



Oakley Greenwood

The contradiction of abundant east coast gas resources and an east coast gas supply crisis

AIE Newcastle
4 May 2017

Jim Snow, Executive Director, and
Adjunct Professor UQ Energy Initiative

An east coast gas supply crisis - the pain

Gas price hikes risk jobs in food sector

The Australian 7 Nov 2016

Gas price hikes force metal processors to the brink

AFR 7 Mar 2017

The great gas robbery is happening before our eyes. But what can we do about it?

ABC 17 Mar 2017

BlueScope warns of 'energy catastrophe' if new gas power not built

ABC 20 Feb 2017

Turnbull to act on power prices, shortage

The Australian 9 March 2017

Gas crisis? We were told it was coming five years ago

The Australian 28 April 2017

Cargill's Penne Kehl: gas, power concerns hurt growth plans

The Australian 10 March 2017

An east coast gas supply crisis - solutions

States have locked away 200 years of gas supply, say business leaders

The Australian 28 April 2017

States deserve business and public wrath over gas

The Australian 28 April 2017

Australia curbs LNG exports amid domestic gas shortage

One of world's top sources of the fuel introduces controls to keep lights on

Financial Times 27 April 2017

Australia's LNG export control plans raise alarms in Queensland

Platts 27 April 2017

Woodside in talks to solve east coast gas shortage, 'pipeline a consideration'

ABC 20 April 2017

LNG shipping cheaper than gas pipeline

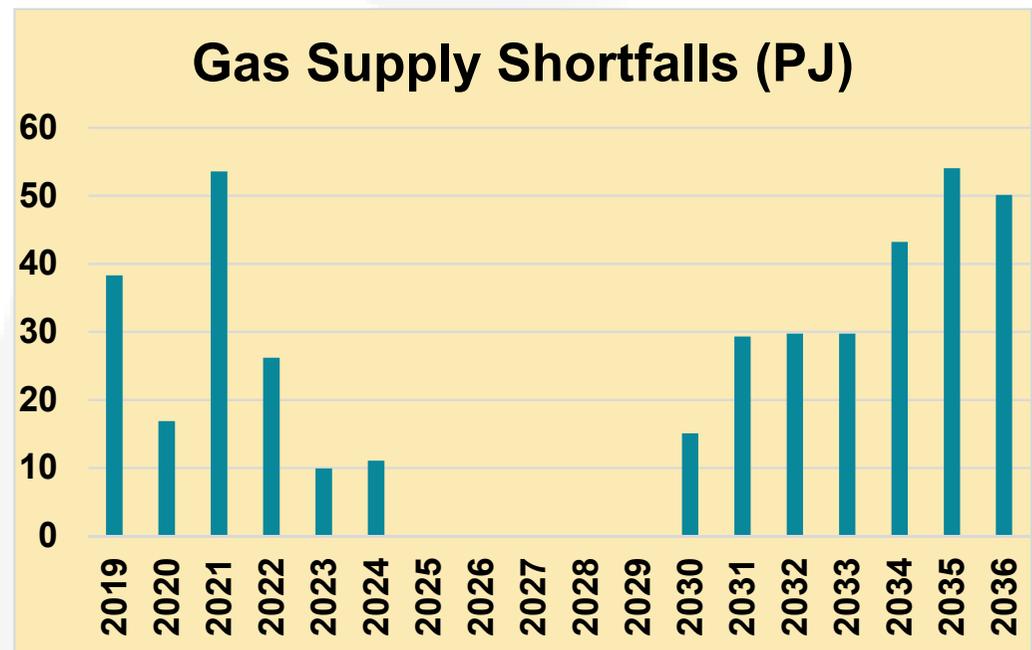
The Australian 25 April 2017

Shell's \$390m asset write-off casts doubt on CSG reserves

The Australian 2 May 2017

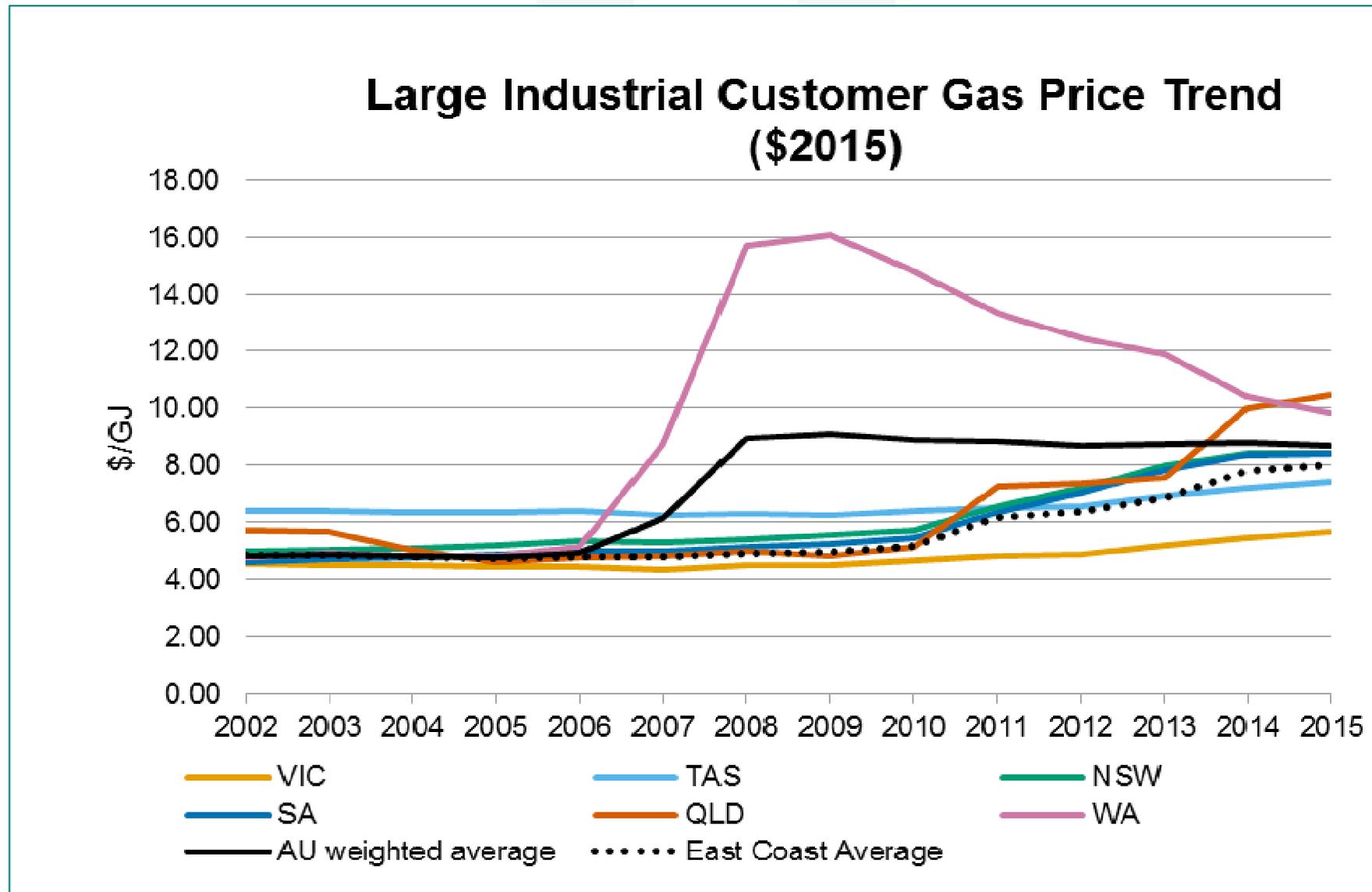
A forecast east coast gas shortage – impacting electricity

- Gas is used in electricity generation across eastern Australia in particular to meet peak demand when load increases due to hot spells driving up air conditioning use
- The volume of gas being used in generation has dropped dramatically. Gas contracted by some power stations in Queensland has been sold for export as LNG
- The Australian Energy Market Operator (AEMO) released in March forecasts of a potential shortfall in gas supply to meet electricity generation requirements from within two years until the middle of the next decade
- AEMO is planning in May to release revised forecasts based on updated supply information from producers

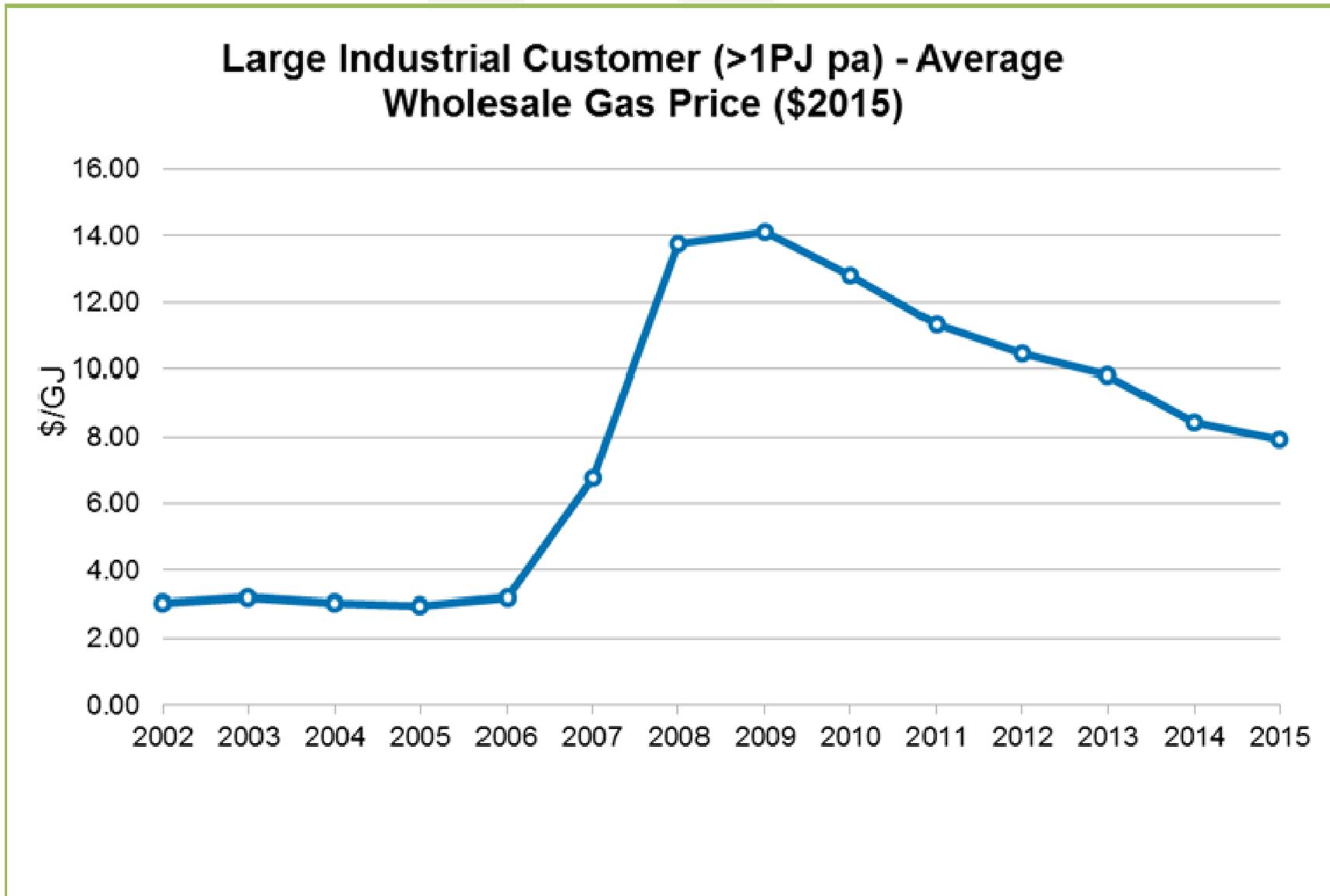


Source: AEMO Gas Statement of Opportunity, 2017

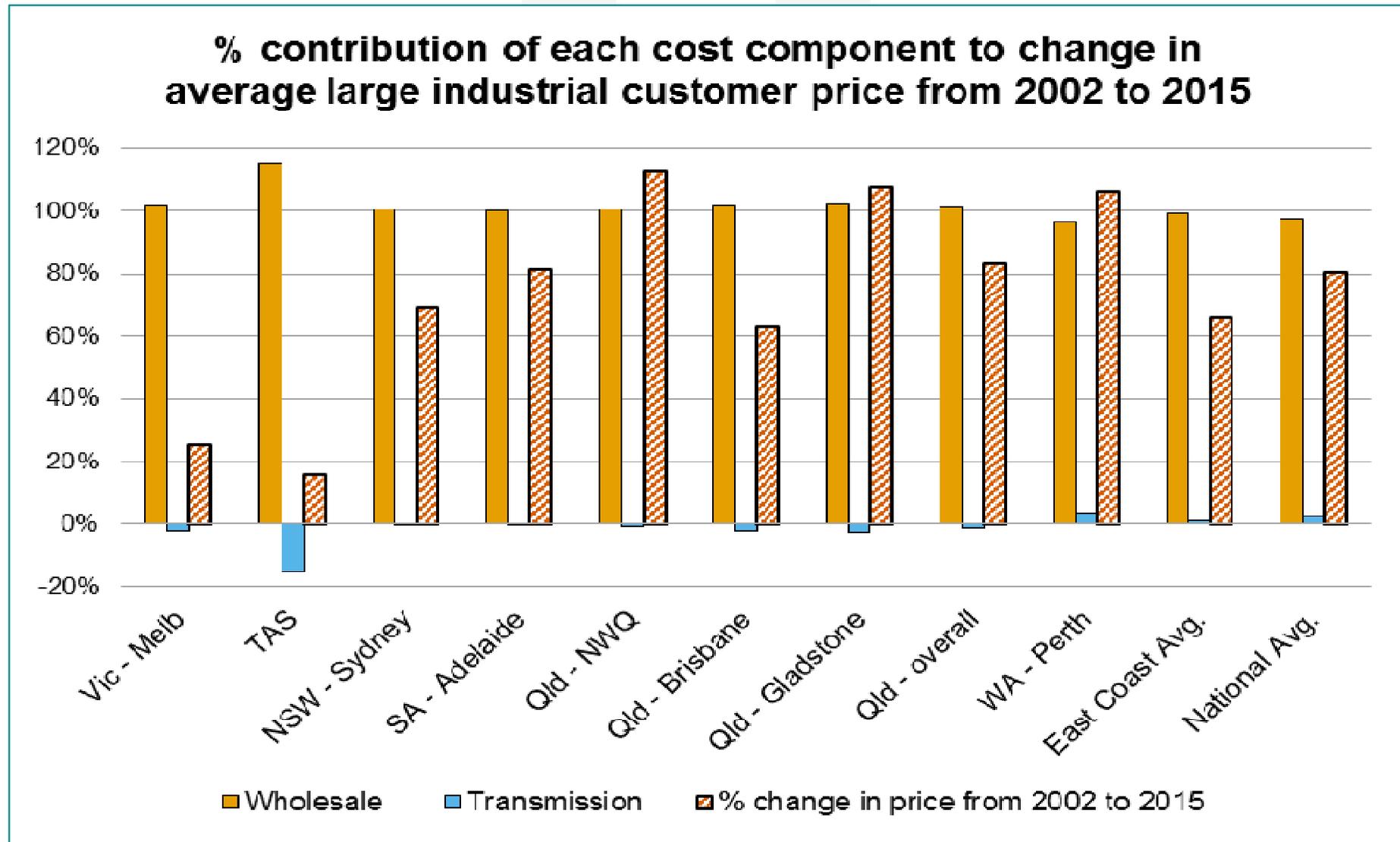
Gas prices have been rising across Australia



