Another energy storm...

...or did we just sink the boat?

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Agenda

- Gas supply and demand
- Gas prices
- Electricity
- The government steps in
  - Gas price caps
  - Reasonable price test
  - LNG diversion to domestic markets
- So what?

ENERGYQUEST

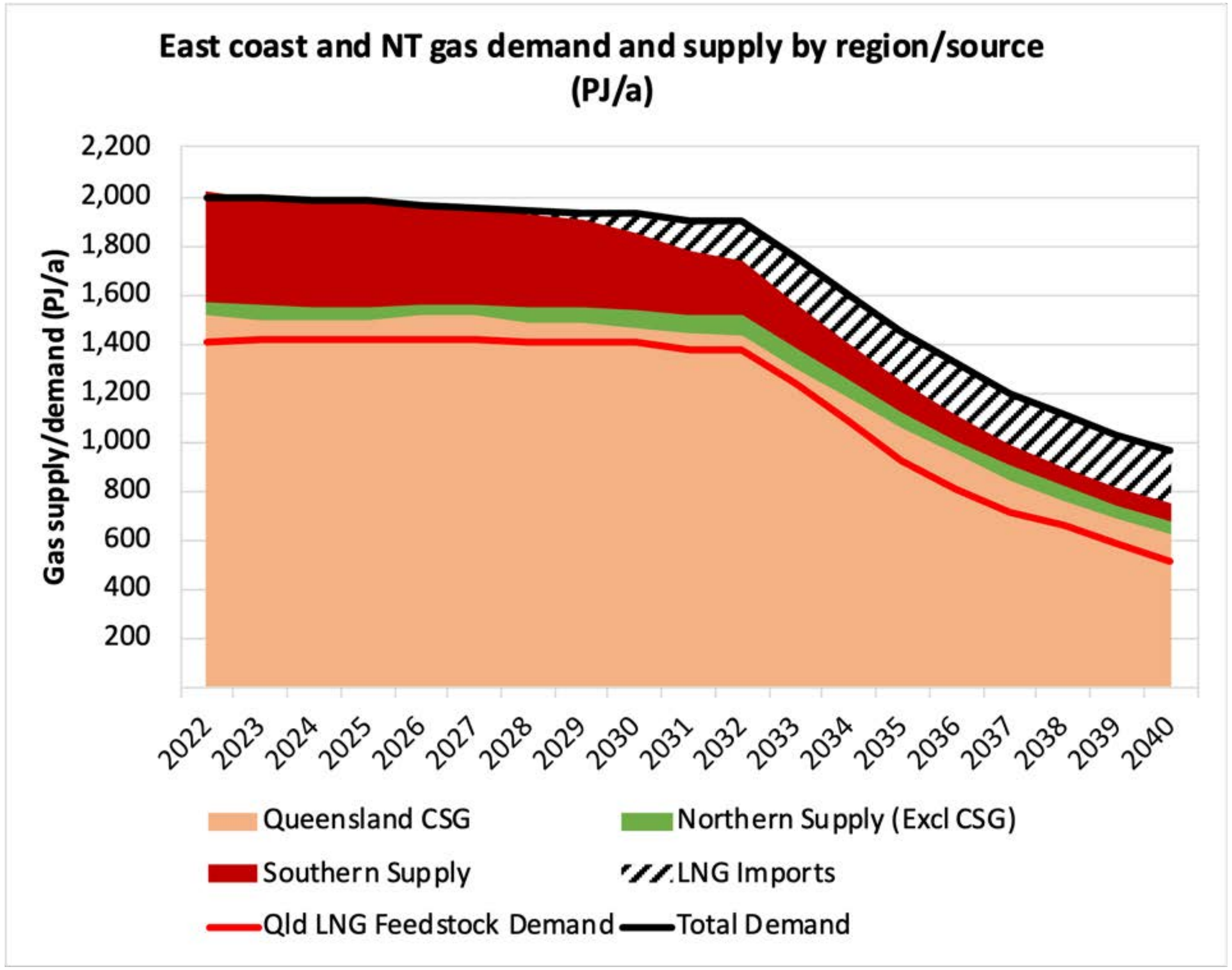
Providing timely data, rigorous analysis and sound strategic advice on Australian energy.

