34 billion
Agriculture	\$5 billion

Figure 5 - Gas price rise impacts on selected industries in Deloitte 2014 Gas Market Transformations report³

In other words, the Deloitte modelling does not directly consider the impacts of current circumstances, but it does corroborate the importance of gas prices for the health of several major sectors of the Australian economy.

Impact of a decision on the domestic gas market

Invoking the ADGSM will have several effects on the domestic gas market, most of them positive.

The risk that the ADGSM will be invoked for 2018 may already be motivating the gas industry to take steps to rebalance the gas market through swaps, contract renegotiation, additional production and other measures. Since the Regulations give you power to amend an export permission or rescind a shortfall declaration in the light of subsequent developments, exporters will continue to have a strong incentive to rebalance the market themselves if you invoke the mechanism.

If you were to declare 2018 a shortfall year and impose quantitative limits on the three Eastern LNG projects set merely at their expected level of imports, this would be a substantial change and improvement to the current situation. We have been told by one gas exporter that they had redirected export gas into the domestic market – only to see some of that gas on-sold to another exporter and exported after all. Quantitative limits would of themselves ensure that any actions taken by any exporter to support the domestic market would constitute a net addition to supply.

If you were to both declare 2018 a shortfall year and reduce the quantitative limit on any exporter that is not a net domestic contributor, we do believe that this would lead to a net increase in local supply both in 2018 and beyond, by establishing the Government’s willingness to act to avoid a shortfall and scarcity-driven gas prices. We would expect to see gas prices fall from current levels, and see no reason why they should not return to export parity if supply is sufficient.

The main risks associated with a decision relate to uncertainty. We have seen evidence that some market participants have been waiting for the past few months to see how the ADGSM is likely to operate before making decisions on gas supply. The Government has reduced this by its statements of intent and willingness to use the mechanism if necessary. However, a clear decision and a well-articulated approach to future decisionmaking will be very important to ensure that gas buyers and sellers alike can plan ahead despite annual ADGSM decision-making.

We recognise that the ADGSM is necessarily a temporary measure to deal with the extreme circumstances of the present and the next few years. Other measures, including new sources of supply and demand management, will be needed to keep the gas market in balance over the medium term and beyond. The ADGSM does not need to compromise these efforts, and appropriately applied it can further motivate them.

We support the Government’s intention to ensure that its ADGSM decisionmaking does not impact

³ Deloitte, *Gas Market Transformations* (2014) page 3. The figures are for the comparison between a no-LNG scenario and an SKM gas price scenario, run through Deloitte’s computable general equilibrium model of the Australian economy and expressed as the net present value in 2014 of cumulative lost output from those sectors through to 2021.



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the Western Australian or Northern Territory gas markets. This is achievable by issuing unlimited export licenses to exporters active in those jurisdictions, in the event that a national export control is introduced on the basis of Eastern market issues.

Impact of a decision on Australia's trade and reputation

We do not believe that a decision to invoke the ADGSM need impact Australia's international reputation nor greatly alter the balance of our trade. The decision to establish and use export controls is a significant one, and as Ai Group has said before, it would be much better if there were no need for such action. We continue to hope that private pre-emptive action will obviate the ADGSM by rebalancing the gas market.

However, all nations have the right to act in circumstances of domestic shortage. Nobody should be surprised if Australia takes action given the dire situation in the Eastern market. A reputation for inaction in the face of insecure energy and extreme price volatility would be extremely damaging to future investment. A well-flagged and well-justified decision should support, rather than detract from, our reputation. We also note that while a reduction in allowable LNG export volumes could temporarily reduce the overall value of Australia's exports, this should be balanced against the risk of a permanent loss of trade-exposed manufacturing activity as a result of inadequate and exorbitant gas supply.

Recommendation

The opacity of the gas market and the speed of events are serious challenges to decision-making. On balance, Ai Group urges you to declare 2018 as a shortfall year and proceed with decisions on quantitative limits for Eastern Australian LNG exporters. The quantitative limits should be reduced by the amount of the calculated shortfall for any exporters that are not net contributors to the domestic market, as laid out in the ADGSM Guideline.

As noted at the outset, you have considerable leeway under the Regulations to amend such a decision subsequently if you decide circumstances warrant the tightening, loosening or removal of export controls. However you have no power to impose export controls on LNG in 2018 unless you make a shortfall determination by 1 November 2017. A timely shortfall declaration will maintain pressure on the gas industry to keep taking steps to rebalance the market, and maintain your freedom to respond to developments. If recent and further steps by Santos and other suppliers and exporters prove adequate to restore the market to balance, the ADGSM will have met the Government's objectives and Australia's needs, and can be relaxed.

Should you wish to discuss the matters raised in this letter, please contact our adviser Tennant Reed on 03 9867 0145 or tennant.reed@aigroup.com.au.

Sincerely yours,

A handwritten signature in blue ink that reads 'Innes Willox'.

Innes Willox
Chief Executive