Price Bubbles – simple supply and demand



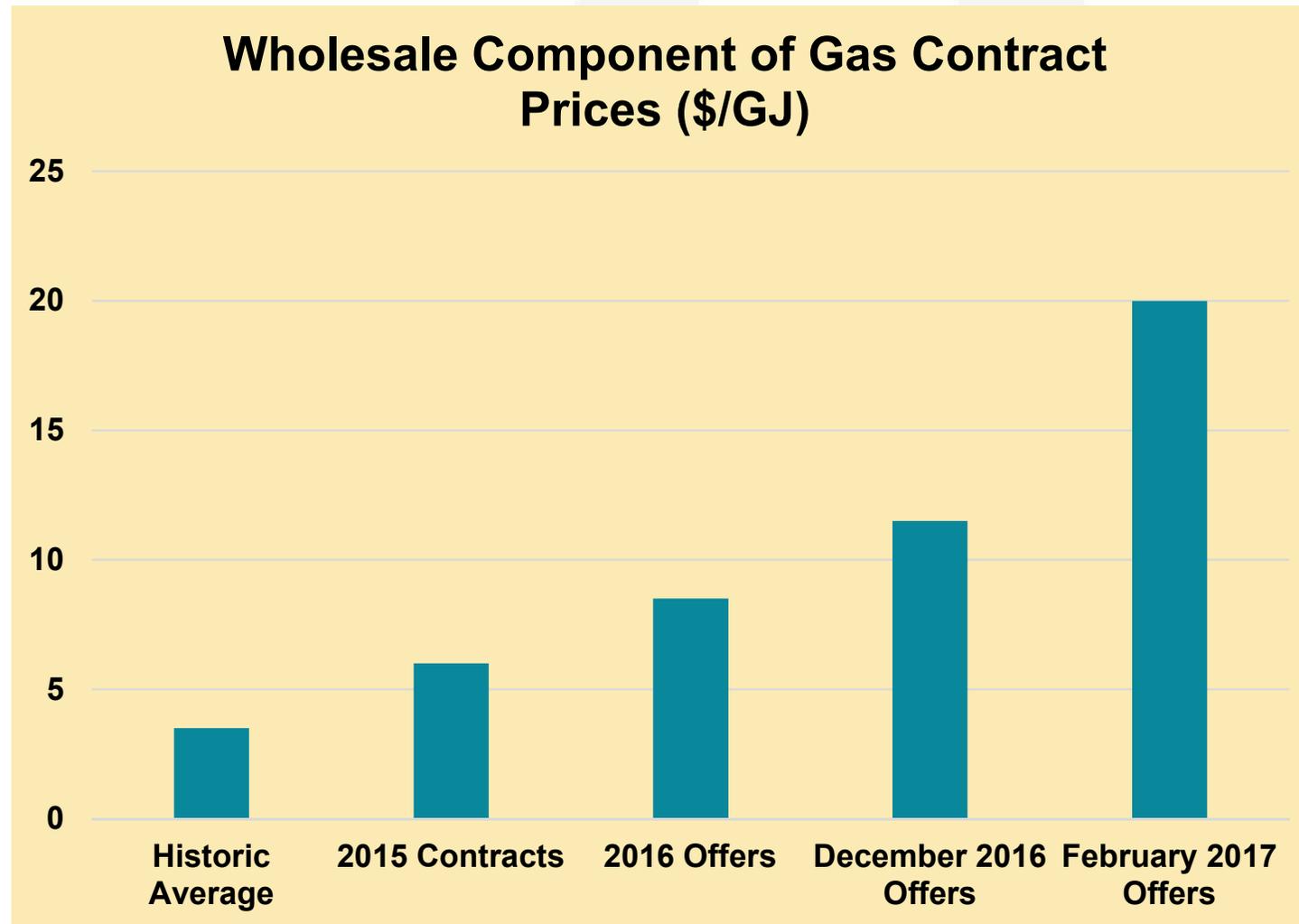
Component contribution to cost increases 2002 to 2015



Transmission re-regulation focus?

Gas Prices: What gas users are saying

- The Australian Industry Group surveyed 286 medium sized business in late 2016 to obtain anecdotal feedback on gas and electricity price increases

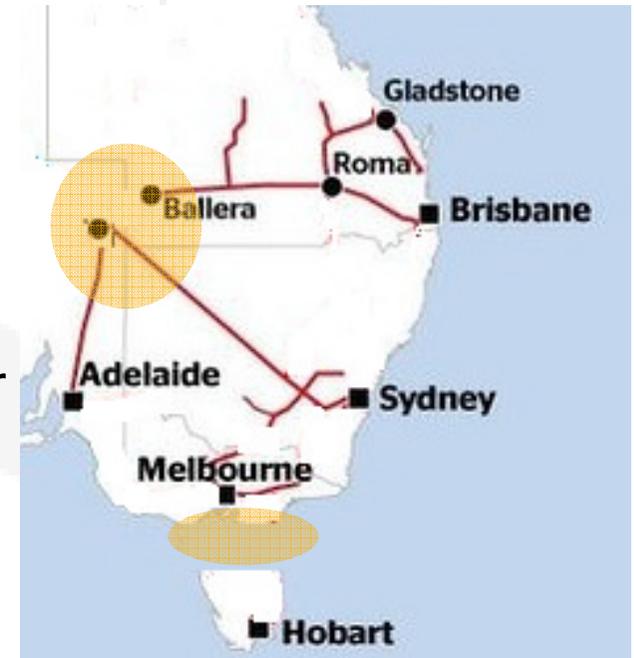


Source: Energy Shock: No Power, No Gas, No Future, AIG, February 2017

The origins of the gas supply crisis

In the 90's demand largely met from two basins

- Historically wholesale gas prices on the east coast were around \$3/GJ
- Supply was dominated by the Cooper Basin and Bass Strait
- In 1990 Tri-Star Petroleum a Texas based gas explorer acquired tenements in Queensland's Surat Basin
- By the mid to late 90s Tri-Star was producing coal seam gas



- In the late 1990s Chevron and Oil Search proposed the PNG Gas Project which would deliver gas to Brisbane via a pipeline
- Chevron and Oil Search lobbied the QLD Government to legislate for a proportion of electricity sold by retailers to be generated from gas

Source: Offshore Magazine Jan 2000

The emergence of coal seam gas

- In response to this the Gas Electricity Certificate Scheme was implemented and initially required that 13% of electricity sold in QLD be generated from gas
- Generating 13% of electricity from gas was not enough to support the PNG Gas Project, however it provided support for the fledgling coal seam gas industry
- Early development of coal seam gas fields was undertaken by Santos, Origin Energy, which each acquired interests in the Tri-Star tenements, and two start-ups, Queensland Gas Company and Arrow Energy
- Early sales of gas by these companies were to power stations and the Incitec fertiliser plant in Brisbane



Linking eastern Australia into the global gas supply chain

- As the fields were developed it became apparent that the size of the Queensland resource was greater than that required by the domestic market and this led to interest in the development of LNG projects
- The potential for a new gas province in Australia led to interest from international oil and gas companies which acquired the smaller gas producers or partnered with Santos and Origin Energy
- These companies brought with them experience in developing LNG plants, a presence in the global LNG supply chain and the capital to make multi-billion dollar investments.



Curtis Island LNG plants near Gladstone

- The three LNG projects at Curtis Island and associated field developments were sanctioned in late 2010 early 2011 when oil prices were between \$US80 and \$US100 per barrel



Source: Google

Gas Reservation in Queensland - a missed opportunity ?

- In 2009 the Queensland Government announced a range of initiatives to promote competition and transparency in the gas market in the context of the then emerging LNG industry.
- These included the Prospective Gas Production Land Reserve (PGPLR) policy which was intended to secure supplies of gas for large industrial users and electricity generators in an environment where there was growing international demand for gas.
- The PGPLR provides the ability to condition future exploration tenure releases to ensure that any gas produced from a subsequent petroleum lease over the area can only be consumed within the Australian gas market
- The QLD Gas Commissioner was appointed in 2010 to consider matters affecting the gas market including “the potential reservation of prospective gas resources for domestic markets”

Gas Reservation in Queensland - a missed opportunity ?

- The Gas Security Amendment Act 2011 was passed in May 2011 to enable the implementation of the PGPLR.
- The QLD Gas Commissioner's 2011 Gas Market Review which was released after 5 of 6 Curtis Island Trains had achieved FID concluded that “**unless domestic appraisal plans are in place or shortly put in place, available gas reserves may not be sufficient to underpin execution of new domestic GSAs.**”
- The Queensland Government's response to the Gas Market Review findings concerning domestic supply was that “**intervention in the market to secure domestic gas supply through the development of a Prospective Gas Production Land Reserve will not be implemented at this time**”.
- They were not alone - federal departments, regulators, economists, productivity reviews, politicians, investors, gas industry - welcome to GE modelling
- The domestic gas users had a very different view and their modelling showed more or less what is of concern now is happening.....EUAA/Kinetics Economics - **National Economic Benefits Test**, AiG Gas market transformations - economic consequences for the manufacturing sector July 2014

Deloitte Access Economics Analysis?

For APPEA – October 2013

The impact of a DGR is to – in effect – place a simultaneous tax on domestic gas production and subsidy on domestic gas consumption. Like all taxes and subsidies, the DGR distorts economic decisions and generates an unequivocal economic loss – one which compounds over time as future investment decisions are affected.

Indeed, the analysis presented in this report demonstrates that the introduction of a DGR on the east coast of Australia would come at a significant cost to the nation's economic welfare.

Against a scenario where production, investment and export decisions are not impeded, the introduction of a DGR on the east coast is projected to cost the Australian economy \$6 billion in forgone GDP at 2025.

This should not be surprising. Deferring resources from their highest and best use in the absence of market failure is seldom – if ever – welfare enhancing. A compelling economic case for providing support to Australia's manufacturing sector is difficult to mount under any circumstances; let alone when this support comes at the direct expense of export income in other sectors.

For AiG et al – July 2014

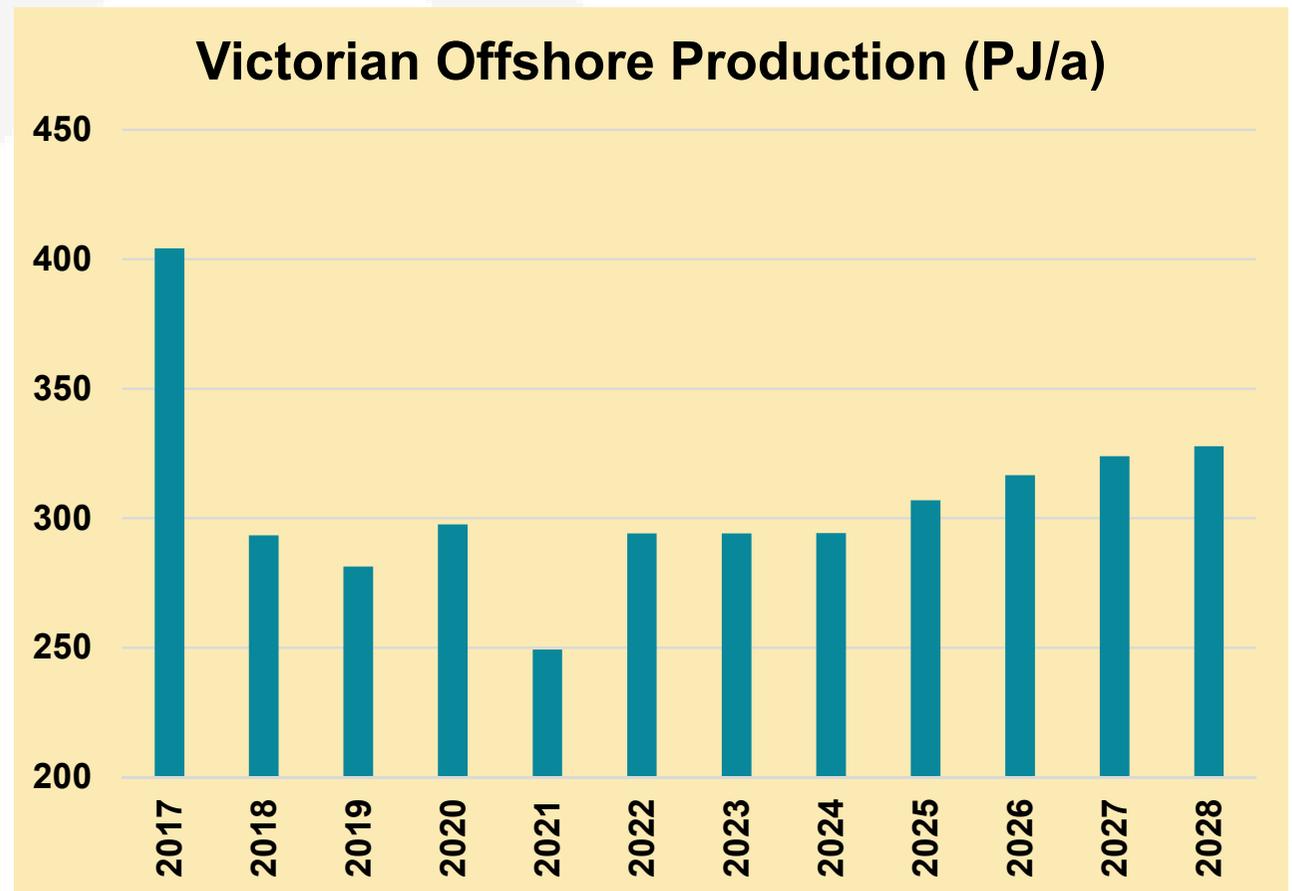
Australia's gas markets on the East and West Coasts are undergoing unprecedented change. On the East Coast transformations are being driven by the development of new LNG export facilities in Queensland, which will link the East Coast gas markets to international gas prices for the first time in history. While exporting Australia's previously untapped unconventional coal seam gas reserves is expected to provide a boost to Australia's GDP, realising these benefits will also entail painful consequences. Both costs and benefits are very unevenly spread across sectors and regions.

