

Blue ENERGY

Energy and Mineral Conference

Brisbane

27th March 2019

Legals

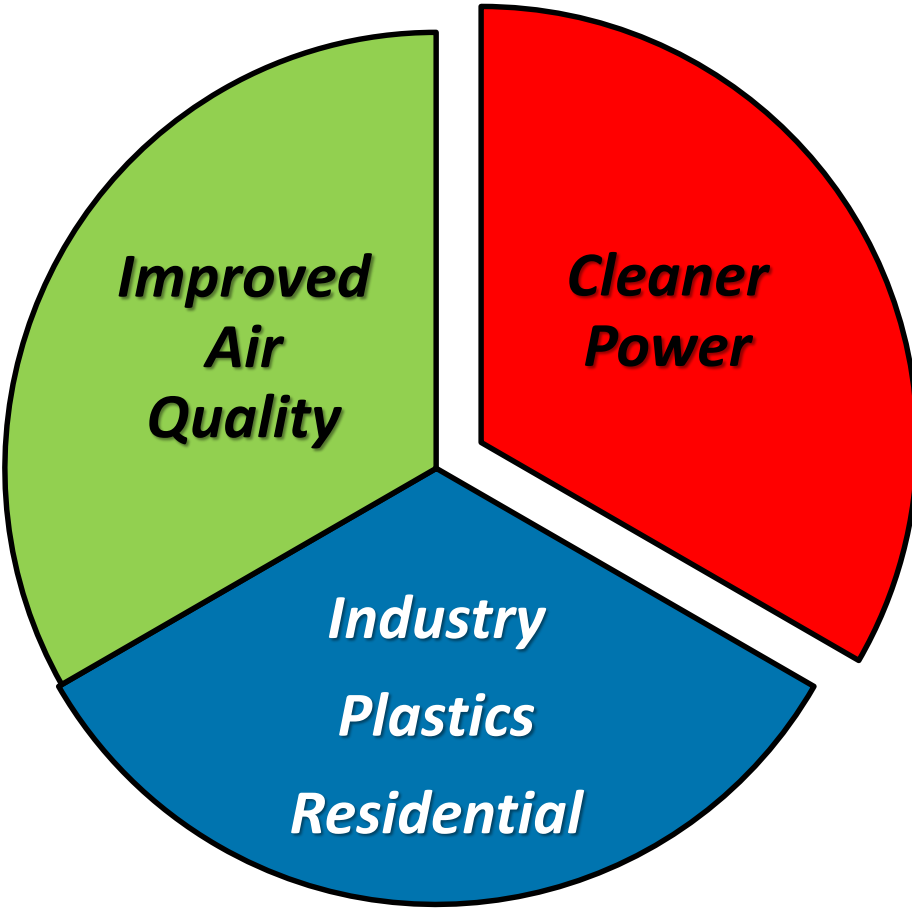
Disclaimer

This presentation may contain forward looking statements that are subject to risk factors associated with the gas and energy industry. It is believed that the expectations reflected in the statements contained within are reasonable, but they may be affected by a range of variables which could cause actual results or trends to differ materially, including but not limited to price and currency fluctuations, geotechnical factors, drilling and production results, development progress, operating results, reserve estimates, legislative, fiscal and regulatory developments, economic and financial markets conditions in various countries, approvals and cost estimates.

Competent Person Statement

The estimates of Reserves and Contingent Resources have been provided by Mr John Hattner of Netherland, Sewell and Associates Inc. Mr Hattner is a full time employee of NSAI, has over 30 years of industry experience and 20 years' experience in reserve estimation, is a licensed geologist, and has consented to the use of the information presented herein. The estimates in the report by Mr Hattner have been prepared in accordance with the definitions and guidelines set forth in the 2007 Petroleum and Resource Management System (PRMS) together with the 2011 and 2018 Guidelines for Application of the PRMS as approved by the Society of Petroleum Engineers (SPE), and utilising a deterministic methodology.

The Compelling Global Case for More Gas



The Compelling Global Case for More Gas

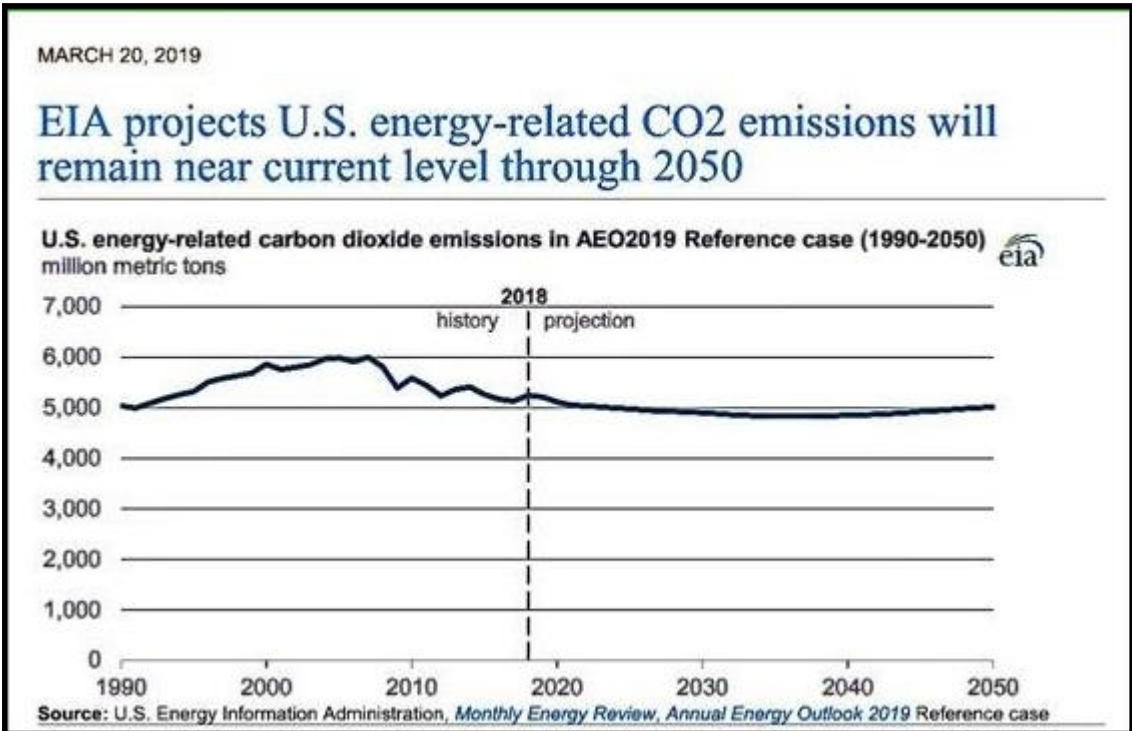
Air quality



**Fuel switching from coal to gas improves lives in Asia
China is moving rapidly**

The Compelling Global Case for More Gas

If CO₂ really is creating more catastrophic weather, then we should follow the US