EnergyQuest…

- *an advisory firm, providing independent energy market analysis and strategy for energy companies, energy buyers, investors and governments around Australia and the world.*
- *Founded in 2005 by Graeme and Susan Bethune.*
- *Our publications include the EnergyQuarterly, Australian LNG Monthly and East Coast Gas Outlook reports.*

East coast gas supply

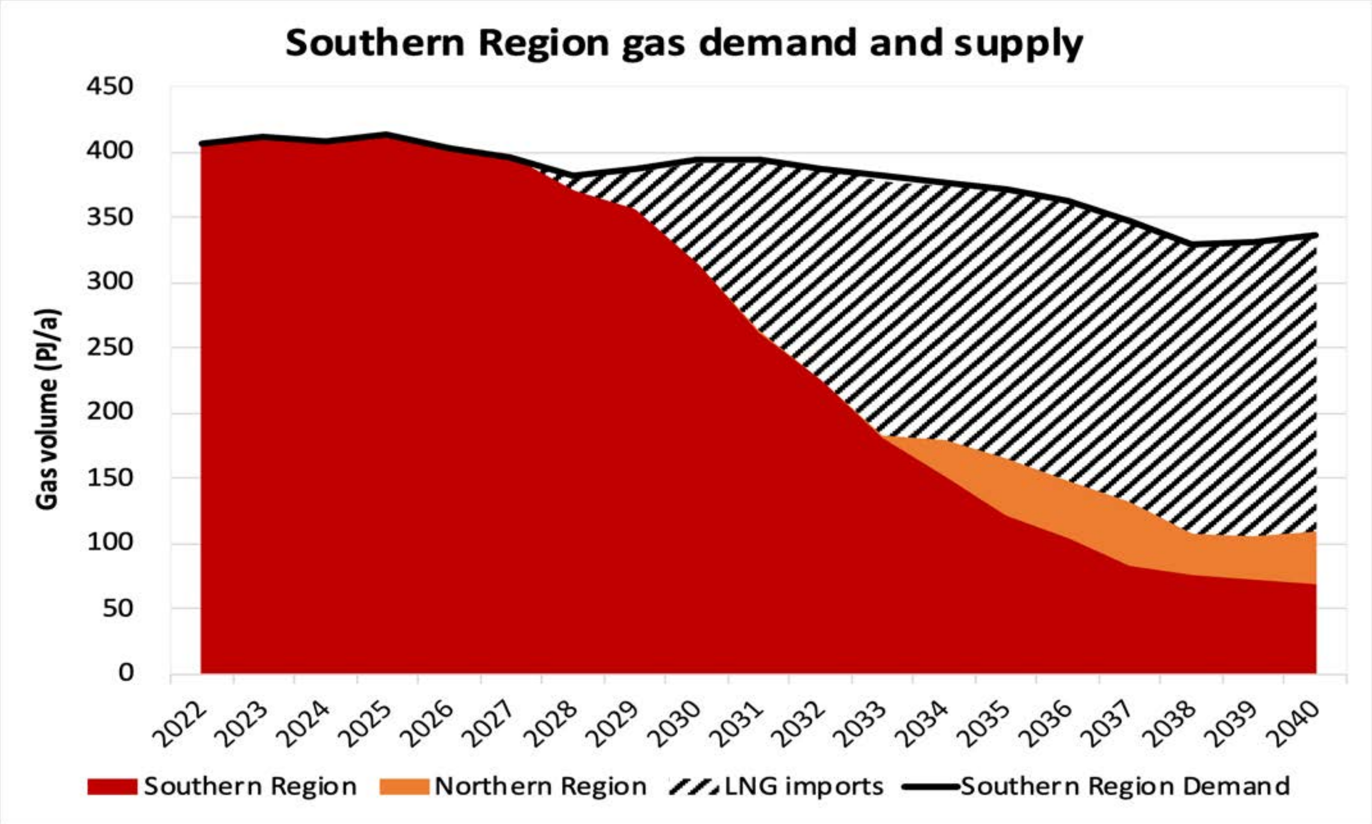
- Supply will shortfall demand by 2028 when LNG imports will be required