The manufacturing sector is projected to experience the greatest reduction in industry output. This is primarily due to its significant gas usage and high trade exposure, which largely limits the sector's ability to pass on higher gas input costs. In 2021, the final year modelled, manufacturing output is projected to be 3.6% (IES) to 4.4% (SKM) lower than in the baseline scenario. The net present value of the cumulative reduction in manufacturing output from 2014 to 2022 is around \$88 billion under the IES gas price projections, and \$120 billion under SKM gas price projections.

New South Wales and Victoria see serious declines in manufacturing (accumulating to around \$24 billion and \$23 billion respectively) under the more realistic SKM gas price forecasts.

Eastern Australia's gas reserves

- 85% of eastern Australia's 2P - proven and probable gas reserves - are in Queensland, 3% are in the Cooper Basin and 12% in offshore Victoria
- Offshore Victoria reserves have been in decline, despite some new fields being developed production is about to undergo a step change with production forecast to drop by 25% in 2018
- The Victorian Government has a moratorium in place preventing onshore gas development



Source: AEMO Gas Statement of Opportunity, 2017

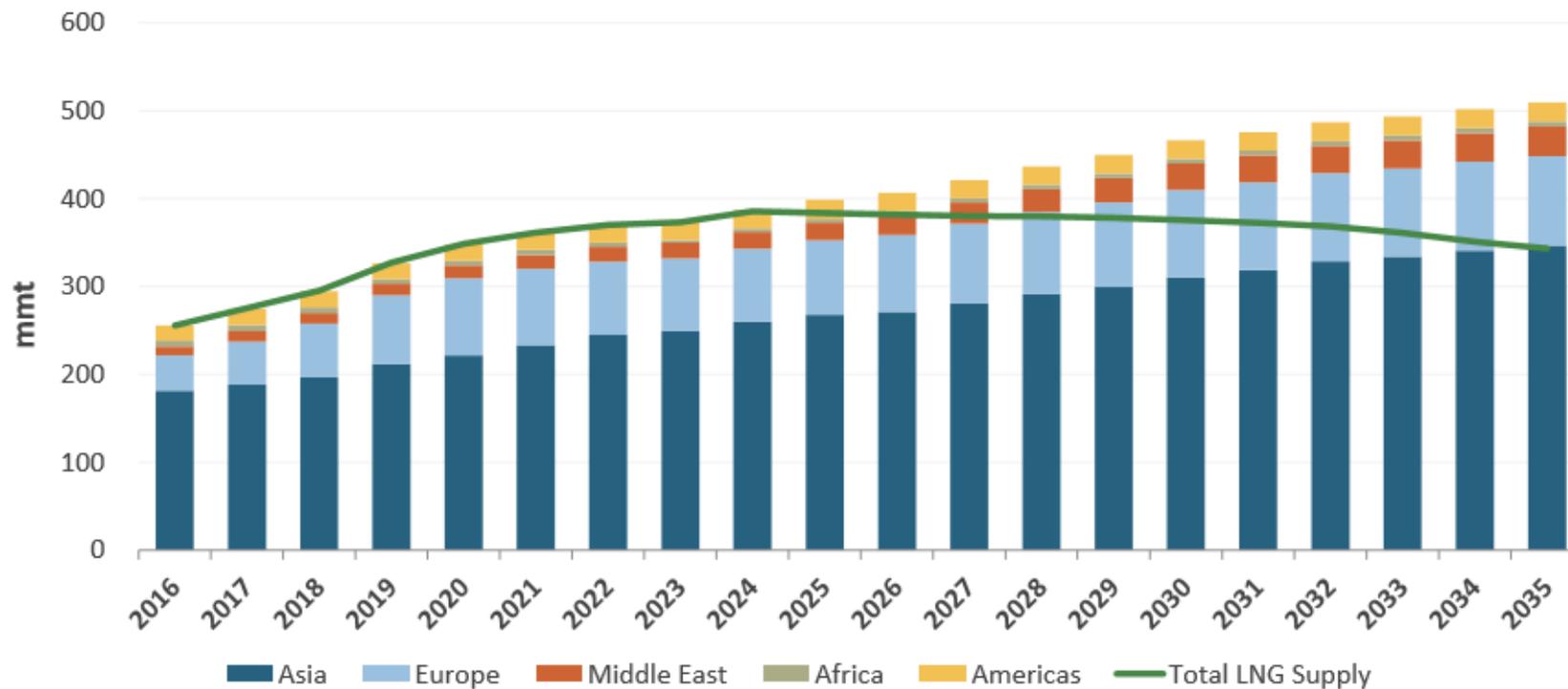
Eastern Australia's gas reserves

- The Santos operated LNG project on Curtis Island does not have enough production from its associated coal seam gas fields to meet its LNG export commitments
- Gas from offshore Victoria, a basin which historically the only demand for which has been the domestic market, is being piped north to the Santos operated LNG project
- Gas produced by Santos and Beach from the Cooper Basin for which historically the only demand has been the domestic market, is now being piped north to the Santos operated LNG plant
- The “smoking gun” - in October 2010 Santos sold 750 PJ of 2P reserves to GLNG oil price linked - the last remaining tranche of conventional gas that would have supported competition in the NSW, Vic, SA and Tas domestic markets - it was a game changer for these markets, and the Cooper Basin production was in decline
- AGL signed a contract to supply gas from 2017 for 11 years to the Santos operated LNG plant
- Despite there being significant un-developed gas reserves in NSW, most gas consumed in NSW is imported from other states

Global and Asian LNG Demand and Eastern Australia's role in meeting that demand

Global LNG markets growing - currently excess capacity

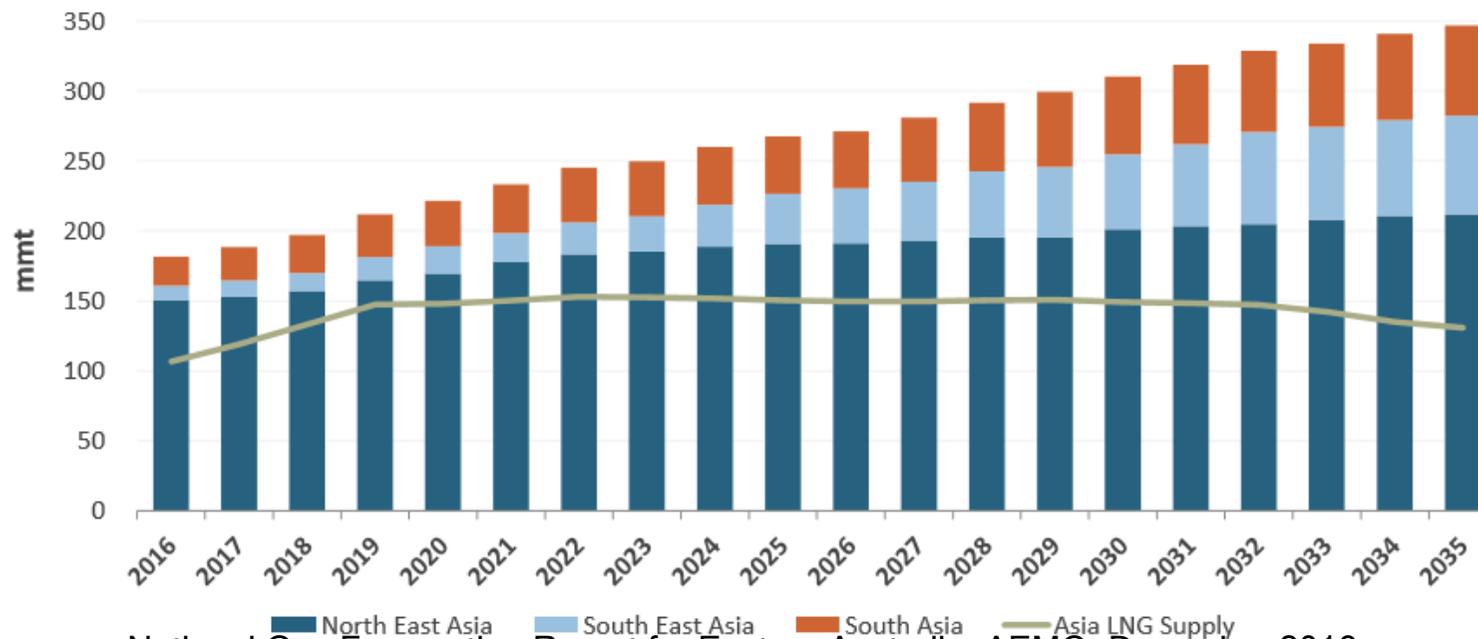
- LNG demand is expected to increase by 50% from 2014 to 2020
- There is sufficient liquefaction capacity operating or under construction to meet demand growth to 2020
- A gap between supply and demand emerges early to middle of the next decade



Source: National Gas Forecasting Report for Eastern Australia, AEMO, Dec 2016

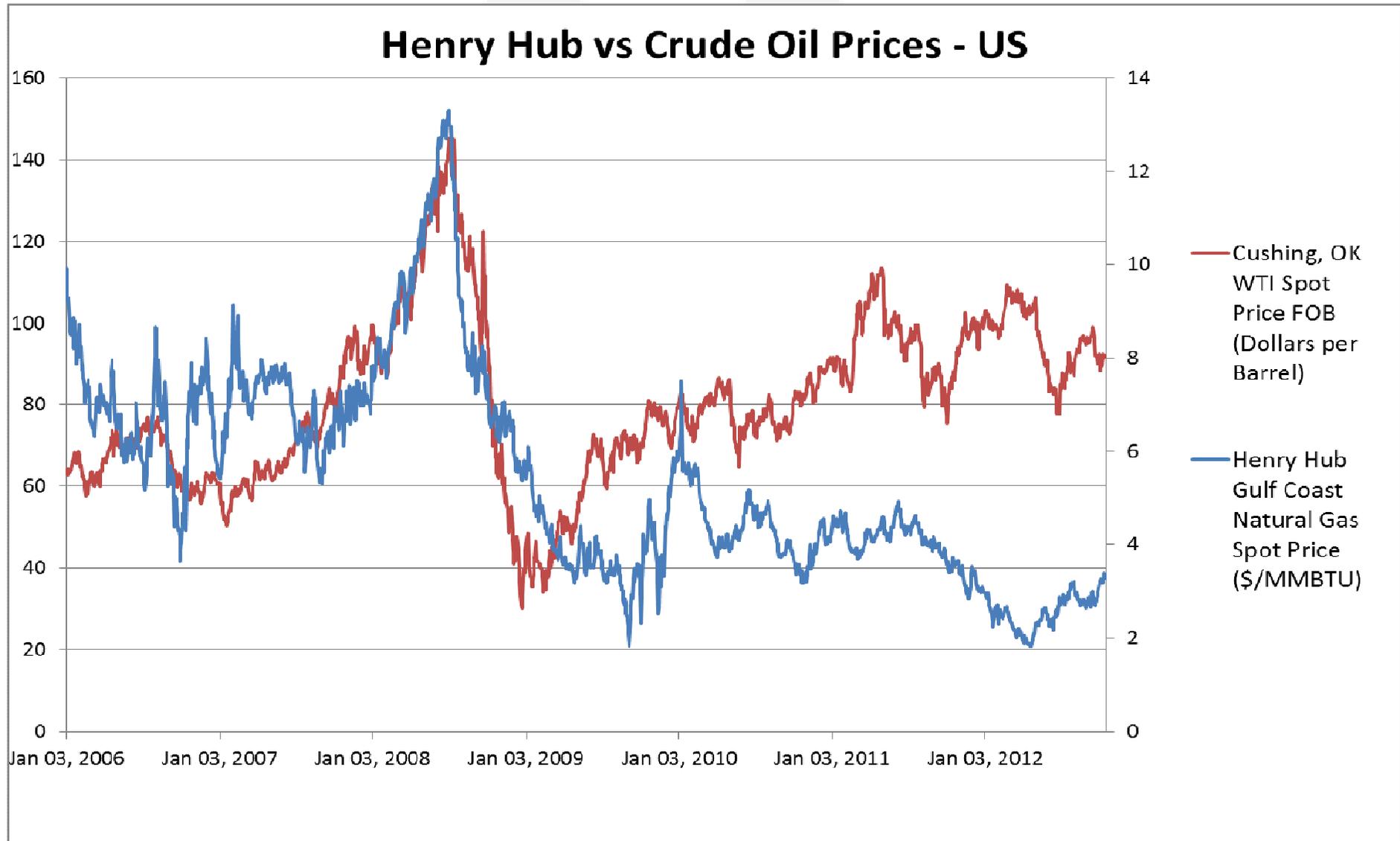
Asian LNG Markets continue to grow

- Shell predicting that Southeast Asia, where Malaysia and Indonesia are among the major LNG exporters in the world, will by 2035 be net importers
- The rise in demand is driven by economic growth in the region and declining domestic gas supplies in countries such as Thailand
- 80 million tonnes per annum of contracts expire in next decade with scope for additional trains to come on line in Asia from the middle of the next decade