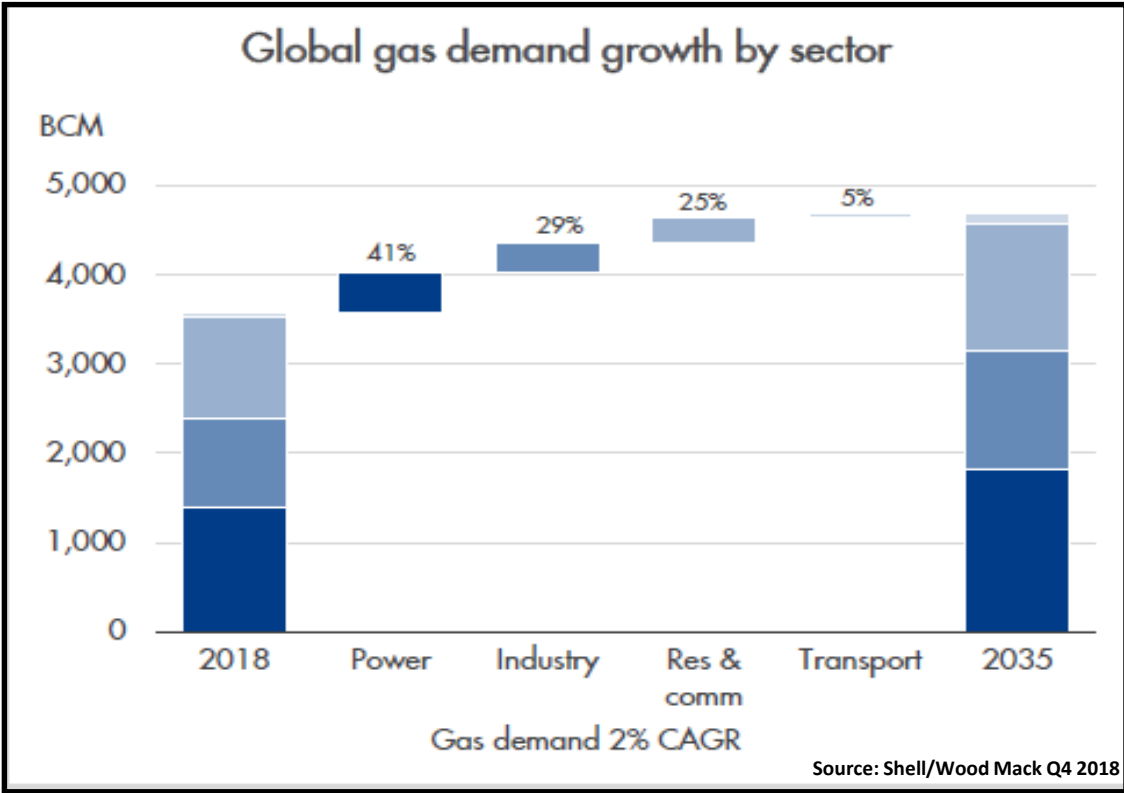


Gas use has reduced US CO₂ emissions to 1990 levels
US GDP increased due to low cost gas/energy
Technology has delivered more gas



The Compelling Global Case for More Gas

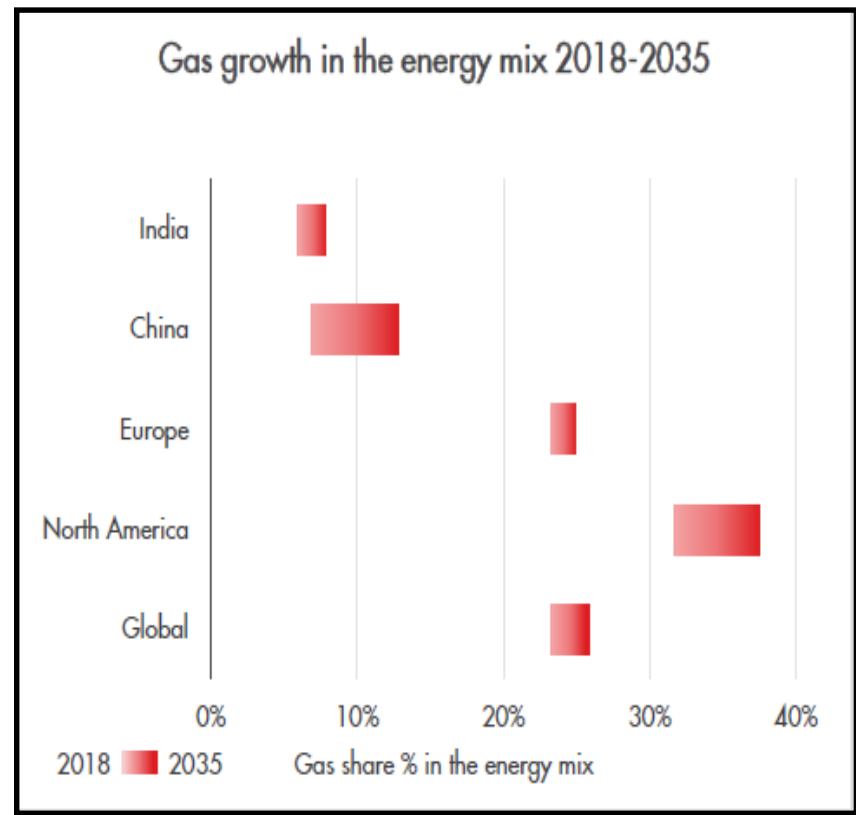
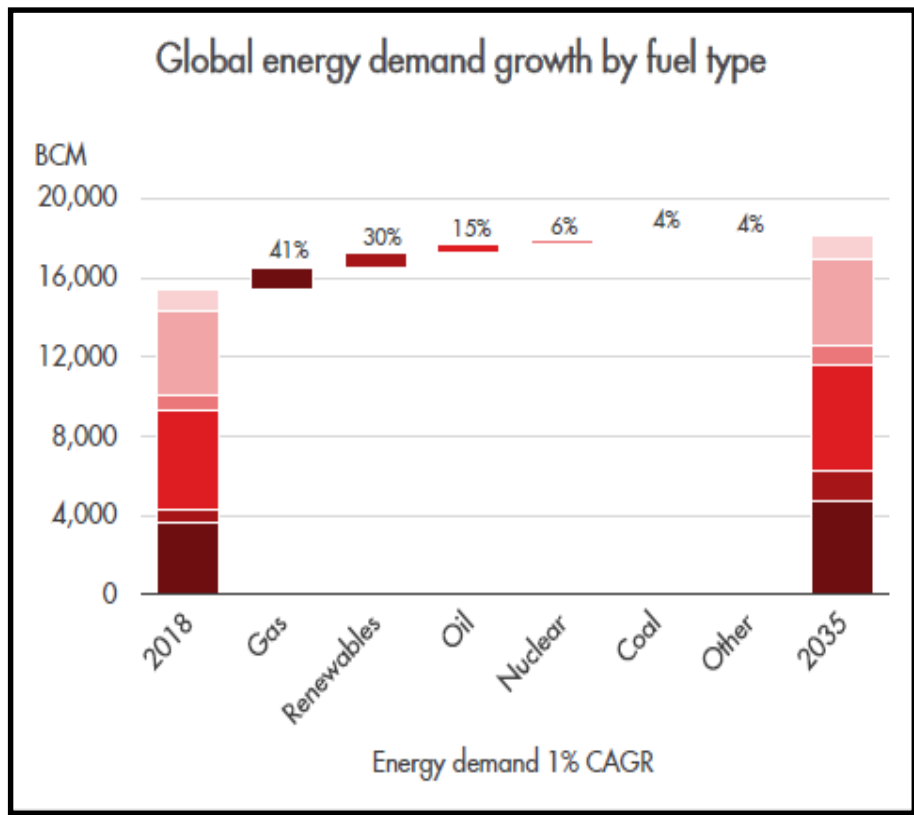
Growth in Industry, Plastics, Power and Residential sectors driving gas demand



