FORECASTING AND PLANNING REFERENCE GROUP

2017 GAS STATEMENT OF OPPORTUNITIES

21 March 2017

PRESENTED BY AEMO | SUPPLY PLANNING

AGENDA

2017 GAS STATEMENT OF OPPORTUNITIES (GSOO)

- About the 2017 GSOO
- Key messages - summary
- Supply adequacy
- Challenges to energy security and reliability
- Possible solutions to short term shortfalls
- Rising production costs and gas prices
- Energy market integration

ABOUT THE 2017 GSOO

The 2017 GSOO provides industry participants and policy-makers with transparent information:

- Supports decision-making to ensure the supply of gas is managed in Australia's long-term interests.
- Assesses the adequacy of gas infrastructure, reserves and resources to meet demand in eastern and south-eastern Australia to 2036.
- As foreshadowed in the November 2016 Electricity Statement of Opportunities (ESOO) update, it also assesses the gas supply impact on supply adequacy in the electricity market.

KEY MESSAGES - SUMMARY

The 2017 GSOO highlights the **increasing interdependencies between gas and electricity, and supply and demand**, and the importance of holistic planning across the entire supply chain to deliver energy security.

Under a Neutral (considered most likely) scenario:

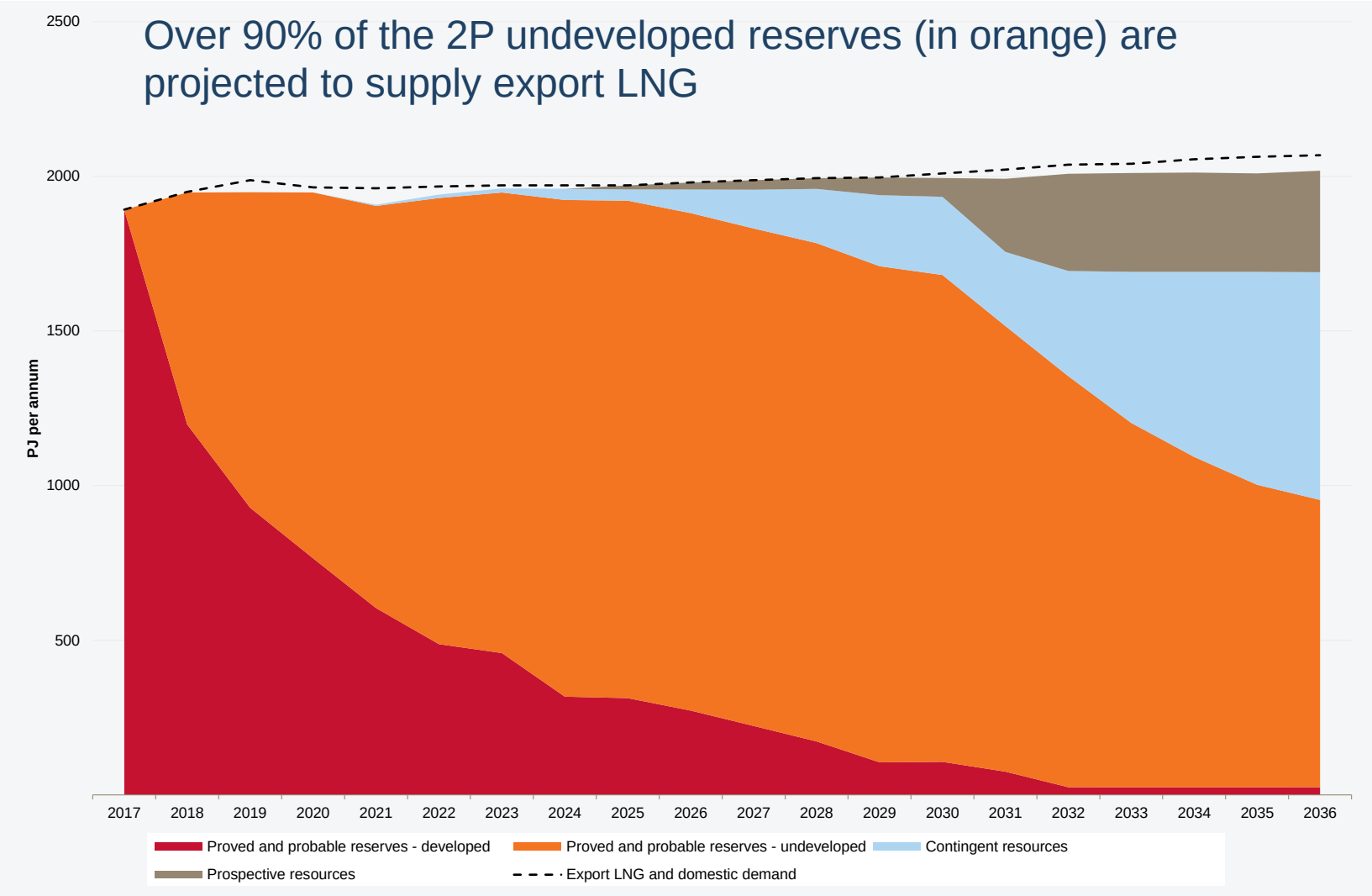
- Declining gas production may result in insufficient gas to meet projected demand from gas-powered generation (GPG) from summer 2018–19.