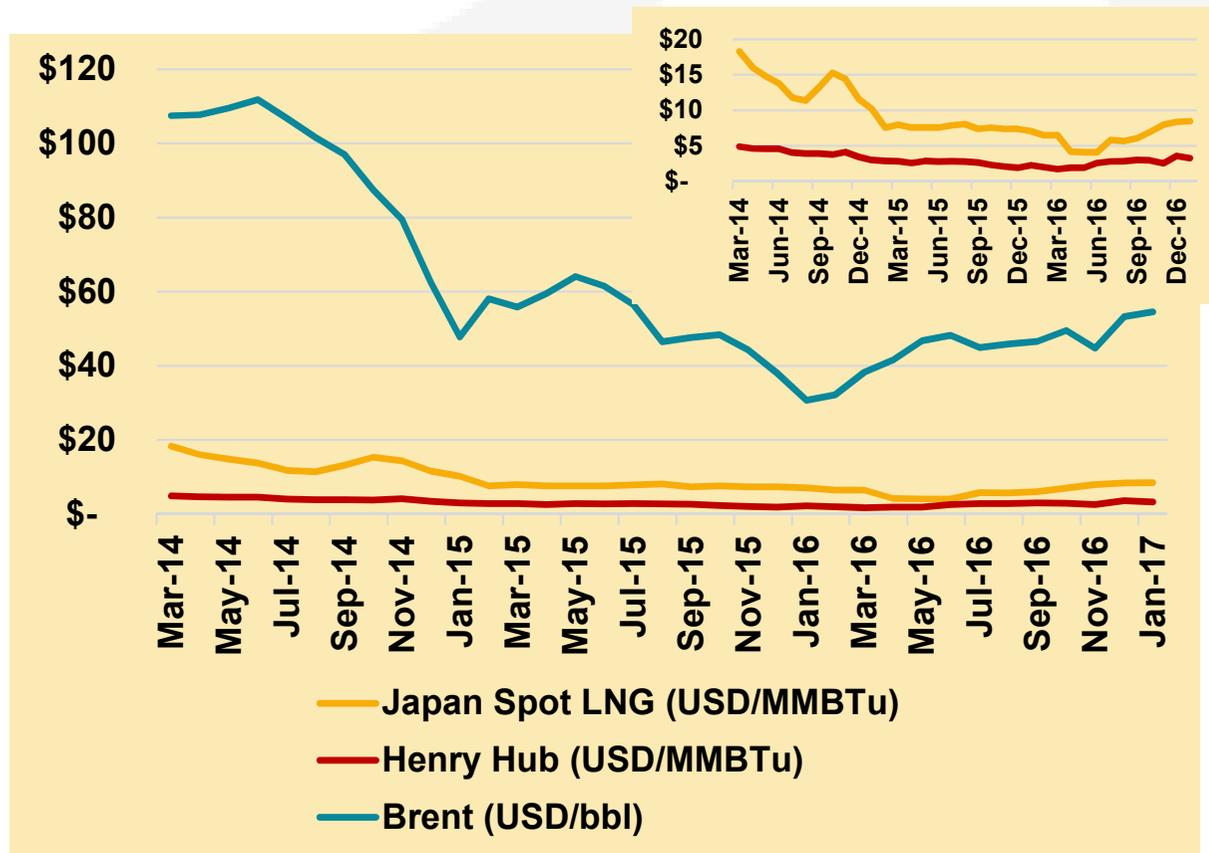
Sources: National Gas Forecasting Report for Eastern Australia, AEMO, December 2016 and Shell LNG Outlook 2017

Henry Hub prices stopped oil tracking in 2009 - shale gas



Curtis Island production starts just after oil prices fall

- The first of the three Curtis Island LNG plants began commercial operation in early 2015
- However by then the global oil price and the price of LNG delivered to Japan had fallen more than 50% compared to only a few years earlier



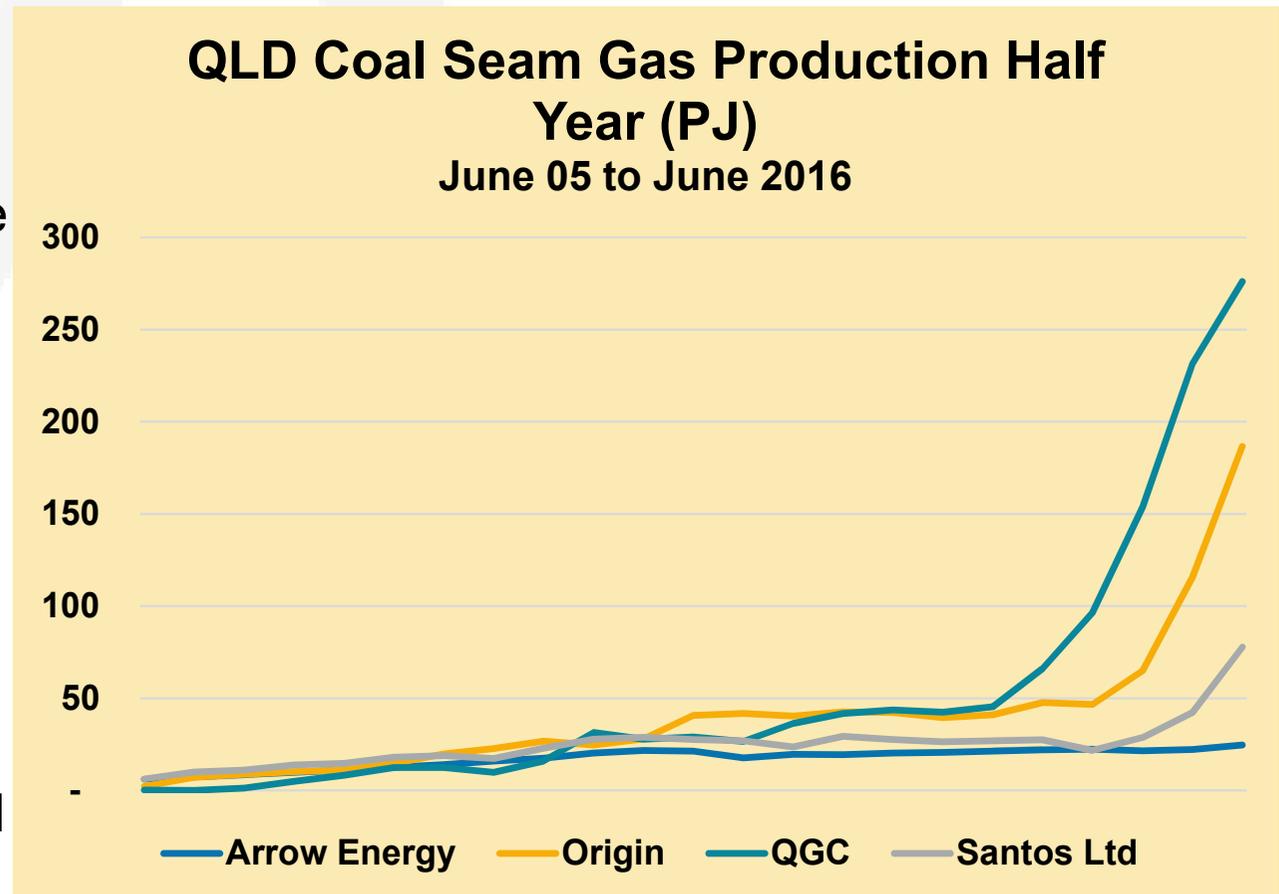
- The entry into the market of LNG from the Curtis Island projects coincided with new gas supply in the US driven by the shale boom
- In 2016 this new LNG supply was absorbed by increased demand from China and India

Source: Ministry of Economy, Trade and Industry

Do we have sufficient gas to honour LNG export commitments and meet the needs of the domestic market?

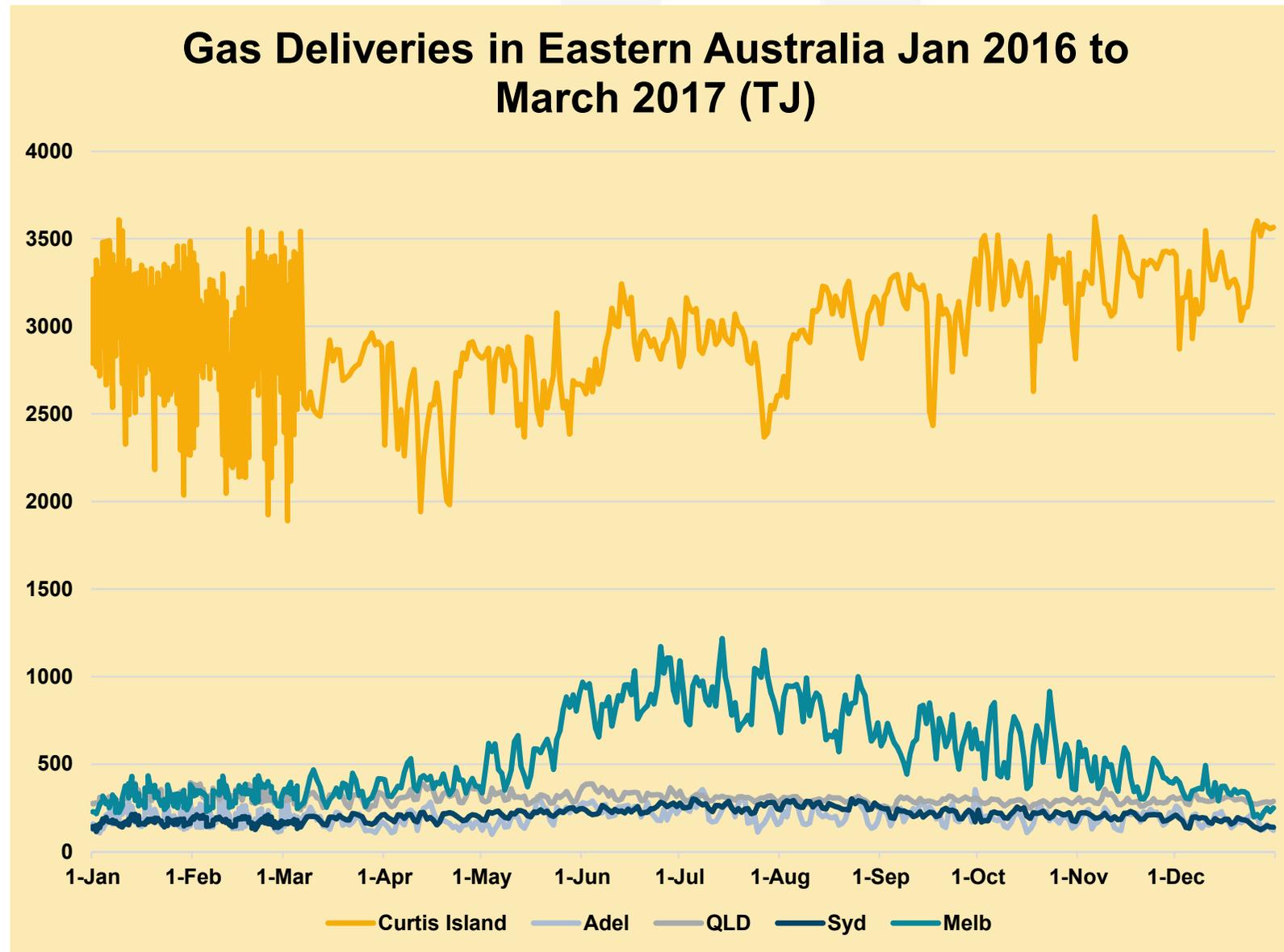
Gearing up for east coast LNG exports

- The Curtis Island LNG projects made multi-billion dollar investments in upstream assets to prepare for the start of LNG exports
- Production increased rapidly to meet export commitments
- However production from the Santos operated fields is not sufficient to supply GLNG the Santos operated LNG plant
- In the March Quarter GLNG purchased 59% of its gas from third parties rather than its own fields



Source: Petroleum and gas production and reserve statistics, Natural Resources and Mines, Queensland Government