Population growth drives consumption
Plastics (eg 3D printing) needs gas



The Global Gas Majors believe in demand growth for gas

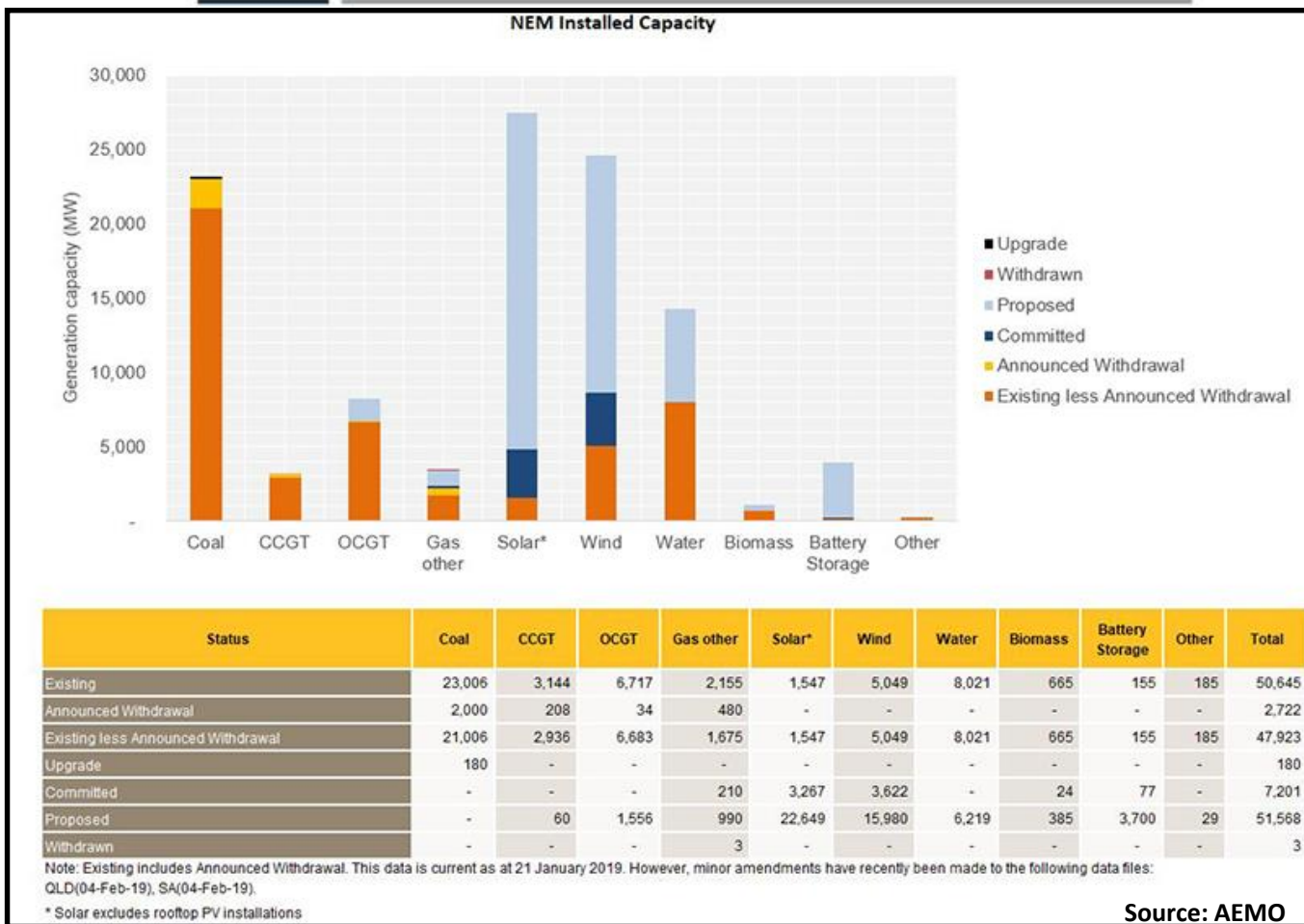


Source: Shell/Wood Mack Q4 2018

Shell, BP and others see strong gas demand growth and are investing internationally to boost market share