Source: AEMO, EnergyQuest ECGO 2022 analysis

South-east coast gas supply

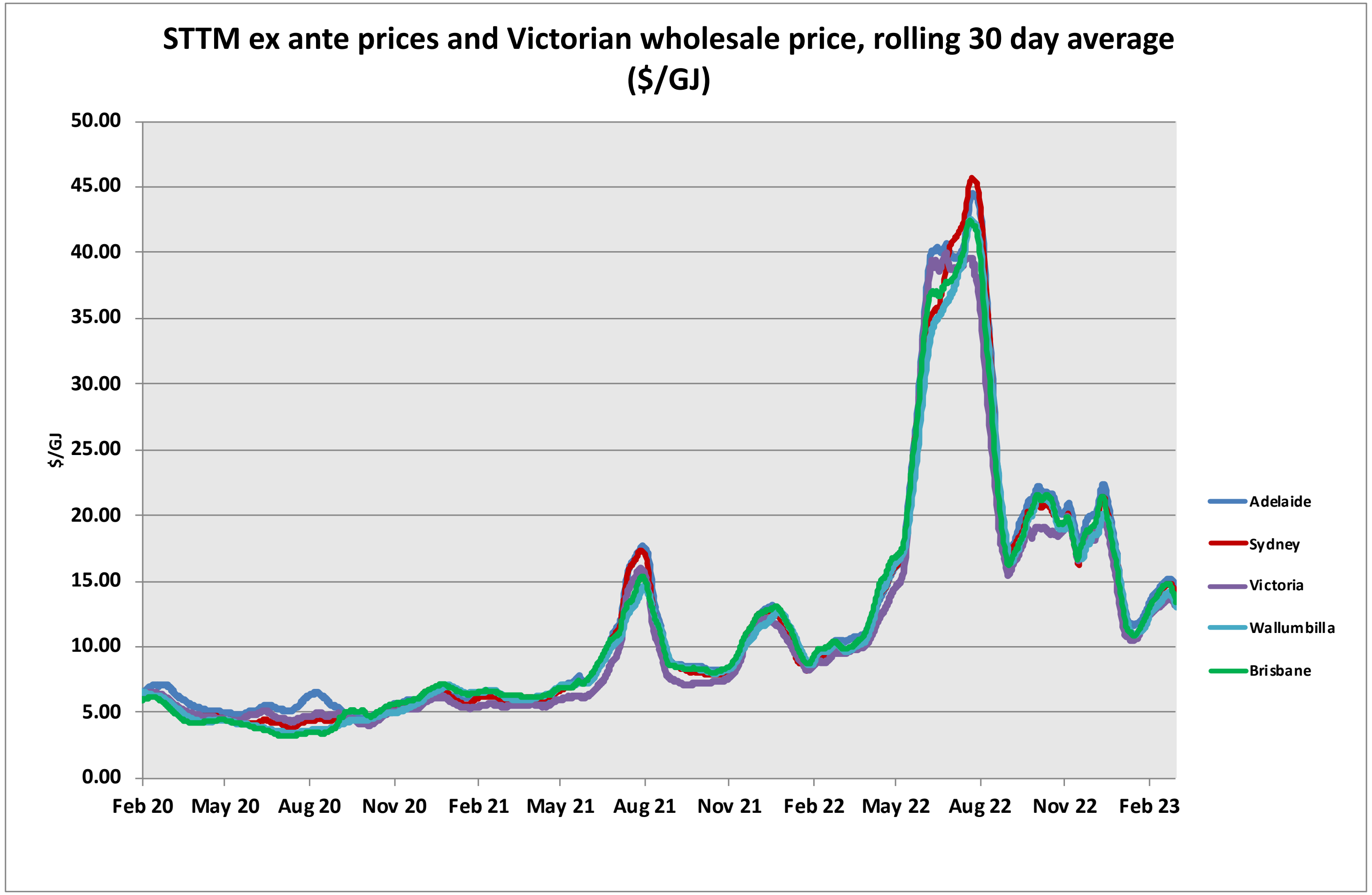
- Additional gas supply from the Gippsland and Otway Basins has improved supply over the short term, but without reserves adds from exploration or better commercialisation, LNG imports are still required.
- By 2033, half of the Southern Region will be supplied by LNG imports.