Demand for East Coast LNG and Domestic Demand

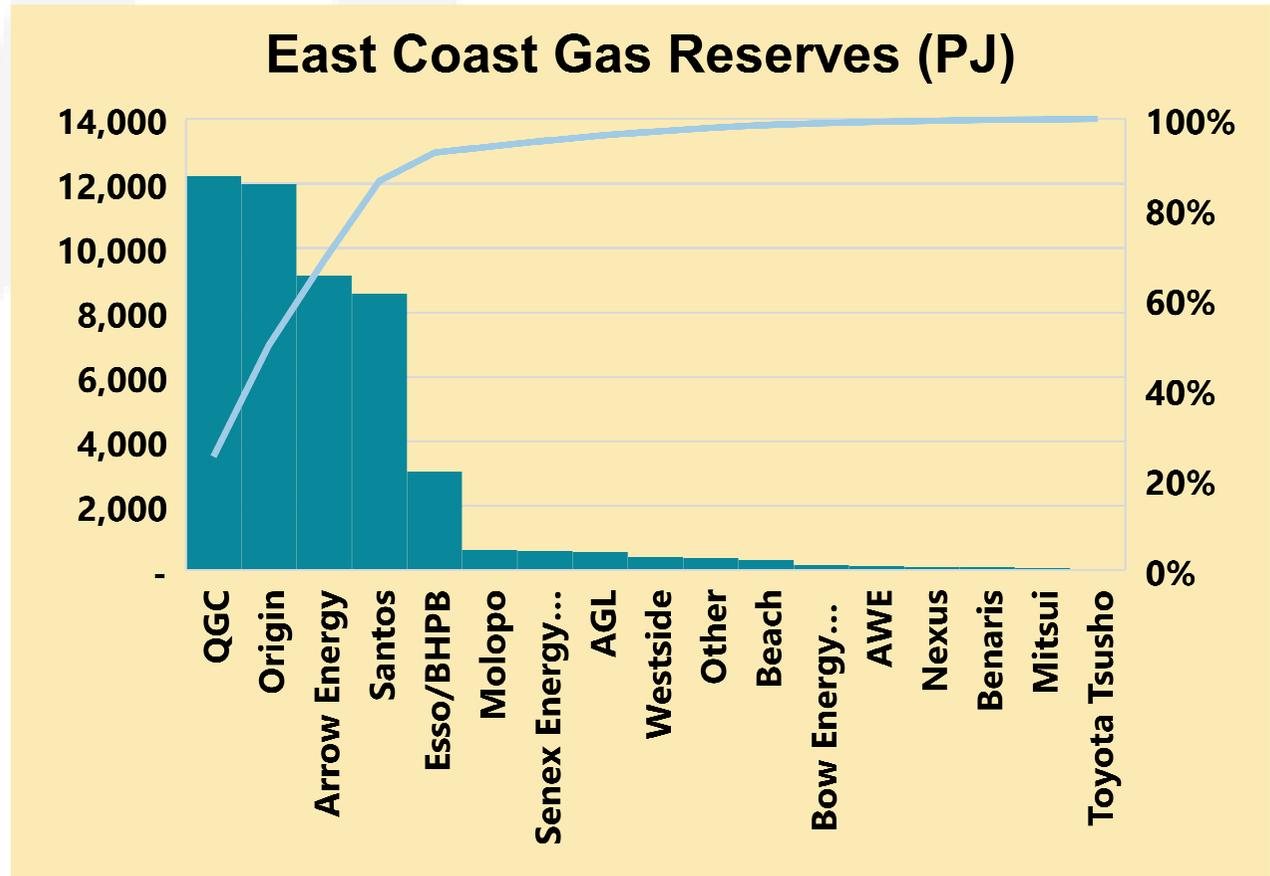


LNG - 3.5 PJ/day...

Source: AEMO Gas Bulletin Board Excludes deliveries to Townsville

Major producers

- Approximately 95% of east coast gas reserves are owned by 5 joint ventures
- QGC, Santos and Origin Energy are operators of upstream joint ventures in QLD and these supply gas to their associated LNG projects
- Esso/BHP is selling gas to the Santos operated LNG project
- Arrow Energy is the only one of the joint ventures that is not supplying an LNG project, although it is 50% owned by Shell which has a majority interest in the QGC LNG project



Source: Petroleum and gas production and reserve statistics, Natural Resources and Mines, Queensland Government, - reserves as at June 2016 and State of the Energy Market 2015, AER, February 2016 - reserves as at May 2015

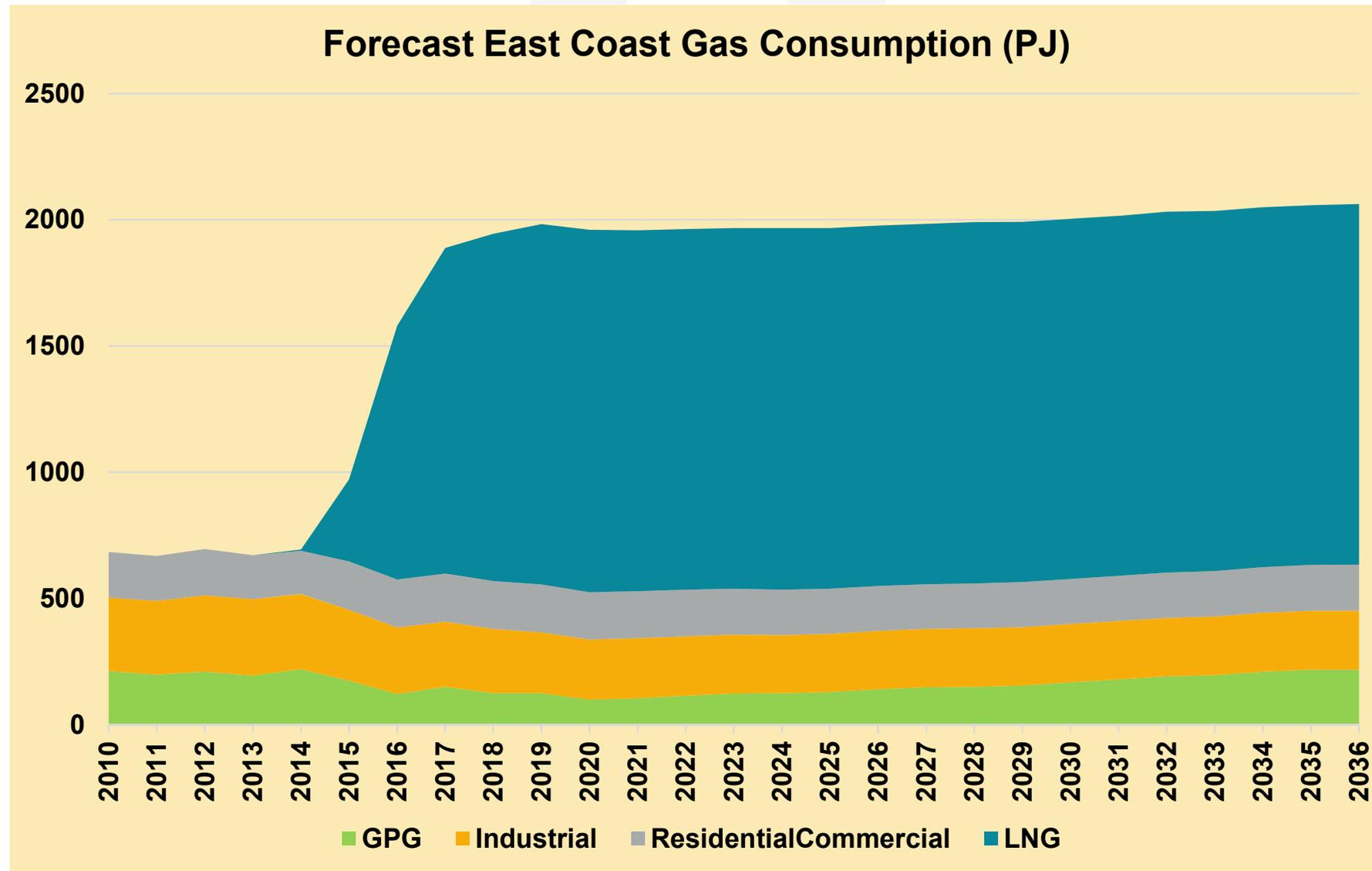
Shell reserves

- Shell owns 50% of Arrow Energy and 75% of the QGC reserves
- Shell is strongly placed to increase supply to the domestic market without compromising export commitments
- Shell announced in March the development of the \$500 million Ruby Jo project to supply QCLNG
- Shell wrote off \$390 million in upstream assets in 2016 associated with the QCLNG project “as technical feasibility and commercial viability of extracting oil and gas resources were not demonstrable”.
- This write downs highlights concerns about the ability of the Queensland coal seam gas fields to produce sufficient gas for the three Gladstone LNG projects

	Reserves (PJ)
Bowen Basin	3,355
Surat Basin	5,779
Total	9,134

Source: Natural Resources and Mines, Queensland Government, Petroleum and gas production and reserve statistics - reserves as at June 2016

East coast gas demand



Source: National Gas Forecasting Report for Eastern Australia, AEMO, Dec 2016

Eastern Australian gas resources (PJ)

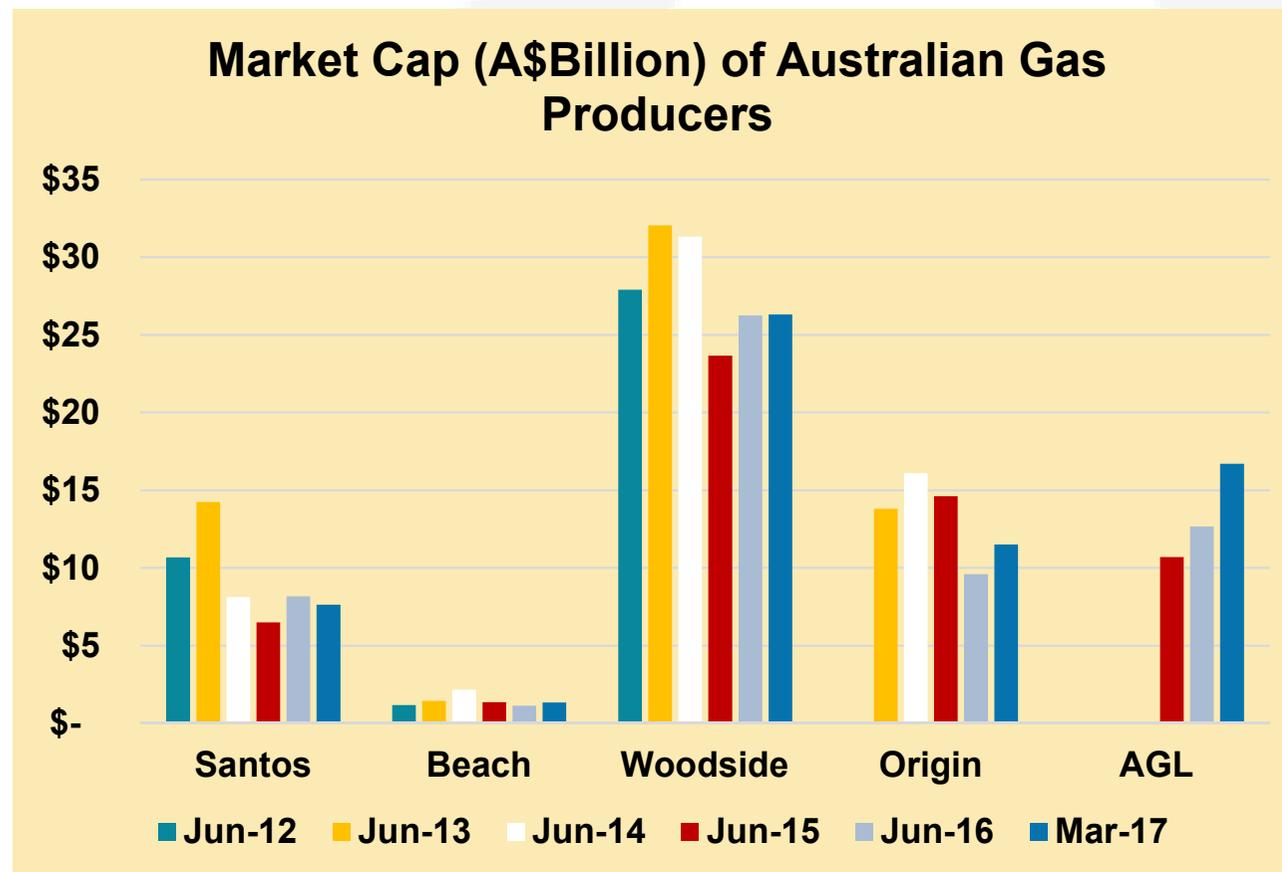
- There are significant resources in eastern Australia and the Northern Territory - proven and contingent
- However some of these resources are frontier resources and could require 10 years for exploration and development before production could begin
- A planned pipeline to connect the Northern Territory to the east coast gas grid at Mt Isa has been delayed, possibly by a year

Conventional Gas		CSG	
Adavale	22	Bowen/Surat	62,734
Amadeus	381	Clarence/Moreton	5,623
Bass/Otway	1,691	Gloucester	2,762
Bonaparte	23,220	Gunnedah	3,653
Bowen/Surat	119	Sydney	1,700
Clarence/Moreton	80	Cooper	445
Cooper/Eromanga	3,546	Galilee	2,533
Gippsland	8,533		
Total	37,592		79,451

Source: Geosciences Australia 2016

Factors effecting exploration and production

- The market capitalisation of companies with significant gas positions have fallen with the drop in oil prices and issues with LNG financing
- The drop in market capitalisation of gas companies has led to a reduction in expenditure as they reduce costs and sell assets to shore up their balance sheets