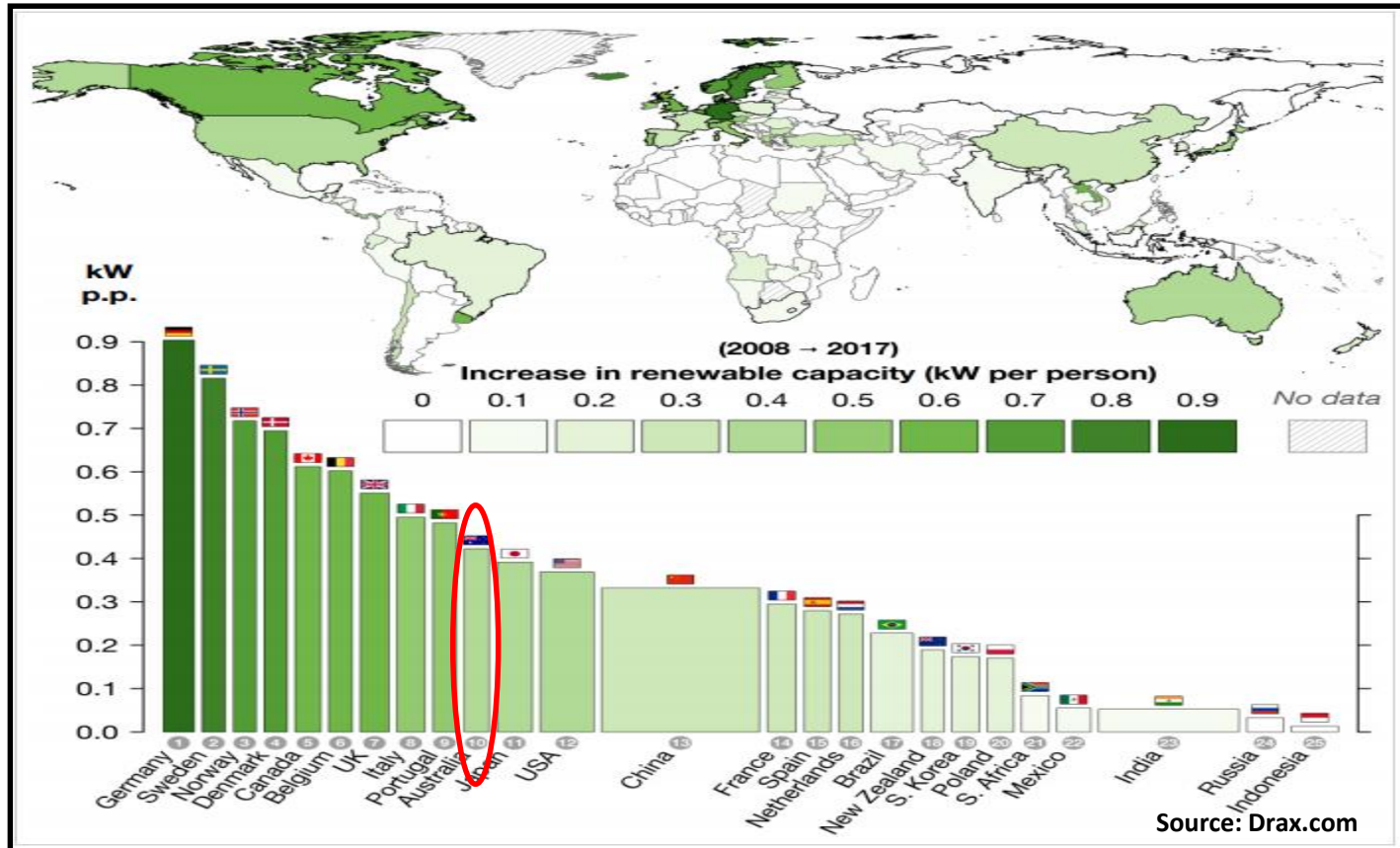


Proposed renewable buildout has implications for Australia's grid stability



**45,528 MW of new generation is proposed in Australia
Gas is needed to firm-up solar and wind and
stabilise the frequency of grid**

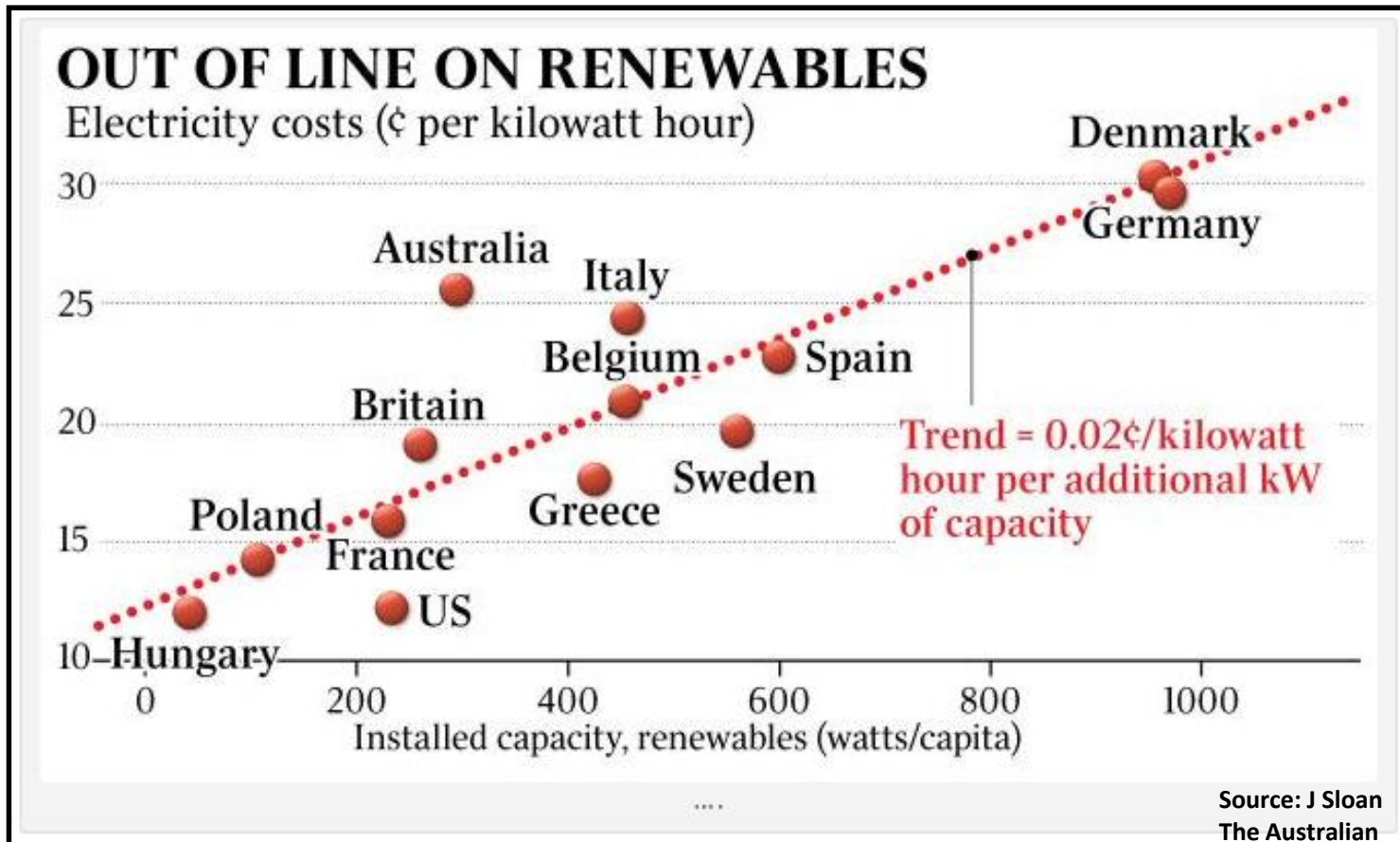
Australia punches above its weight on renewables (...is that a good thing?)



....but our efforts will make zero difference to the global average temperature (Finkel)

(Fun Fact: For Germany to meet its 60% renewable target by 2050, it requires a 15 fold increase in wind and solar – that's a 200m high wind turbine every 1.5 km over the entire area of Germany)