Source: AEMO, EnergyQuest ECGO 2022 analysis

Spot gas prices

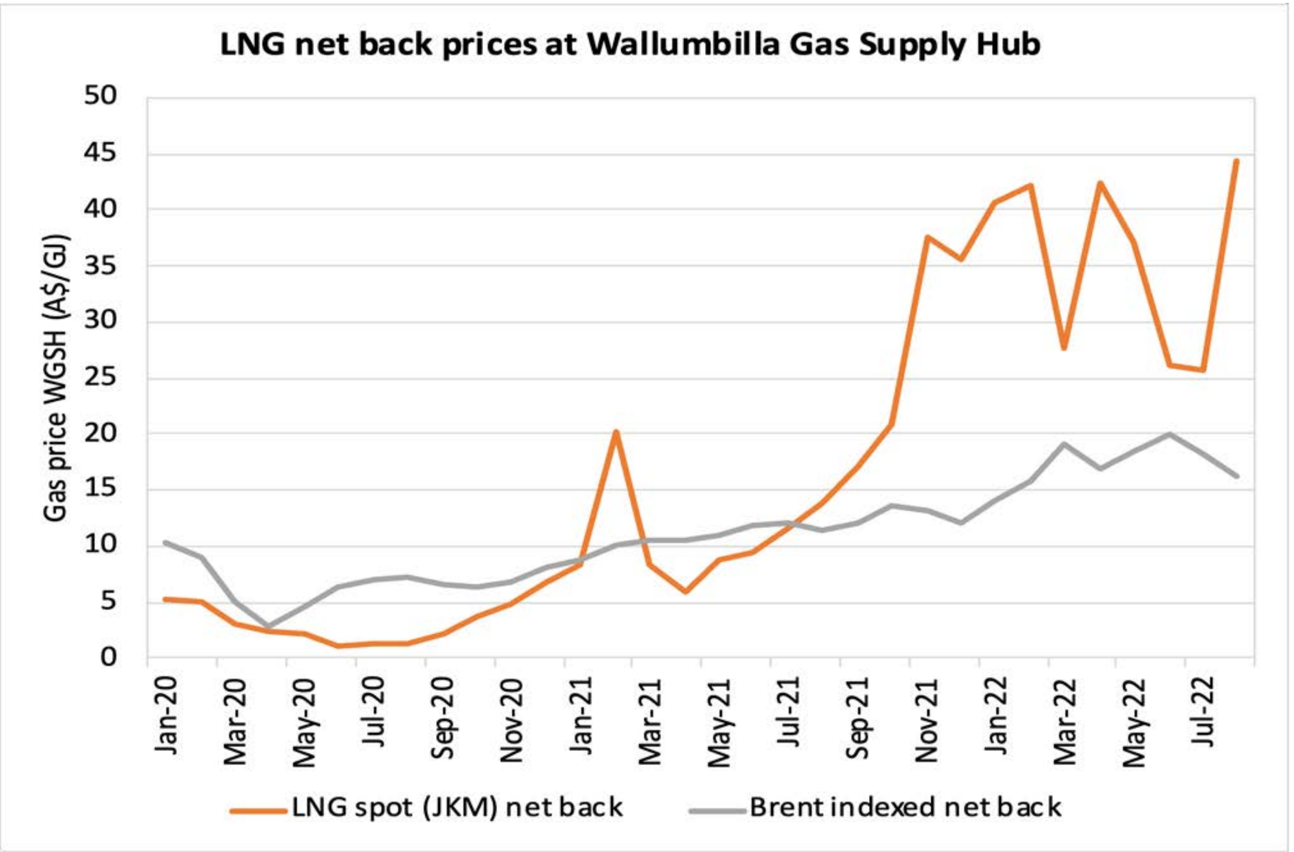
- In May 2022,gas spot price broke through long term trends reaching more than $40/GJ