- Maintaining system security is becoming more challenging, increasing the risk of supply shortfalls in both gas and electricity markets.

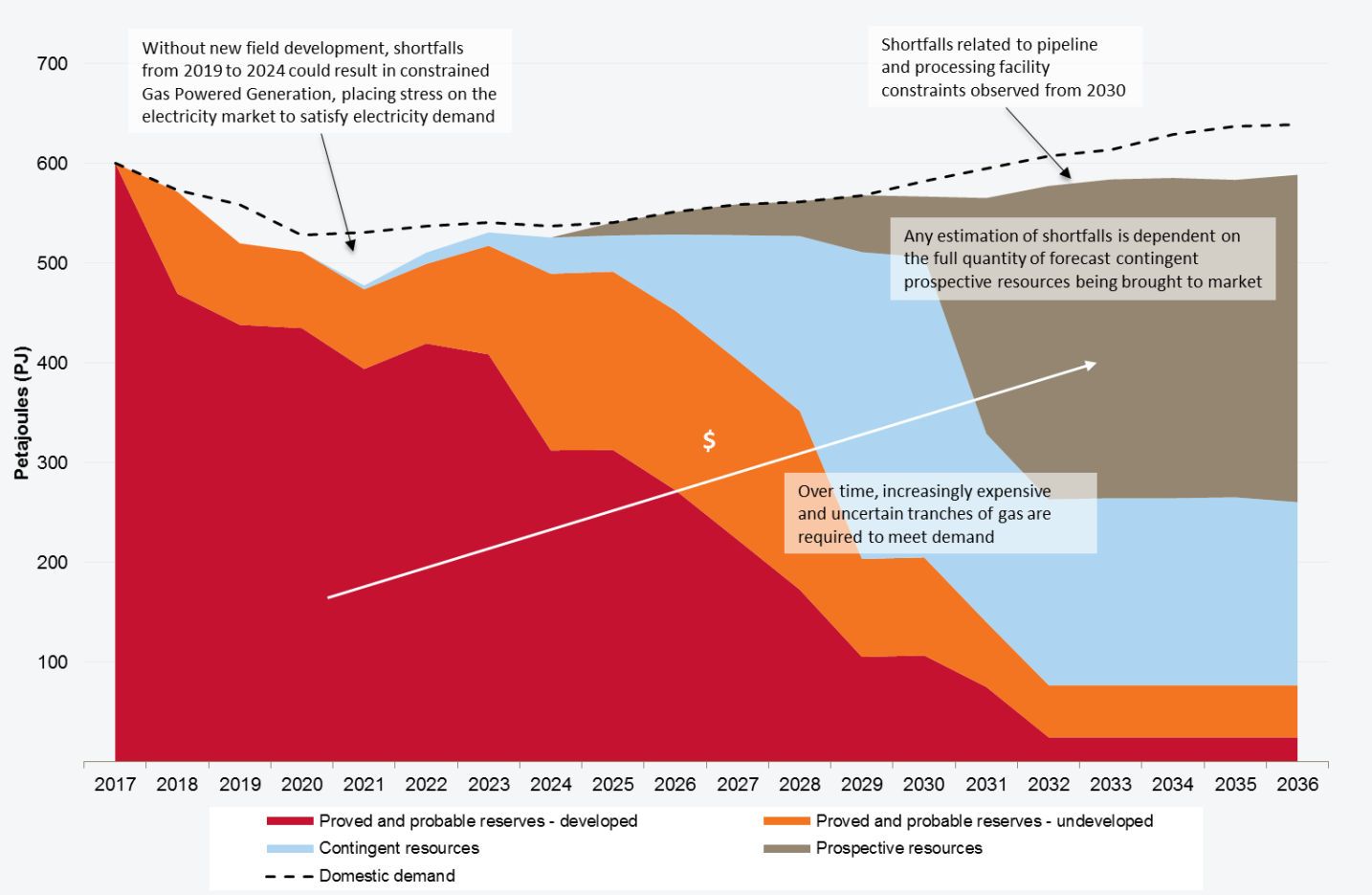
- Energy reliability and security could be improved through industry responses, if the market provides incentives for industry to increase gas supply or reduce demand.