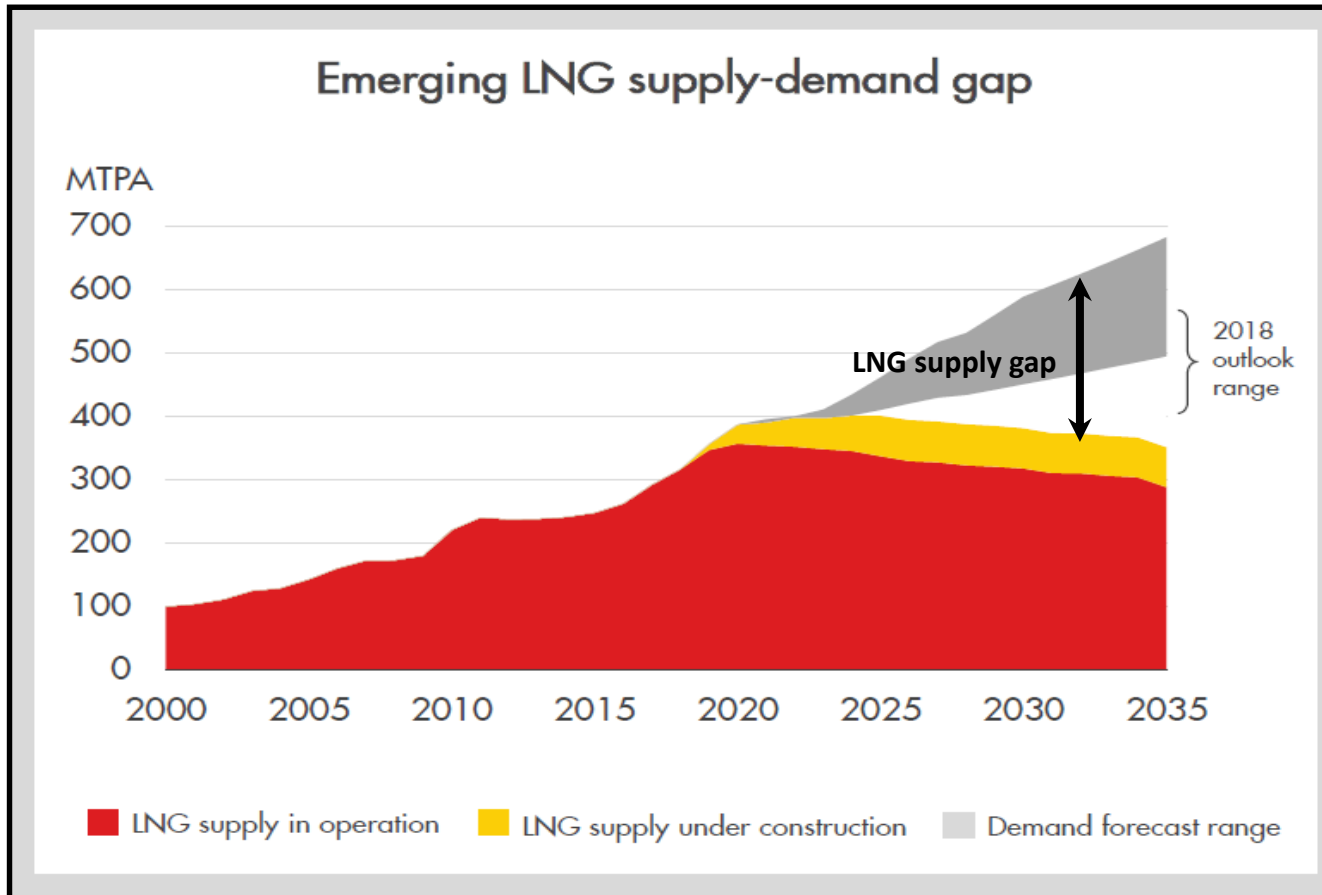
The impact of renewables on electricity price ...there is a correlation



More renewables = higher electricity prices

Growing gas demand

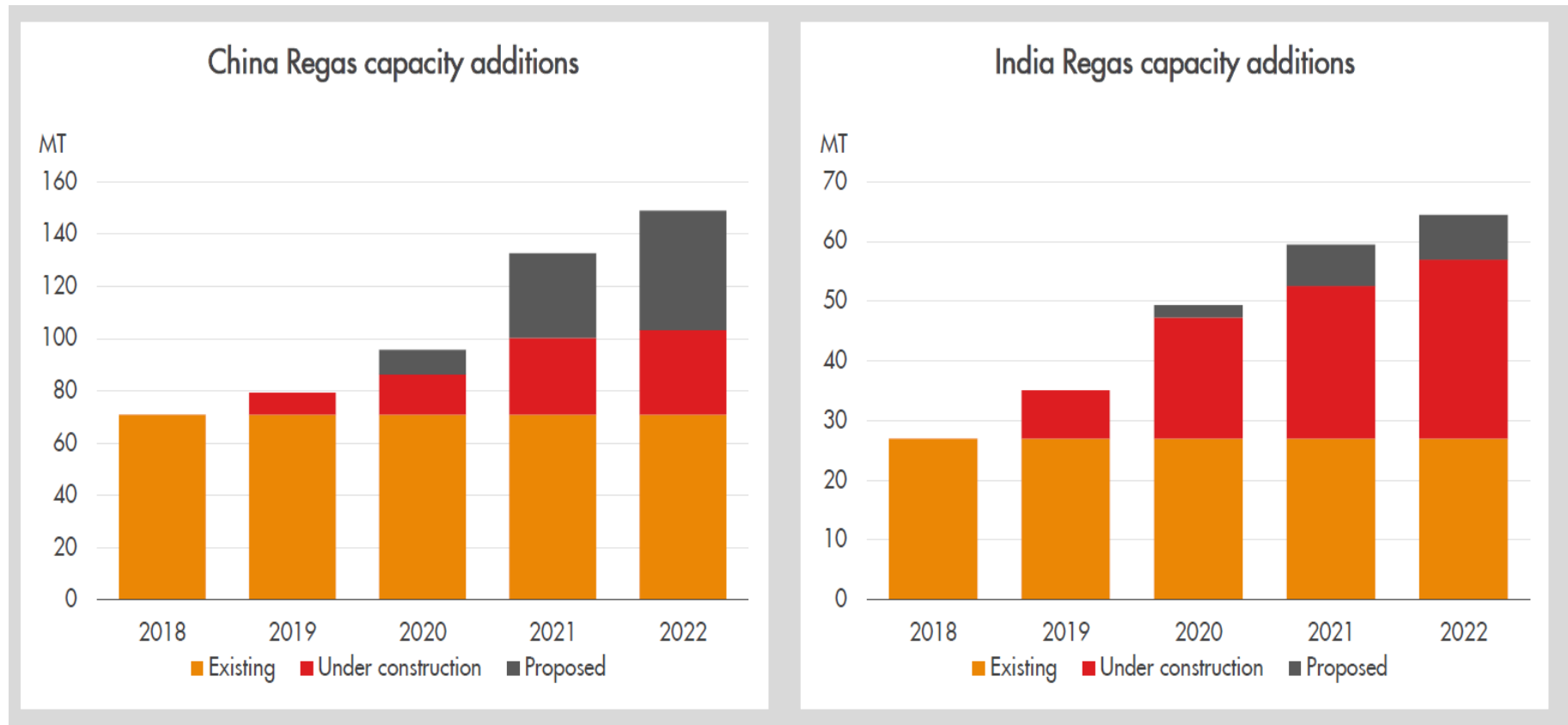
Global LNG supply gap widens



Source: Shell LNG Outlook 2019

Global gas giants developing supply capacity to fill the gap and build market share.