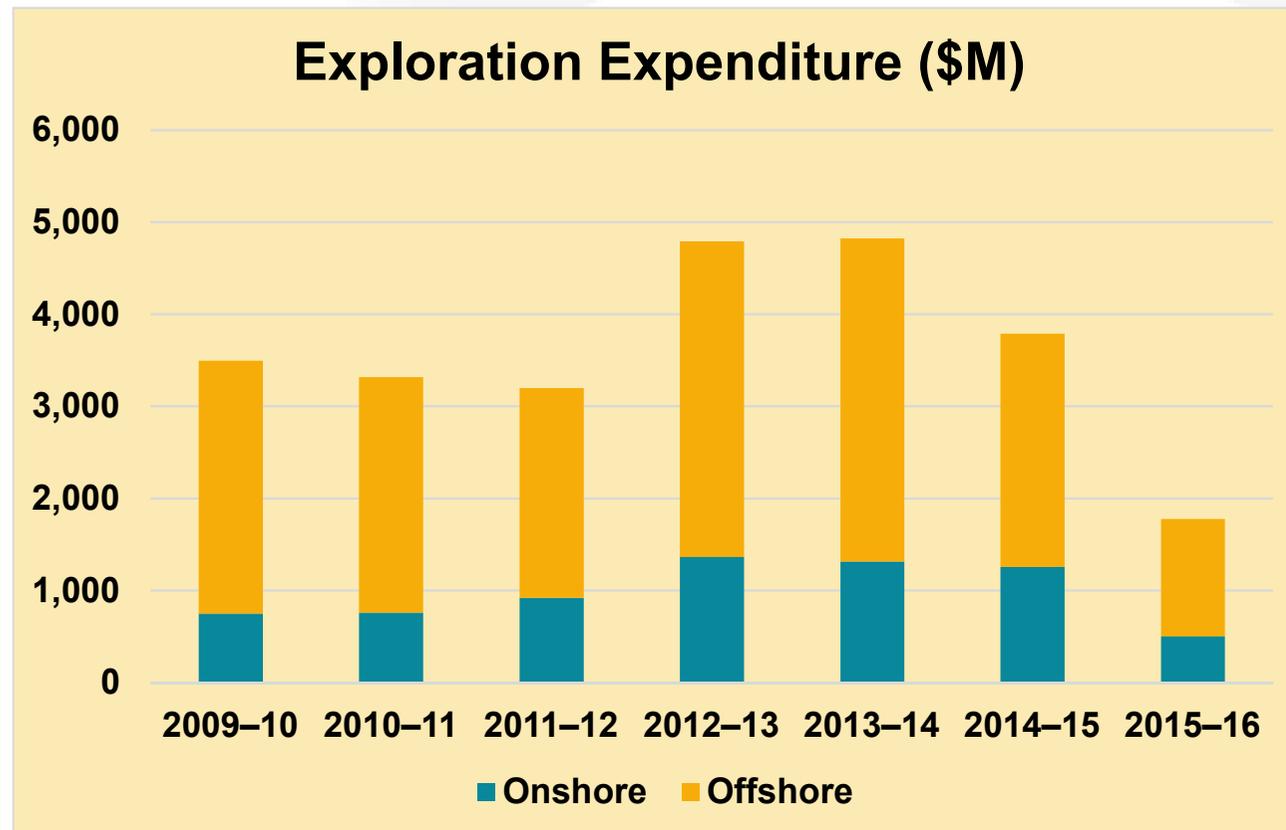
Santos has halved again since March 2017...share price around \$3.80 and reported to be a take out target

Origin has dropped 40% as well

Sources: Company Reports and ASX

Australian exploration activity

- Exploration expenditure in Australia has collapsed as producers have become capital constrained
- It will take time to increase exploration expenditure and this with lead times of over 5 years to discover and develop new fields makes it unlikely that new resources will come into production before early next decade



Source: Resources and Energy Qtrly, Office of the Chief Economist, December 2016

Undeveloped fields in NSW not available to the market

- NSW largely relies on imports of gas from other states, initially from the Cooper Basin in South Australia and QLD, and now from offshore Victorian fields
- The only producing gas field in NSW is due to cease production in 2023
- Gas fields were being developed until various concerns forced the NSW Government to halt development and develop/introduce much stricter measures for any coal seam gas production, as well as buy back some licences
- Santos and AGL had made significant investments proving up gas resources in NSW, however Santos has written down its investment in its Gunnedah basin assets by \$808 million in 2014 and \$588 million in 2015 and AGL wrote down its gas investments in NSW by \$198 million in 2016
- Geosciences Australia estimates that the gas resource in the Gloucester and Gunnedah basins is 6,400 PJ
- In February 2017 Santos submitted an EIS for its NSW Narrabri Gas Project to the NSW EPA - Santos expects that the Narrabri Gas Project could supply half of NSW's gas requirements and could be producing gas by 2019/2020

What are the prospects for LNG imports to meet seasonal demand and any supply shortfall brought about by production moratoriums?

LNG imports - increasing flexibility

- In late 2016 AGL announced that it would undertake a study into the development of an LNG import terminal in south eastern Australia
- In this section we examine how realistic it is for LNG imports to form part of the solution for Eastern Australia's gas supply crisis
- Floating Storage Regasification Units (FSRUs) increasingly are being used as an alternative to onshore regasification facilities - FSRUs account for 10% of global regasification capacity

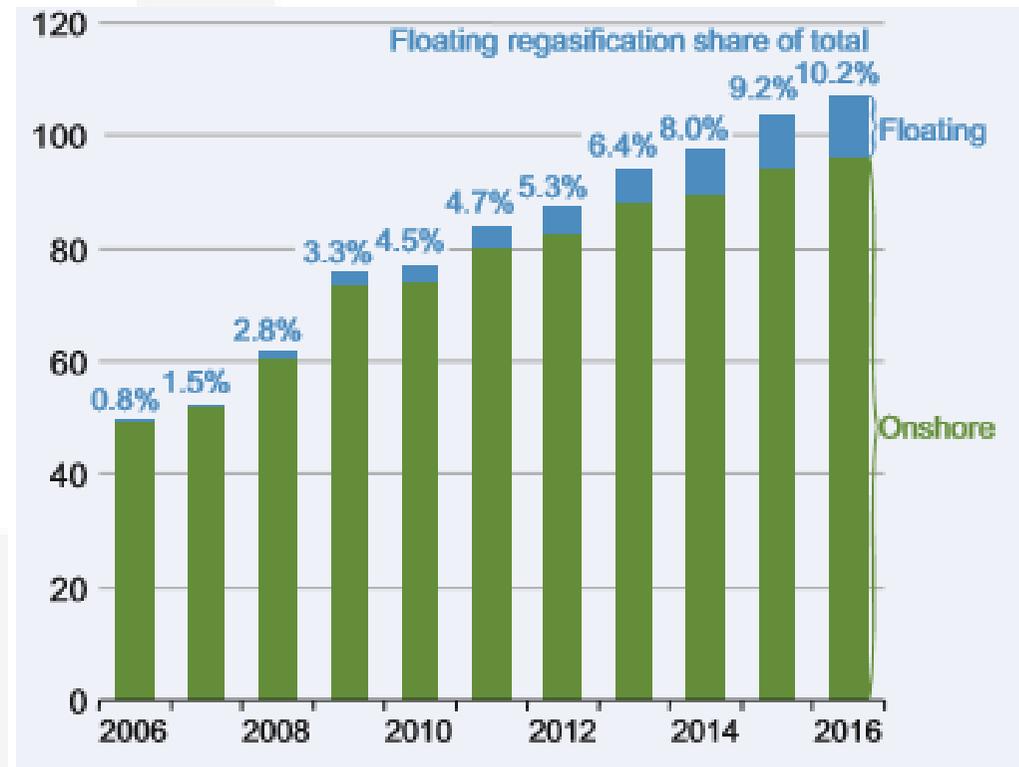


Photo Credit: Hoegh LNG

LNG imports - increasing flexibility

- Regasification is the process of converting LNG into natural gas
- From 2008 to 2016, 19 countries became LNG importers for the first time
- A large proportion of new importing countries have developed FSRUs to meet seasonal peak demand by buying LNG on spot markets
- There are now 21 FSRUs in operation with six more under construction
- FSRU share of regasification capacity has doubled in last 5 years

Global Regasification Capacity (billion bcf per day)



Source: International Energy Outlook 2016, US Energy Information Administration

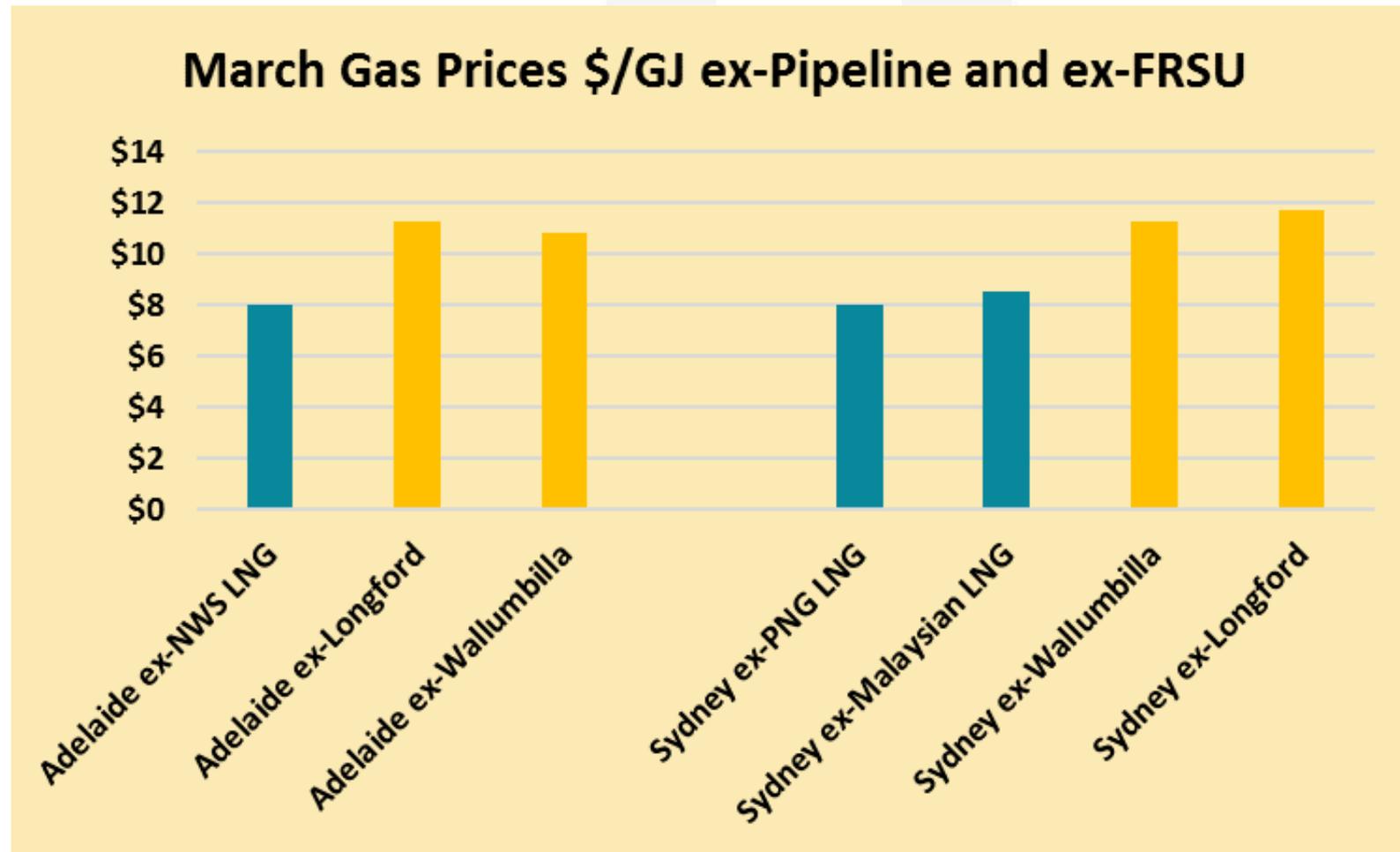
LNG Imports versus Domestic Supply

- The average price of LNG delivered to Japan in March 2017 was US\$7.30/GJ, down from US\$8.35/GJ in the previous month
- The average price of gas in Victoria on the Declared Wholesale Gas Market was just over \$9/GJ in March down from almost \$11/GJ in February
- The average price of gas on the Wallumbilla Gas Supply Hub was \$8.50/GJ in March down from almost \$13/GJ in February
- Despite the fall in domestic gas prices importing LNG and re-gasifying it near a major demand centre such as Sydney or Adelaide may well be viable
- The big losers if imported LNG could be established as an ongoing solution to the gas supply crisis would be pipeline owners.

LNG shipping cheaper than gas pipeline

The Australian 25 April 2017

LNG Imports versus Domestic Supply



The cost of sourcing LNG from Asian suppliers

- The price of LNG delivered to Japan in March 2017 was US\$7.30/GJ
- Less freight between Japan and PNG of US\$0.50/GJ
- The price of LNG loaded on a tanker (FOB) in PNG is US\$6.80/GJ



Japan Spot –
Average for
March



Freight



FOB PNG



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The cost of sourcing LNG from Asian suppliers

- Major producers in the Asian region in addition to PNG are Malaysia and Australia
- Australia is set to become the world's largest LNG exporter
- The Curtis Island LNG plants are producing about 15% above their nameplate capacity and are selling LNG into the spot market
- Similar calculations to the above PNG example can be made to arrive at prices FOB Malaysia and Australia's North West Shelf



Japan Spot – Average for February



Freight



FOB

The cost of sourcing LNG from Asian suppliers

- The FOB price for LNG in PNG is US\$6.80
- Add to this freight of US\$0.30 to transport LNG to Australia
- The price of LNG delivered to South Eastern Australia would be US\$7.10/GJ - circa A\$9.50/GJ - add about another \$1/GJ to for regasification



FOB LNG Plant

Freight

Delivered

The cost of sourcing LNG from Asian suppliers

- Similar calculations to the above PNG example can be made to arrive at prices delivered South Eastern Australia from Malaysia and Australia's North West Shelf
- The next step to allow a comparison with using domestically produced gas is the cost of converting LNG to natural gas, a process known as re-gasification
- The cost of re-gasification is estimated at US\$0.70/GJ (NERA 2012)



FOB LNG Plant (USD/GJ)

Freight (USD/GJ)

Delivered (USD/GJ)