- Continued upward pressure on gas and electricity prices may threaten the financial viability of some commercial and industrial customers.

KEY INSIGHTS: EASTERN AND SOUTH-EASTERN AUSTRALIA GAS PRODUCTION (EXPORT LNG & DOMESTIC), 2017−36

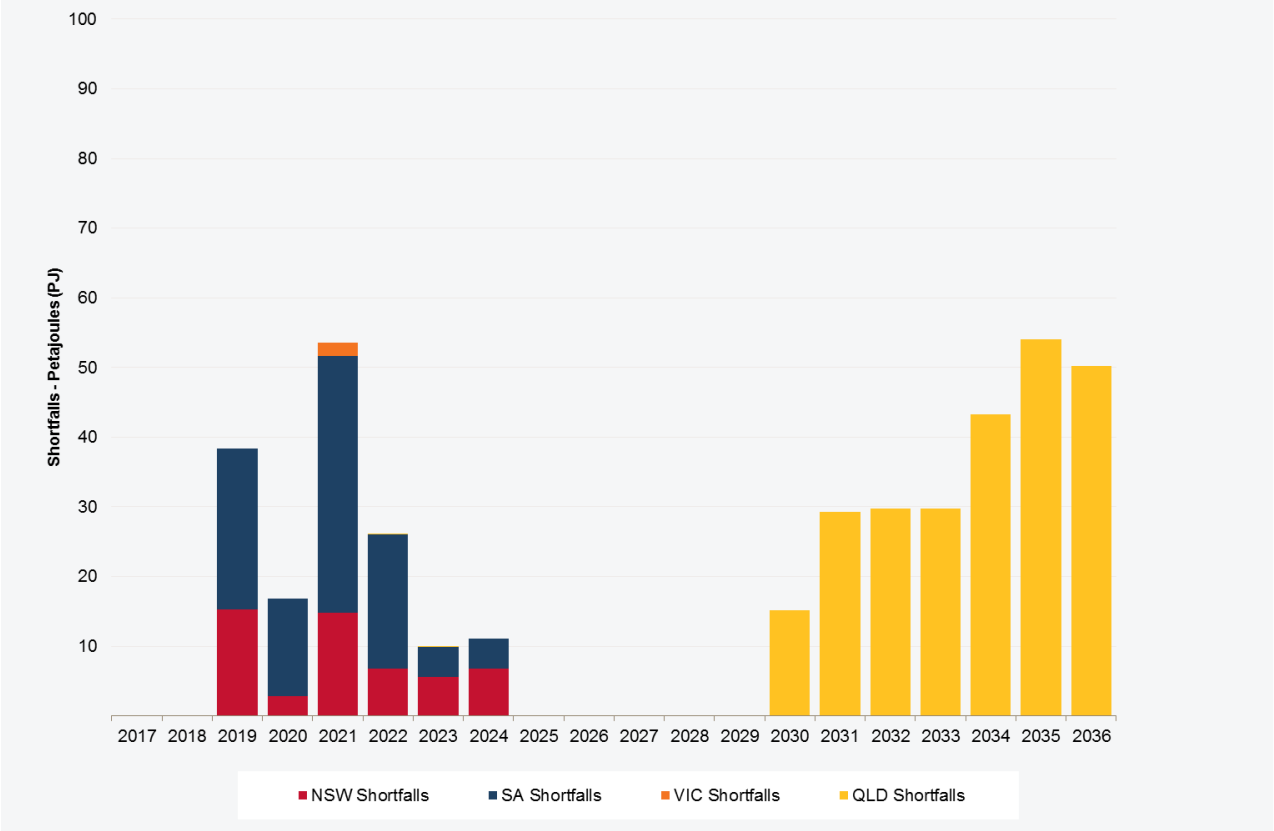