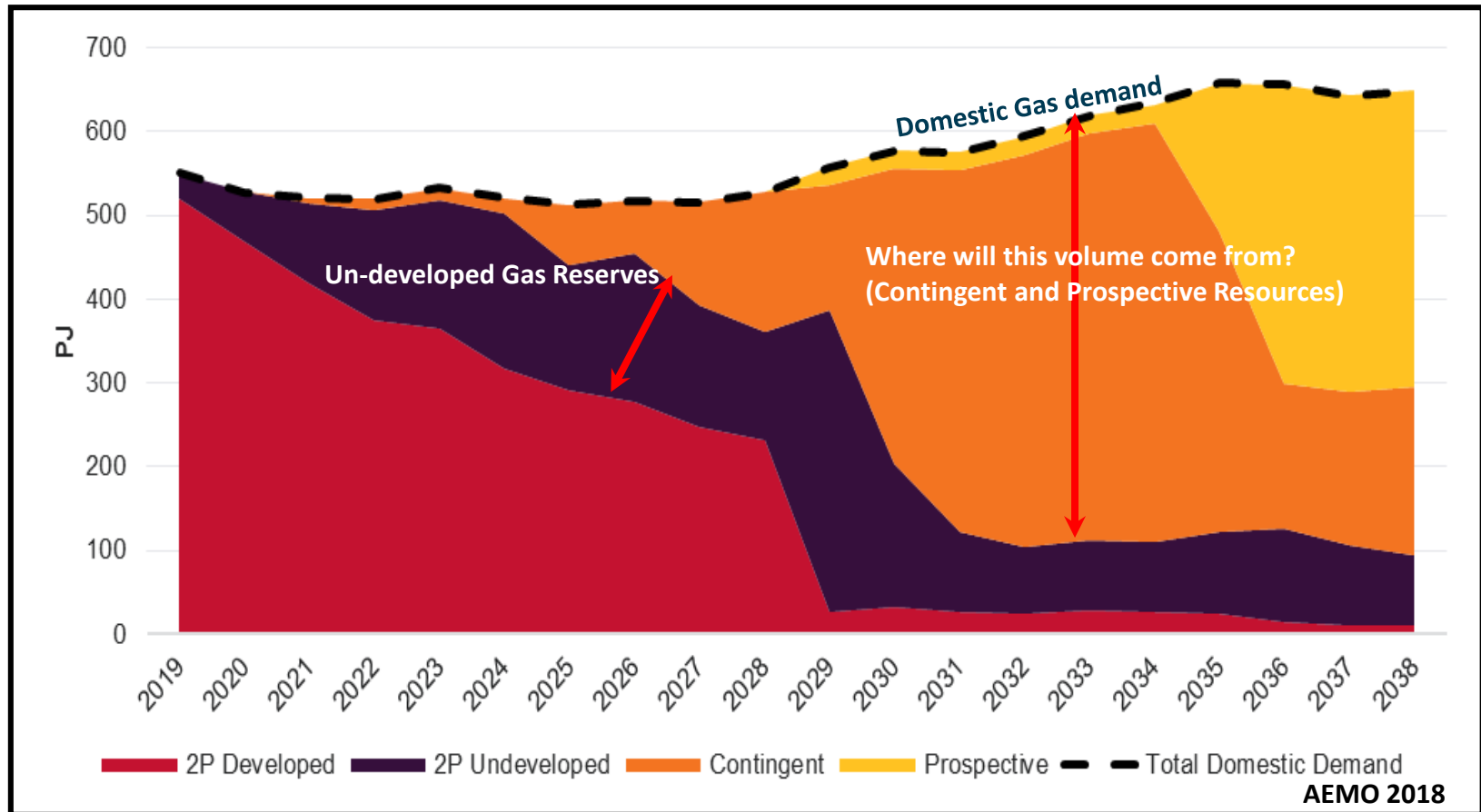
LNG Demand centres gearing up



Source: Shell LNG Outlook 2019

China and India are doubling import/regas capacity in the next 4 years

So how's the Domestic Gas Crisis going....

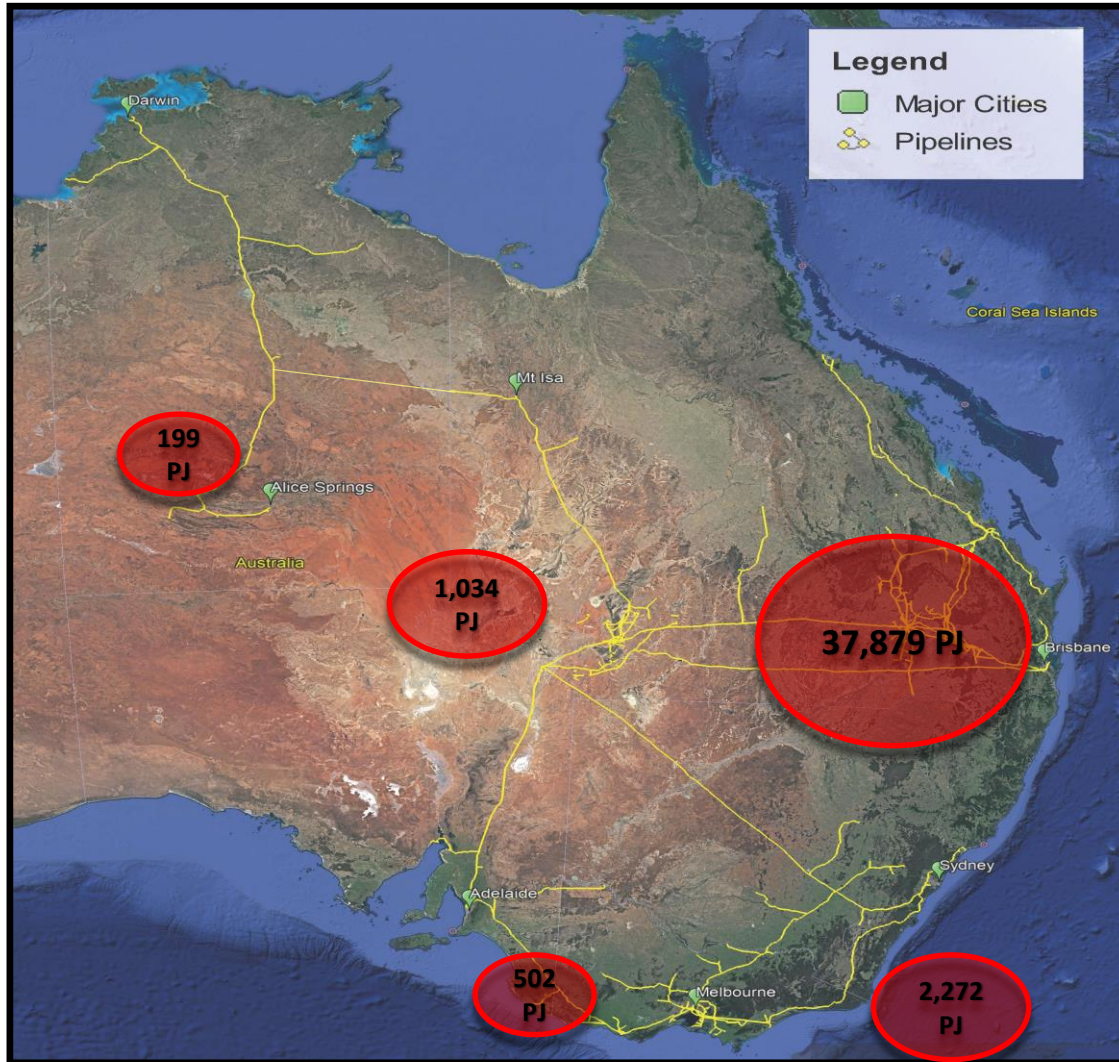


AEMO demand forecast doesn't consider renewable build out/baseload retirement
Drilling out Contingent Resources must be a priority – now – as manufacturers go to the wall
New AEMO Gas outlook due this week