Source: AEMO, EnergyQuest analysis

Domestic gas prices

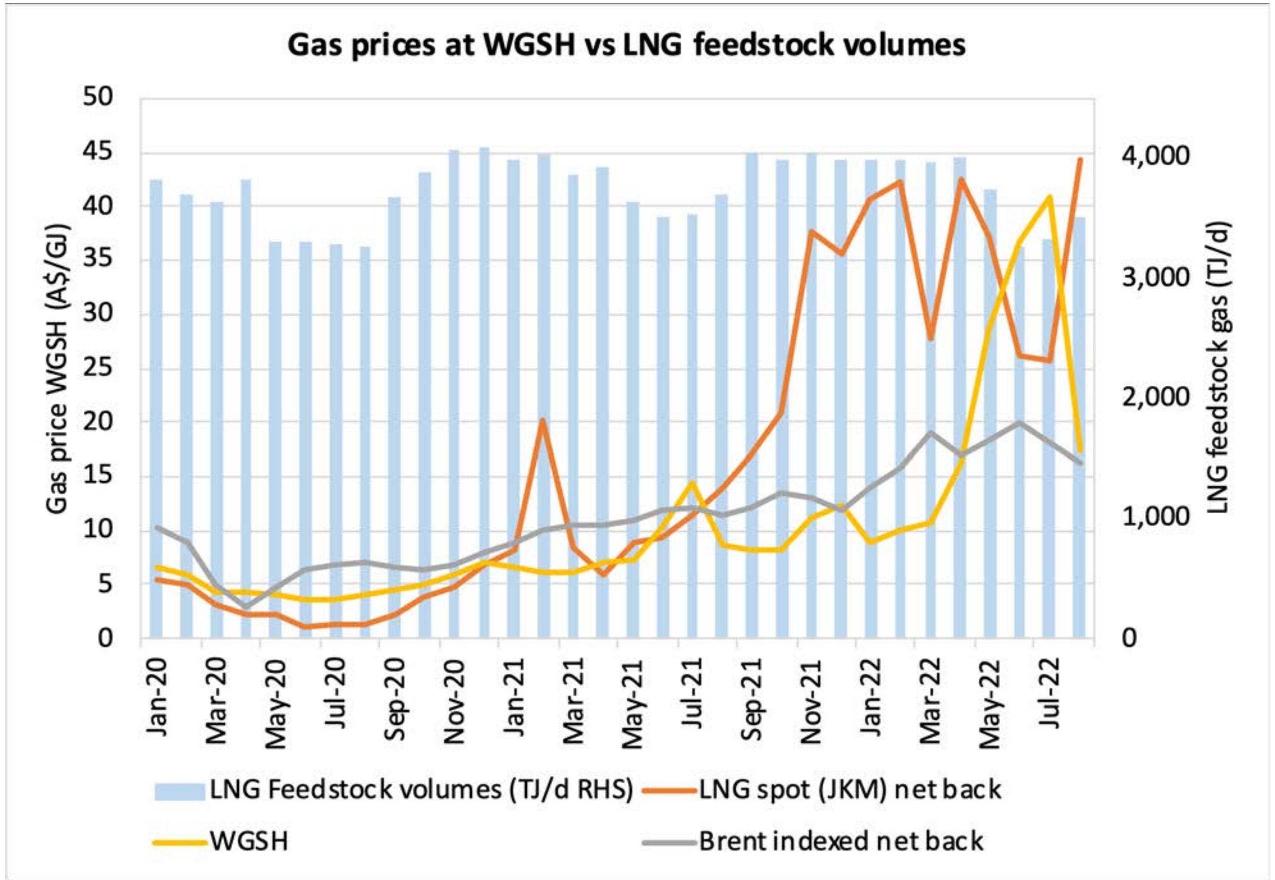
- Contracted LNG (Brent indexed) has shown much less volatility compared to the Asian LNG spot prices (JKM)