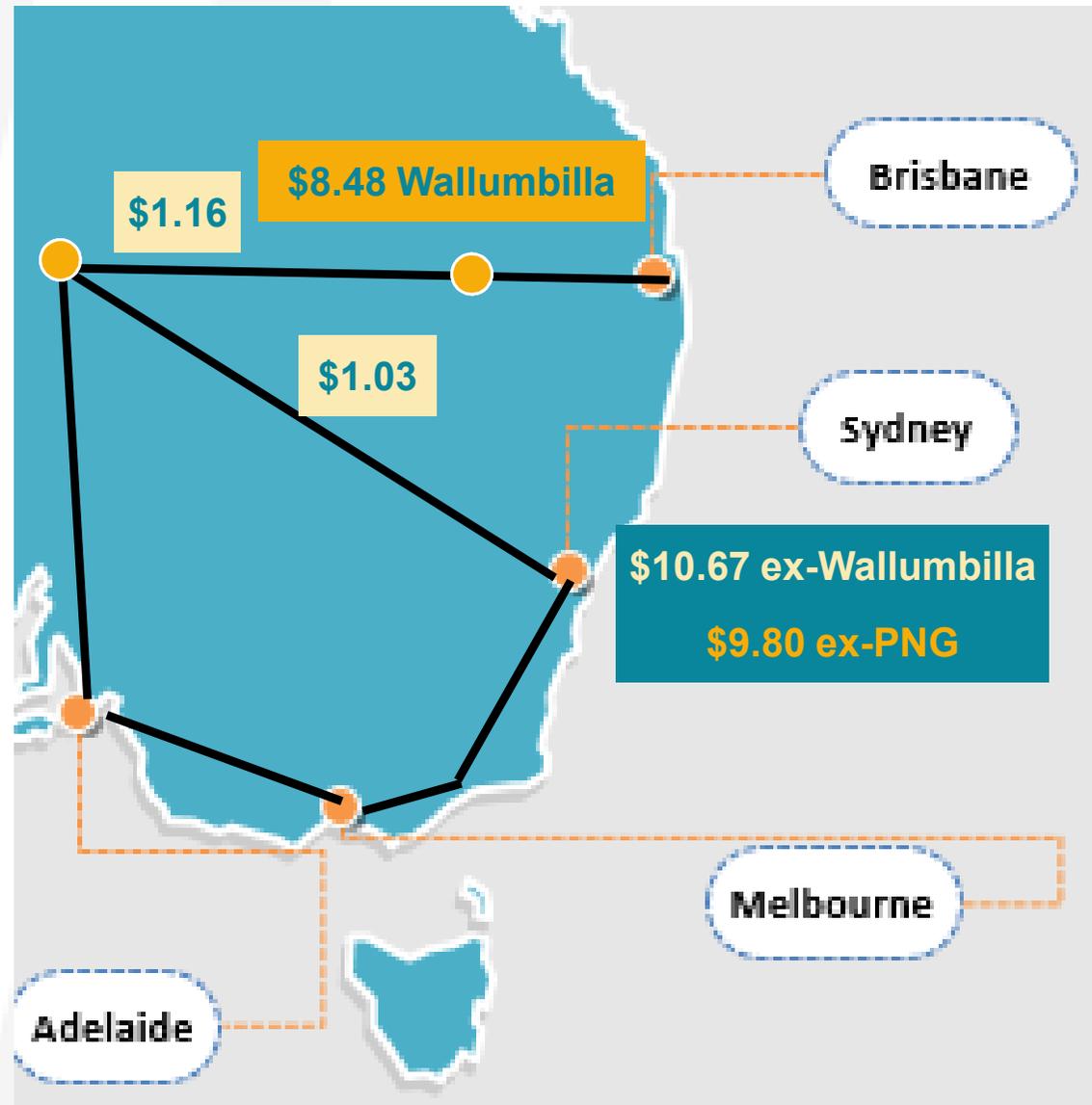


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The cost of LNG imports v domestic supply

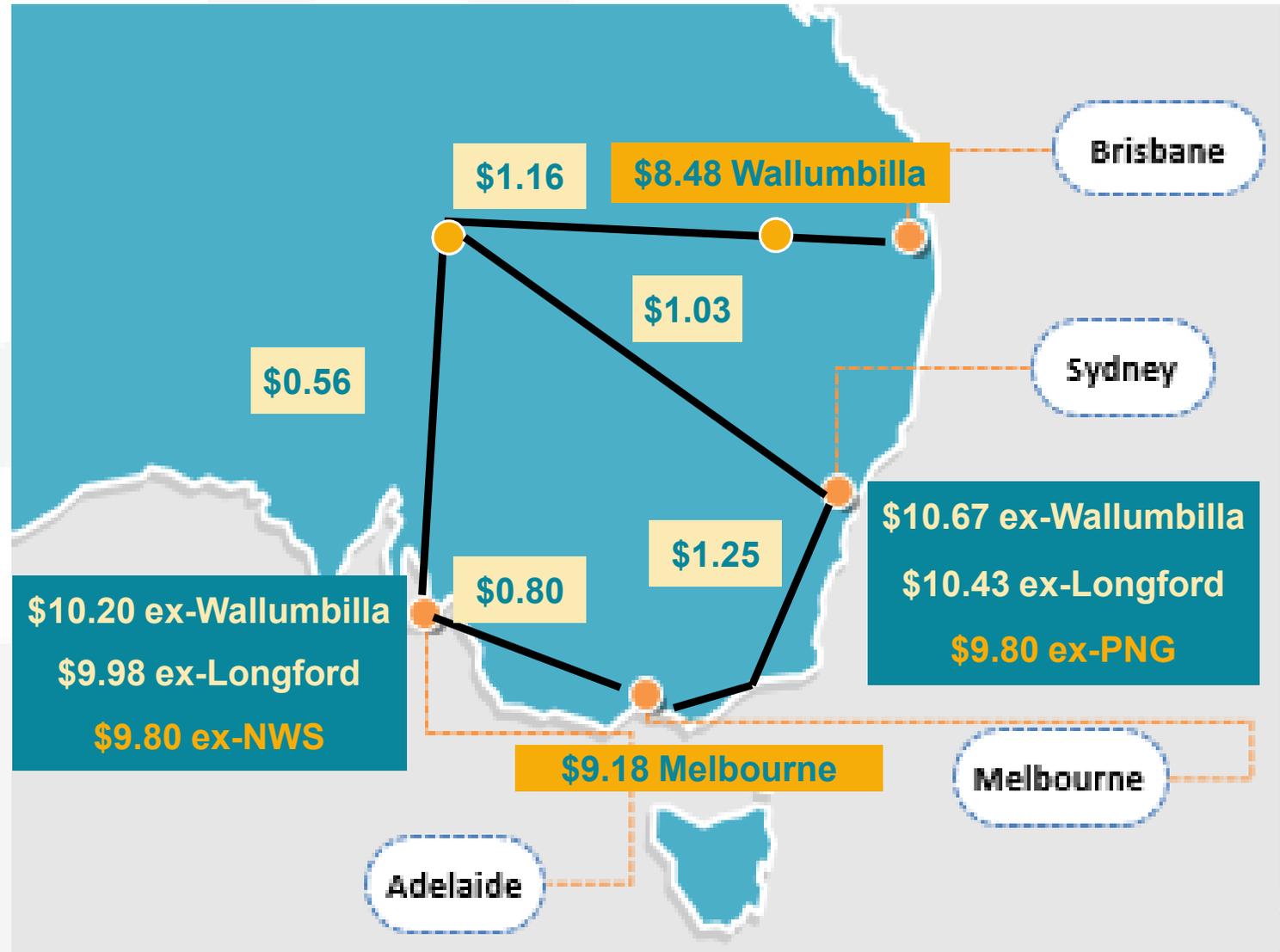
- Gas is largely traded bilaterally however there are market platforms on which gas is traded daily and prices are published
- One such market is the QLD Gas Supply Hub at Wallumbilla
- The average price of gas traded on that market in February 2017 was \$A8.48/GJ, the pipeline charges that connect Wallumbilla to Sydney are \$A2.20/GJ giving a price in Sydney of \$A10.67/GJ
- LNG imported from PNG and converted into natural gas would have cost \$A9.80/GJ
- The \$US/\$A exchange rate used to convert to A\$ prices was 0.80



Sources: Tariffs from company web sites, AEMO reports. Gas Prices from Gas Prices from Gas Bulletin Board.

The cost of LNG imports v domestic supply

- The cost of gas from Victoria delivered to Adelaide and Sydney is slightly higher than gas imported as LNG
- The cost of gas from QLD delivered to Adelaide and Sydney is \$A0.40/GJ and \$A0.90/GJ higher than gas imported as LNG

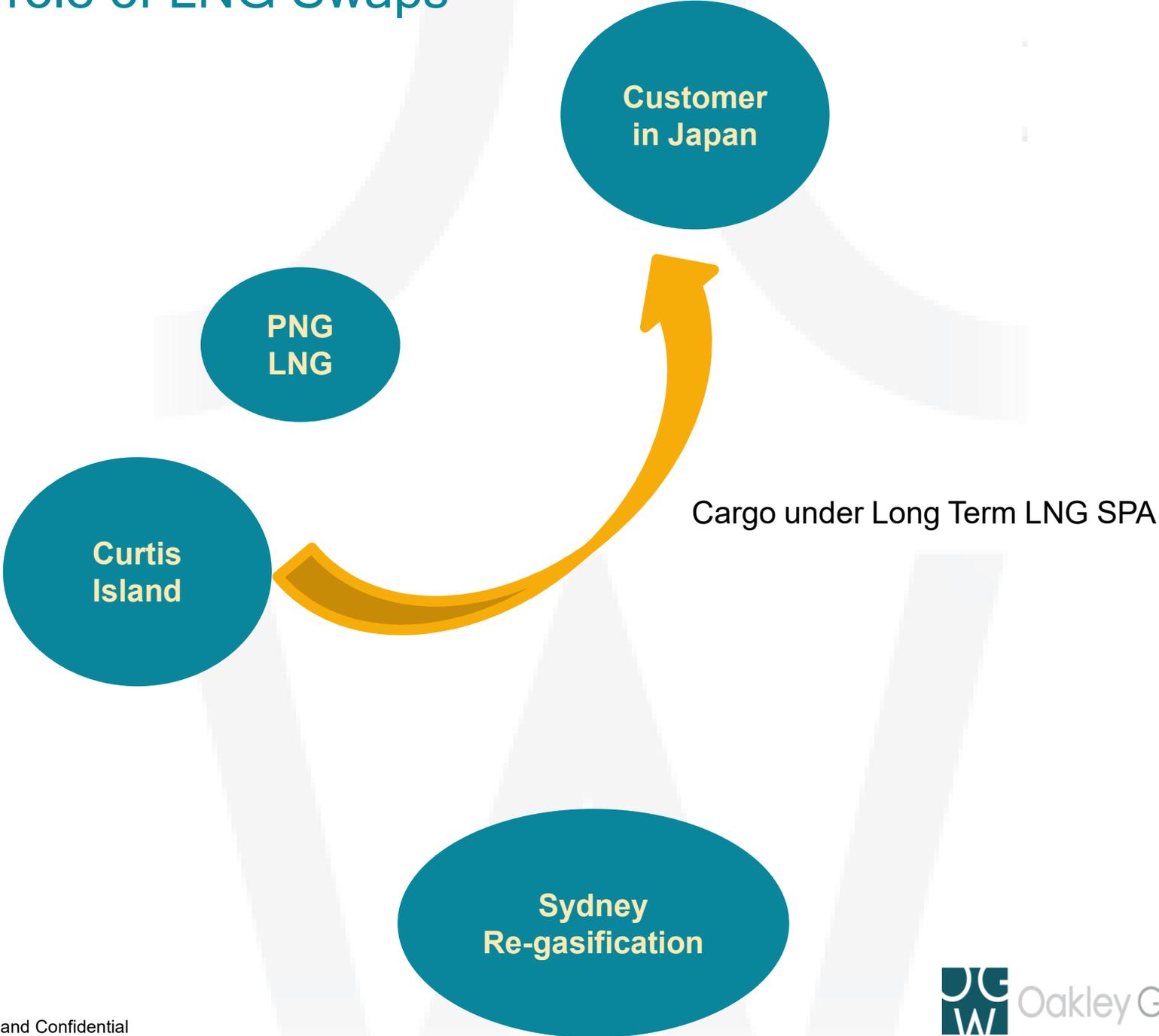


Sources: Tariffs from company web sites, AEMO reports. Gas Prices from Gas Bulletin Board.

The role of LNG Swaps

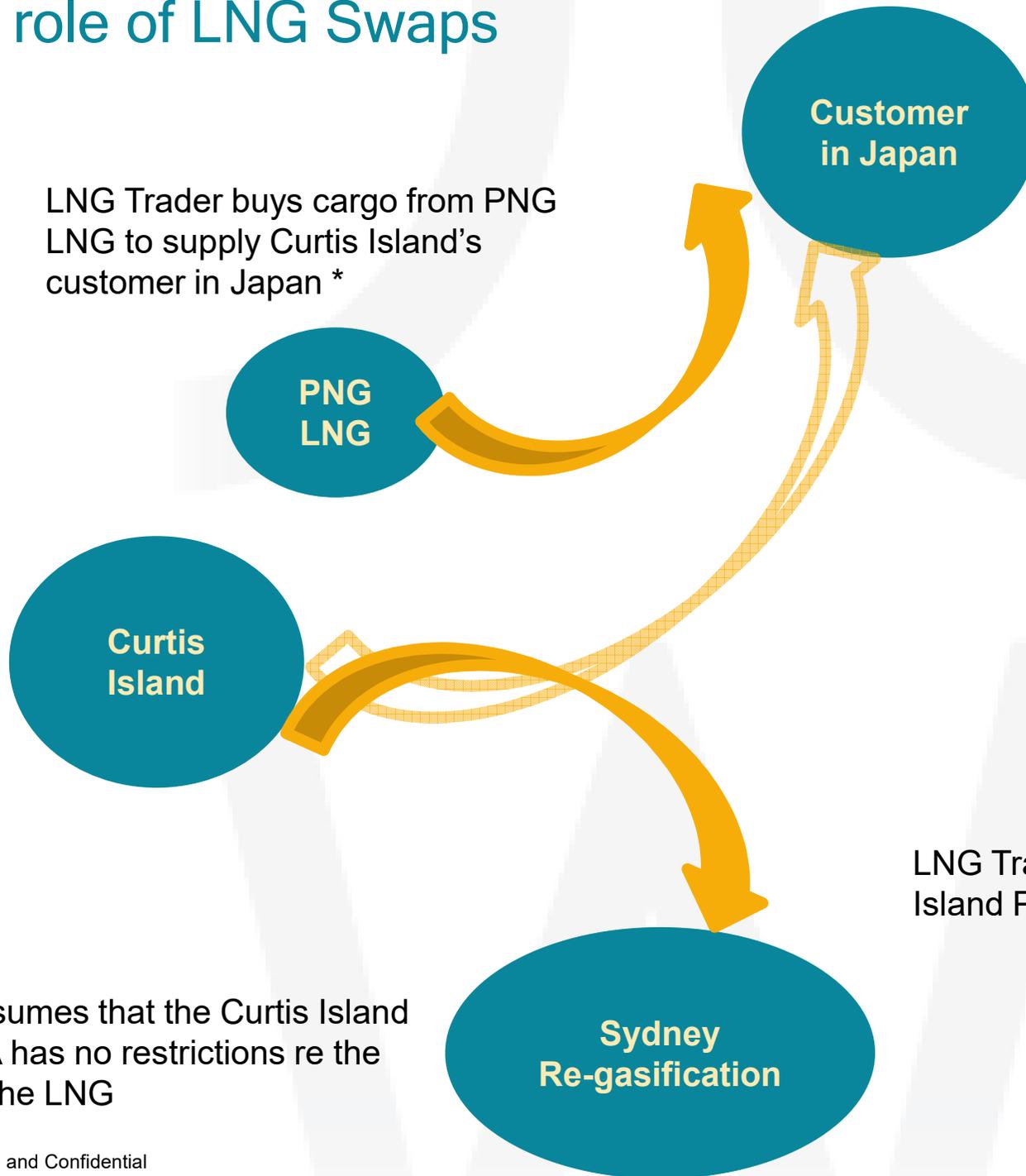
- The Commonwealth Government has stated that LNG swaps to address the east coast gas crisis should be put in place by the private sector. Senator Matthew Canavan has stated that “there was no role for government in negotiating gas swap agreements”
- Imports into South Eastern Australia of LNG from Malaysia, PNG or Western Australia could in practise be facilitated with LNG swaps
- An LNG trader could buy spot cargoes from Malaysia, PNG or Western Australia with these cargoes delivered to meet demand from Curtis Island customers in Asia under long term contracts
- LNG cargoes from the Curtis Island projects destined for the customer in Asia could be diverted to a re-gasification facility in South Eastern Australia

The role of LNG Swaps



The role of LNG Swaps

LNG Trader buys cargo from PNG LNG to supply Curtis Island's customer in Japan *



* This assumes that the Curtis Island LNG SPA has no restrictions re the origin of the LNG

Summary - the potential path forward and industry led and government intervention?