East Coast Gas

2P Reserves by Basin & Ownership

Global gas players control 75% of reserves
- and therefore control Domgas



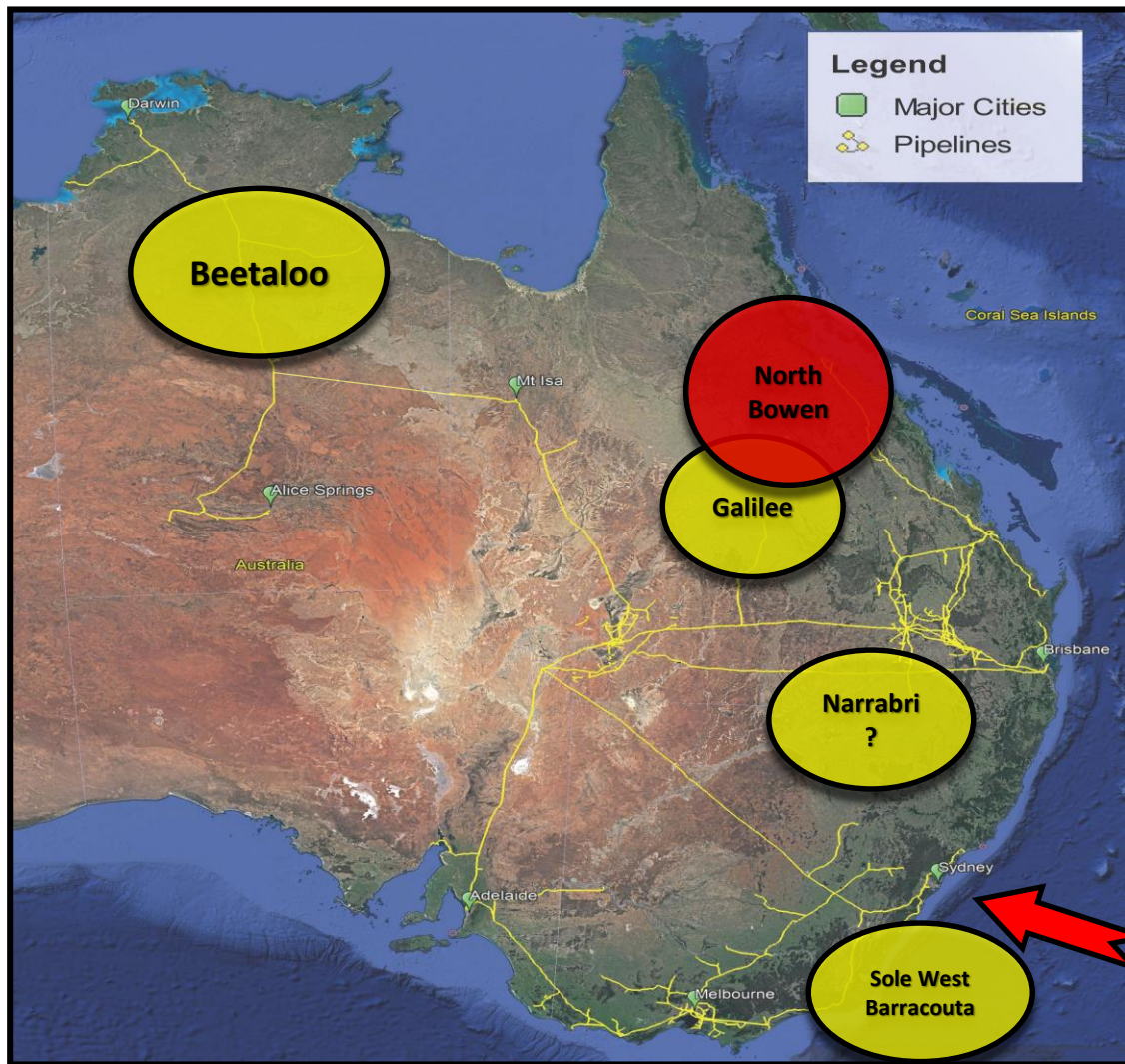
10,790 PJ

31,100 PJ



Source: EnergyQuest

So where's the new gas supply coming from?



North Bowen – ~15,000 PJ
Discovered resource and producing

Surat – Small blocks released

Galilee – ~3,500 PJ
Proof of concept

Beetaloo – 12,000+ PJ
Timing, economics, Regulation

Narrabri – 2,254+ PJ
Regulatory risk, Activism, timing

Sole; West Barracouta
LNG imports ? – price, volume

East Coast Gas Prices

(now linked to oil price through LNG netback)

- **Domestic gas price is now based on competition for supply**

Export vs Domestic; Domestic vs Domestic. LNG exporters are able to play the arbitrage on domestic vs Spot LNG price – they can choose to supply either the domestic market or the spot LNG market with extra cargos, depending on price

- **Cost of supply is increasing**

Environmental regulation and decision delays, Govt fees and charges, ASIC fees; Land access (Pristine Rivers - Qld), compensation levels to landholder and Traditional Owners (Timber Creek High Court decision), community activism, labour, services and time

- **Cost of supply needs a market price which allows profitability**

Av Cost of production of un-developed 2P = \$5.50 (AEMO 2018) + Transport

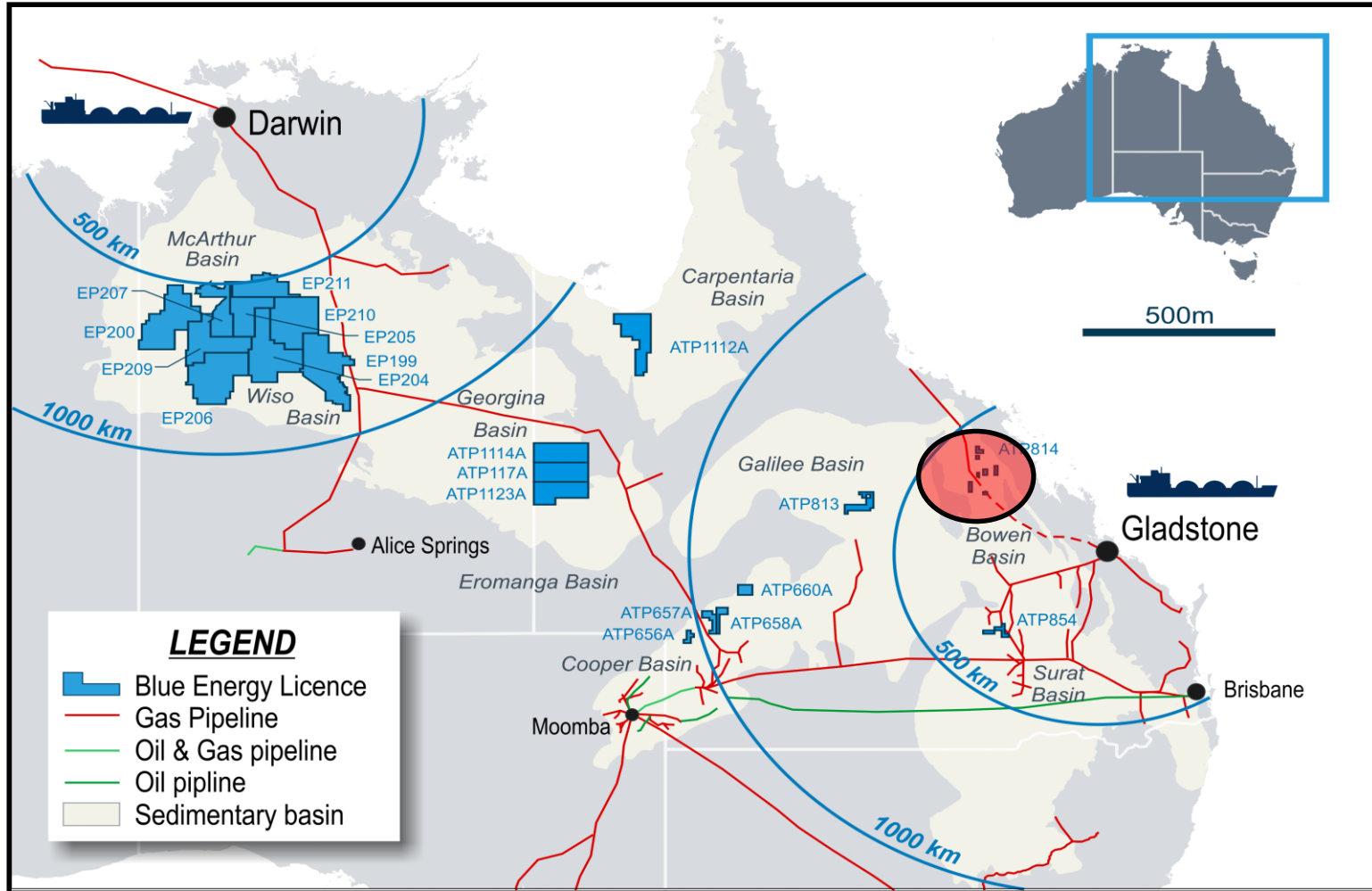
Av Cost of production of Contingent Resources = \$7.00 (AEMO 2018) + Transport