Source: AEMO, EnergyQuest ECGO 2022 analysis

Domestic gas prices

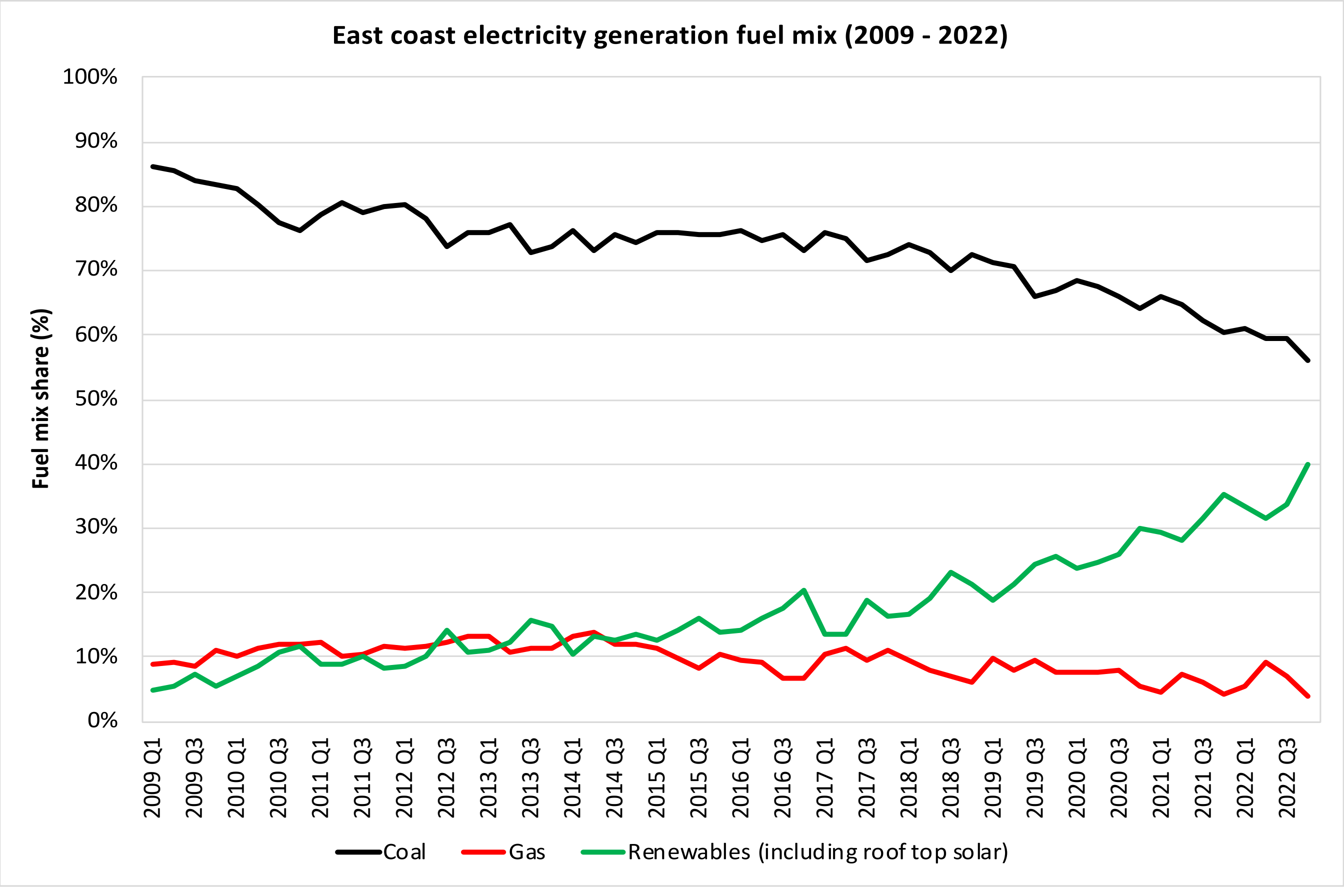
- WGSH spot price is poorly correlated to LNG feedstock volumes and JKM prices