A crisis with impacts across the community

- A shortfall of gas for power generation is expected to emerge within the next two years and this has the potential to lead to blackouts
- Businesses using gas are at risk of closing or moving offshore due to the inability to secure gas supplies at reasonable prices - this will have impacts across the community. Some of the products that are produced with gas as an input include:

- food and beer
- steel
- fertiliser for agriculture production
- glass
- bricks



- The public is unlikely to feel the direct impact of short term gas shortages if gas supplies get rationed from businesses to protect residential users
- However the public will be affected through job losses and the impact of relying on imports of products no longer produced in Australia

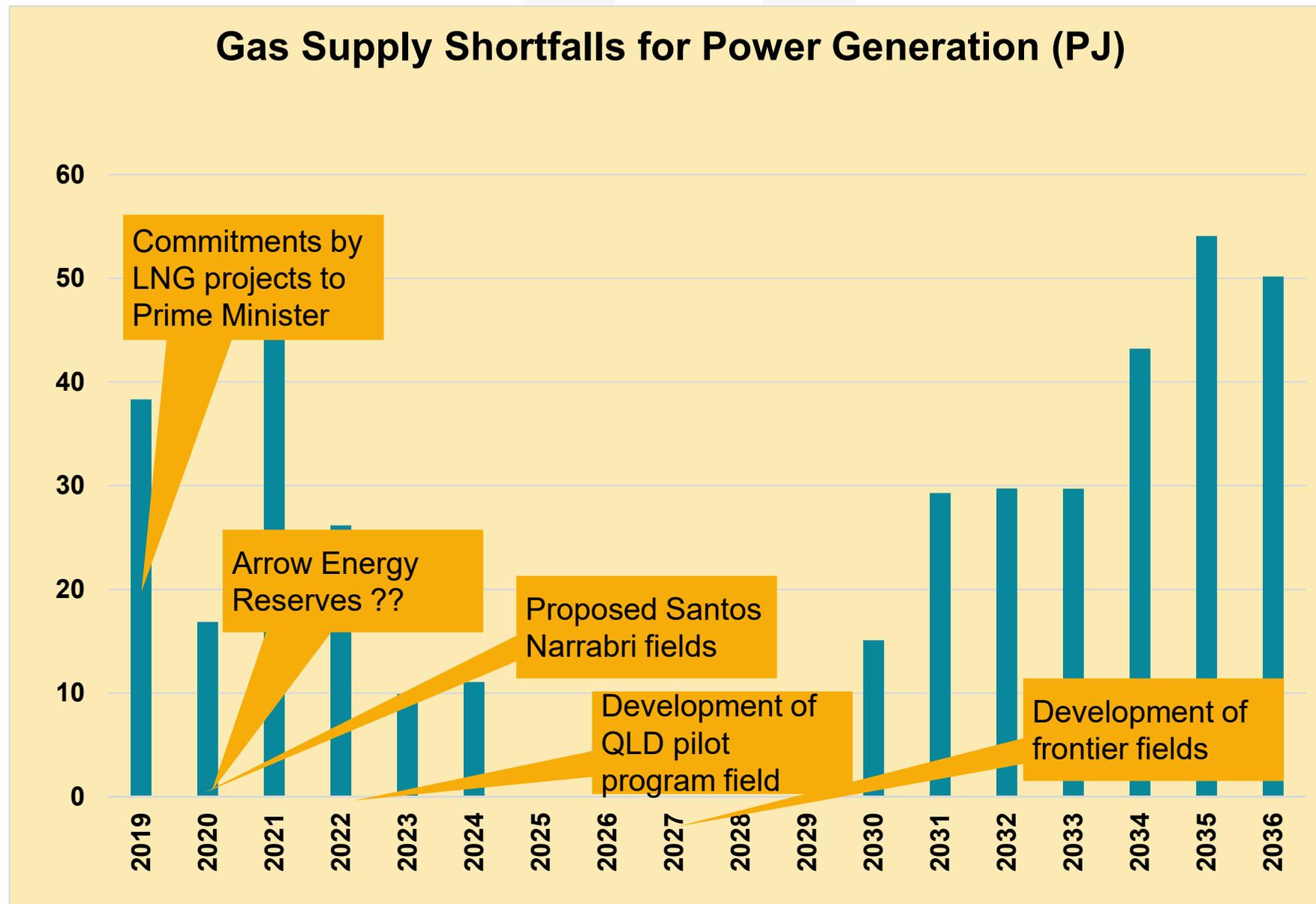
A path forward out of the crisis?

- With a return to the prices of a decade ago recognised as not being possible (the cost of production has increased beyond those prices) and current high prices expected to continue in the short-term then economics tells us that there will be a reduction in domestic demand for gas - which is happening
- There are significant gas resources in QLD, however 75% of these are associated with the Curtis Island LNG projects
- There are significant frontier resources in eastern Australia, however even if these are technically and commercially viable the lead time for production could be up to 10 years
- The Queensland government announced in February a “pilot” program of releasing acreage for domestic gas sales - however the lead time to explore and develop this could be in the order of 5 years
- The Queensland government “pilot” program offers a way forward for other states to open up their undeveloped gas resources for the domestic market

A path forward out of the crisis

- Santos expects that if approved the Narrabri Gas Project could be producing gas by 2019/2020
- Shell controls significant reserves through its investment in the QGC upstream project and Arrow Energy. The Arrow Energy reserves are not committed to a Curtis Island LNG project
- Commitments made by the Curtis Island LNG projects to the Prime Minister in March 2017 include
 - That gas will be available to meet peak demand periods in the National Electricity Market with AEMO given the power to direct the market
 - Two projects committing that they will be “net domestic gas contributors, as part of their social licence”, with a third having taken this on notice

Timing will be everything



Timing will be everything

- Since Oakley Greenwood's initial analysis on the East Coast gas crisis in March 2017 a number of announcements have been made by the Federal Government and producers.
- These announcements relate to short term initiatives on the path to securing gas supplies to meet the predicted gap between supply and demand
- The announced initiatives include:
 - Australian Domestic Gas Security Mechanism - limitations and intervention into domestic gas sales by producers associated with the Curtis Island LNG projects - with threats of export controls
 - ACCC gas market transparency measures - a wide ranging enquiry into supply and demand for wholesale gas and price/reserves with public reporting - across the whole supply chain working with Dr Michael Vertigan

Australian Domestic Gas Security Mechanism and ACCC Enquiry

- If an exporter is not a net contributor to the domestic market they will be required to outline how they will fill the shortfall of domestic gas as part of their overall production and exports - if there is a shortfall forecast in the domestic market (yes it is a bit fuzzy).
- A net contributor is described as an LNG exporter that draws more from the “domestic” market than they put in - if they can’t explain their exports can be curtailed?
- The Australian Domestic Gas Security Mechanism will be implemented under the Customs Act of 1901, although it is unclear how it will be implemented
- The ACCC enquiry into the gas market - will it be using its special inquiry powers, including its ability to acquire information compulsorily and publish information...
- The ACCC enquiry will run for three years and make formal reports every six months, with the first in October - and prices/reserves to be more transparent?



COMMONWEALTH OF AUSTRALIA

COMPETITION AND CONSUMER ACT 2010

INQUIRY FOR IMPROVING THE TRANSPARENCY OF GAS SUPPLY IN AUSTRALIA

I, Scott Morrison, Treasurer, pursuant to subsection 95H(1) of the Competition and Consumer Act 2010, hereby require the Australian Competition and Consumer Commission (ACCC) to hold an inquiry into:

- measures to improve the transparency of gas supply arrangements in Australia;
- the supply by persons in the gas industry (including without limitation gas producers and gas retailers) of, and demand for, natural gas extracted or produced in Australia, or imported into Australia; and
- the supply of, and demand for, natural gas transportation services in Australia by persons in the gas industry (including without limitation gas pipeline operators and other persons who have access to pipeline capacity).

Matters to be monitored and taken into consideration in the inquiry shall include, but not be restricted to:

- the pricing and availability of offers to supply gas;
- the volumes of gas supplied or available for current or future supply, including natural gas extracted or produced in Australia, or imported into Australia;
- the pricing, volume and availability of gas for domestic supply compared to the pricing, volume and availability of gas for export;
- the pricing, volume and availability of other goods or services, such as goods or services for drilling for, storing or processing gas, that enable, assist or facilitate the supply of gas or gas transportation services in Australia.

The ACCC should make use of publicly available information on the gas industry, including that published by the Australian Energy Market Commission, the Australian Energy Market Operator or the Australian Energy Regulator, where appropriate. This is not to be an inquiry into supply by any particular person or persons, or by a State or Territory Authority.

The inquiry is to commence today. The inquiry is to submit interim reports to me no less frequently than every 6 months and provide information to the market as appropriate. The inquiry is to be completed and a final report submitted to me by 30 April 2020.

DATED THIS 19th DAY OF April 2017


SCOTT MORRISON
Treasurer

Australian Domestic Gas Security Mechanism and ACCC Enquiry

- The ACCC has also launched an investigation into the Bass Strait gas marketing arrangements of ExxonMobil and BHP Billiton to establish if they have contravened the Competition and Consumer Act - long story here
- Santos claim the ADGSM is aimed at GLNG - and has pointed out that Santos is not GLNG - they are very separate entities and Santos does not have majority ownership - and that Santos sells some 90 PJ/year already into the “domestic market”?
- The issues here will start with definitions - what is the “domestic market” - is it simply gas consumed in Australia or east coast - what shortfall is in the domestic market anyway or is this all about price - Santos has challenged the Government to answer this one - how much is the shortfall?

Australian Domestic Gas Security Mechanism and ACCC Enquiry

- Do “export controls” mean the ACCC can reach as far as BHP/Esso as they sell “domestic gas” for LNG production - likely not
- However, the Government wants to ensure gas prices in Australia are lower and “fairly reflect international export gas prices” - effectively this is being interpreted as LNG netback - but it is not at all clear - and does that apply to all “domestic gas” - BHP/Esso may have a very different view - major sovereign risk issues and market interventions always have some form of unintended consequences...
- The pricing statements and information publication requirements start to look like they could be the basis for a form of gas price regulatory intervention - potentially the implementation of price cap controls based on some sort of export market price-minus formula, or for the ACCC to issue some form of please explain notice about pricing of gas - how will these “fair” prices be worked out - will it need to be “determined” by say the ACCC and at what point in time - every 6 months?

Gas Producers

- Shell:
 - Claims to be on track to supply approximately 40% of Queensland and 11% of east coast demand and that it supplies three times as much gas to the domestic market that it buys from the domestic market, it expects to supply 75 PJs, net of domestic gas purchases, in 2017
 - Has committed to develop the Ruby Jo project to drill 160 wells for supply to QCLNG
 - Has agreed to supply around 8PJs of gas to Engie's Pelican Point power plant in South Australia for five months over the peak winter period
 - Has agreed to supply gas to Orica's Yarwun facility near Gladstone
- Origin Energy:
 - Claims to supply 20% of the domestic east coast market
 - Has agreed to supply around 8PJs of gas to Engie's Pelican Point power plant
- Santos is differentiating its position from that of the GLNG project that it operates, by stating that "moving forward Santos will supply more gas into the Australian domestic market than it purchases for its share of LNG exports."

Gas Producers

- Santos is reported to be selling 70 per cent of it's production from the Cooper Basin to the GLNG plant at just \$3.50 to \$4 per gigajoule due to low oil prices. This is well below prices that could be achieved in the domestic market (*The Australian 29 April 2017*)
- ExxonMobil, the operator of the Bass Strait fields has said that in 2017 it will match the record gas production it achieved in 2016 - their reserves at top market prices are worth the GDP of a small country...2P circa \$50 billion...
- There is no “quick fix” on prices - yet - maybe the escalating Government actions and underlying “threat” will see gas prices deescalate somewhat if major retailers are prepared to pass the market value of their legacy contracted gas through to customers under this pressure
- Or more customers will seek to buy direct from the market (Weston Energy model)
- BUT we need more gas.....



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