- **East Coast Domestic industrial users and jobs under threat**

More gas would safeguard 2 million jobs in gas exposed industries

Need aggregated demand profile to underwrite high risk exploration

Blue's Portfolio



Reserves close to markets and exploration upside

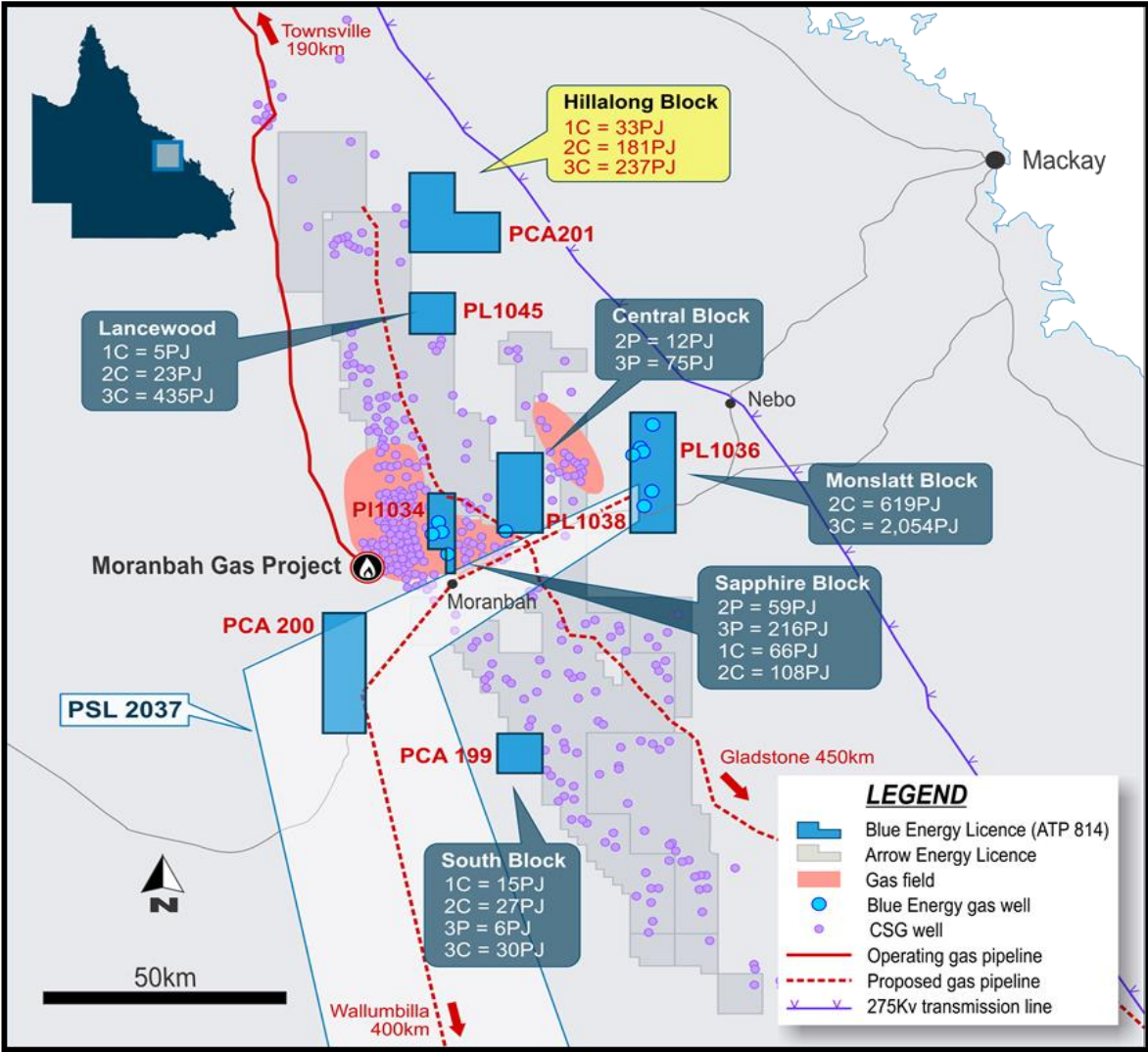


The **Bowen Basin** and ATP 814

Key to long term East Coast gas security

- Large discovered resource: 10,000 - 15,000 PJ development ready
- Arrow (Shell/Petrochina) has 80% : Blue Energy has 20%
- Arrow has an approved EIS for 6,625 wells and a pipeline licence
- A producing basin
 - 40 Tj/day into local market
 - Well flow rates up to 4 mmcf/d
- Up to 30 years of East Coast Domestic Demand
- Reserves and resources assessed by Tier 1 independent - NSAI
- Needs a pipeline connection to the East Coast Market

Blue's Bowen Gas Resource now 3,248 PJ



Blue's progress

- **Blue increased Contingent Gas Resource by 237 PJ**
 - **Total 3C = 4,179 PJ (Bowen, Galilee and Surat Basins)**
 - **Total 2P+2C = 1,237 PJ**
 - **2P = 71 PJ**
 - **3P = 298 PJ**
 - **Assessed by NSAI – Dallas based top tier global certifier**
- **Applied for Pipeline Survey Licence to connect Bowen Basin to Wallumbilla**
- **PL Applications in Bowen acreage on foot**
- **Opportunity to access Nth Qld electricity grid – uplift to gas price**

Blue's Strategy and Catalysts

- **Focussed on monetising Bowen Basin gas**
 - negotiating with gas buyers
 - progressing pipeline options
 - Increasing gas resources
 - Investigating gas fired generation to stabilise renewables
- **Capitalise on short east coast export and domestic market**
- **Continual focus on cost**

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