Note: Correlation: WGSH vs LNG volumes -28%; WGSH vs JKM, 58%
Source: AEMO, EnergyQuest analysis

Electricity – fuel mix

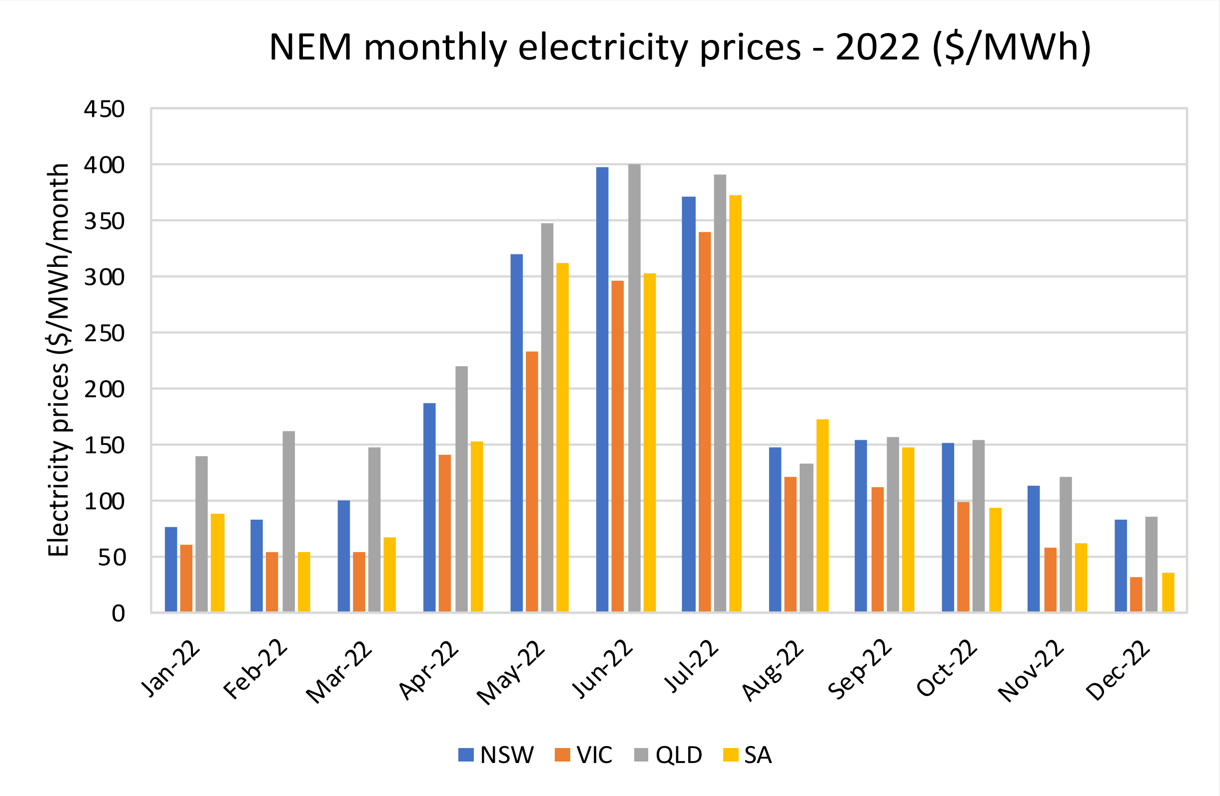
- Renewables have grown to 40% of east coast power generation fuel, while gas-fired power falling to 4% in Q4 2022.