KEY INSIGHTS: EASTERN AND SOUTH-EASTERN AUSTRALIA GAS PRODUCTION DOMESTIC (EXCLUDING LNG), 2017−36



Annual domestic gas production is forecast to decline by 122 PJ to 2021 and gas supply shortfalls are projected

GAS OR ELECTRICITY SHORTFALLS?



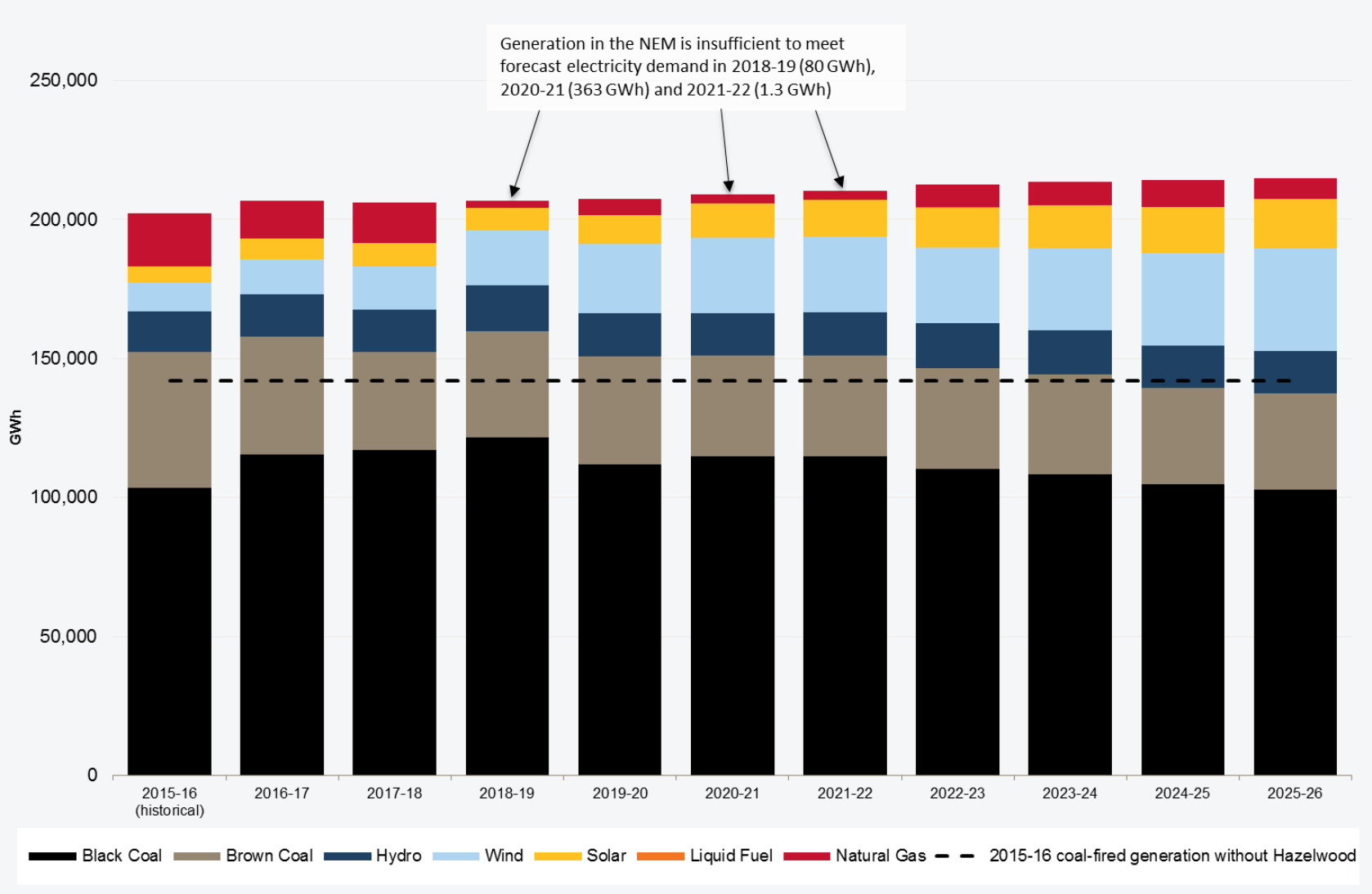
Shortfalls in gas-powered generation expected:

- SA from 2019-24 (up to 37 PJ in 2021)
- NSW from 2019-24 (up to 15 PJ in 2019)
- VIC in 2021 (2 PJ)
- QLD 2030-36 (up to 54 PJ in 2035)

Average electricity supply shortfalls of between approximately 80 GWh and 363 GWh may be experienced in 2018–19 and 2020–21.

This exceeds the NEM reliability standard which targets meeting 99.998% of demand.

NEM GENERATION MIX (IF GAS CONSTRAINED)



CHALLENGES TO ENERGY SECURITY AND RELIABILITY

Ensuring sufficient natural gas supply is essential for energy security in both the gas and electricity markets:

- Refilling Iona Underground storage (UGS) will be key to meeting winter gas demand in Victoria.
  - The refilling of Iona UGS is uncertain for winter 2018, and unlikely for winter 2019 and beyond.
  - AEMO has identified this as a threat to system security.

- Following South Australia's Black System event on 28 September 2016, the region has increased dependence on GPG to provide the minimum levels of thermal generation required to maintain security of electricity supply.
  - This means reliability of gas supply to South Australia is essential to maintain energy security in the region.

POSSIBLE SOLUTIONS TO SHORT TERM SHORTFALLS

Energy reliability and security could be improved through industry responses, if the market provides incentives for industry to increase gas supply or reduce demand.

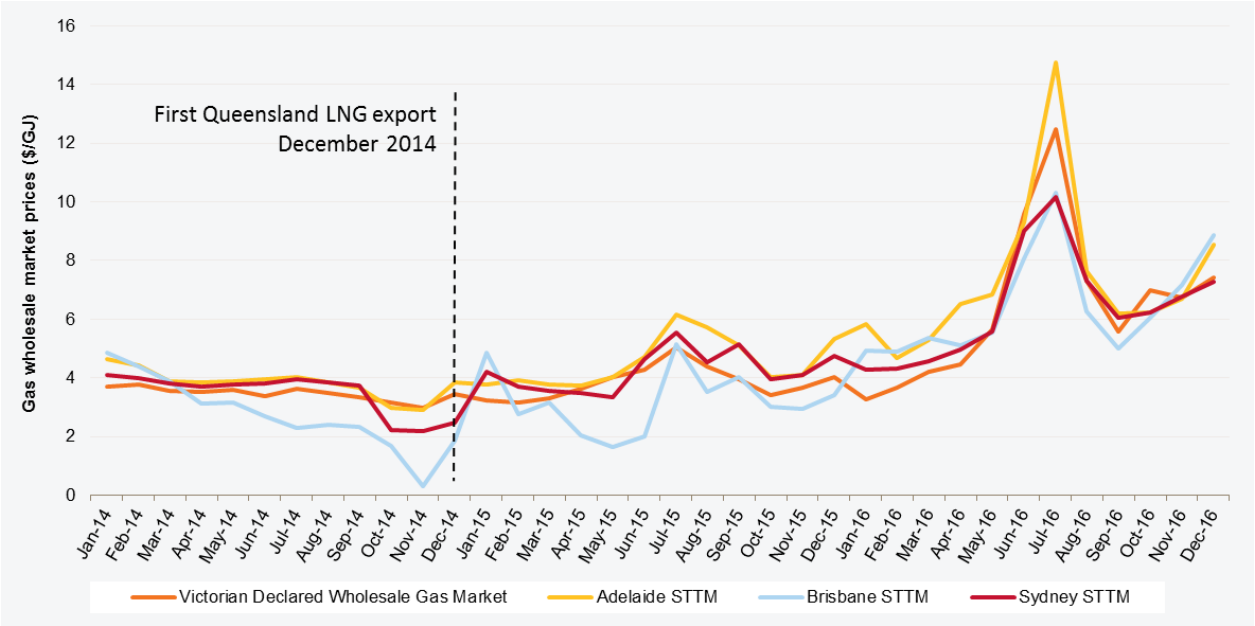
Some possible options being considered by industry include:

- Redirecting a small portion of LNG supply to the domestic market.
- Increasing production from existing fields.
- Exploring and developing new fields.
- Building the Northern Gas Pipeline (NGP) to access gas in Northern Territory.
- Developing the proposed Narrabri Gas Project.
- Investing in alternative electricity generation and storage technologies.

Gas volumes associated with some of these options would only be realised if moratoria currently in place were to change.

RISING PRODUCTION COSTS AND GAS PRICES

Average gas market prices since January 2014



A finely balanced gas market will continue to place upward pressure on gas prices.

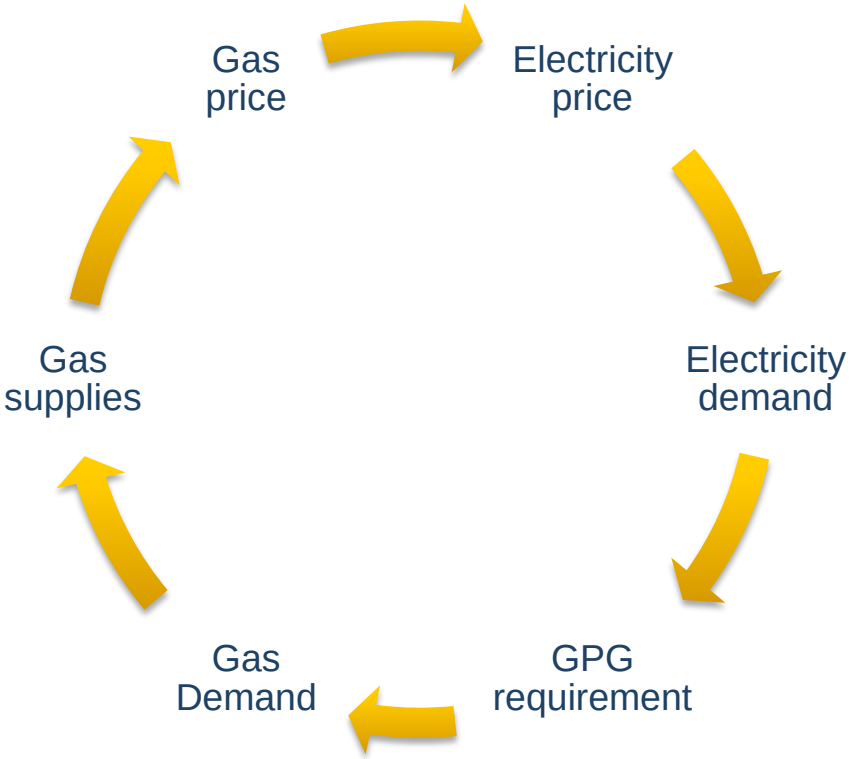
New supply tranches becoming harder to extract and **more costly** - at a time when low cost reserves in eastern Australia are in decline.

Additional gas in the market may not translate to lower gas prices.

Gas price increases could threaten the financial viability of some industrial and commercial loads, and reduce demand from forecast levels.

ENERGY MARKET INTEGRATION

The convergence of energy markets in eastern and south-eastern Australia demands a single energy view.



Maintaining energy security requires holistic planning across the entire supply chain

….to ensure investment decisions are made in the long-term interests of consumers.