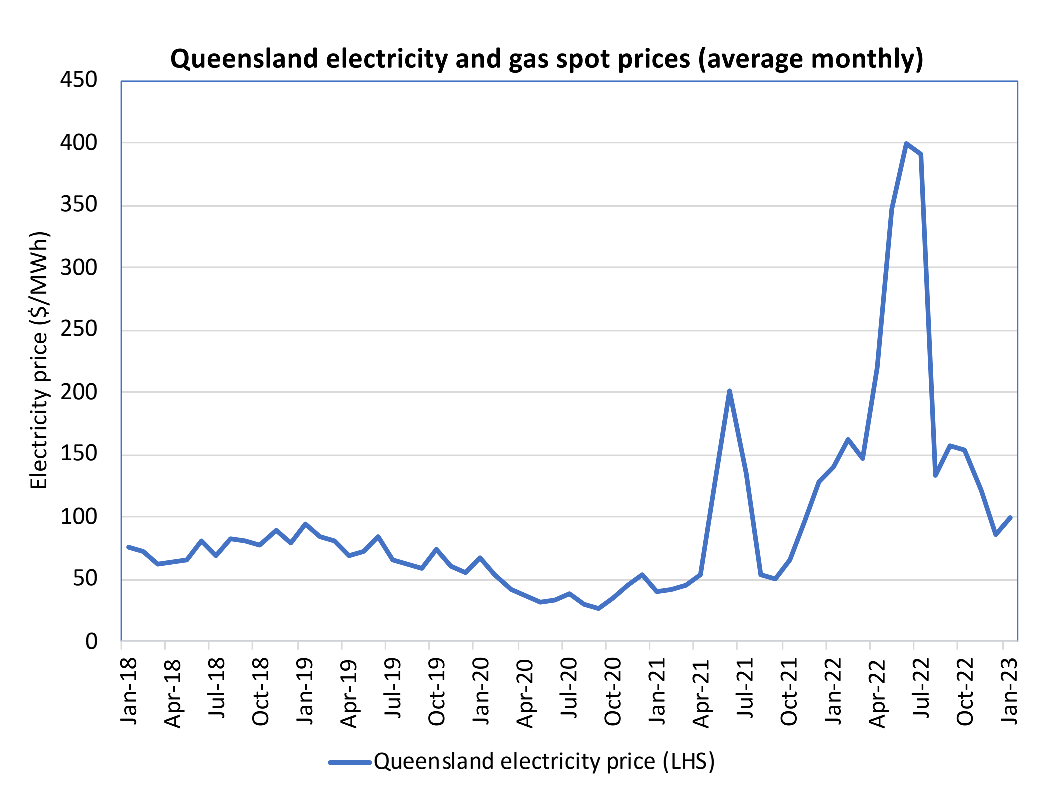


Source: AEMO, EnergyQuest analysis

Electricity – prices in 2022

- During 2022, winter electricity prices more than tripled the summer average prices, reaching up to $400/MWh monthly average
- Compared to the highest monthly average in 2021 of $200/MWh with the Callide outage in June

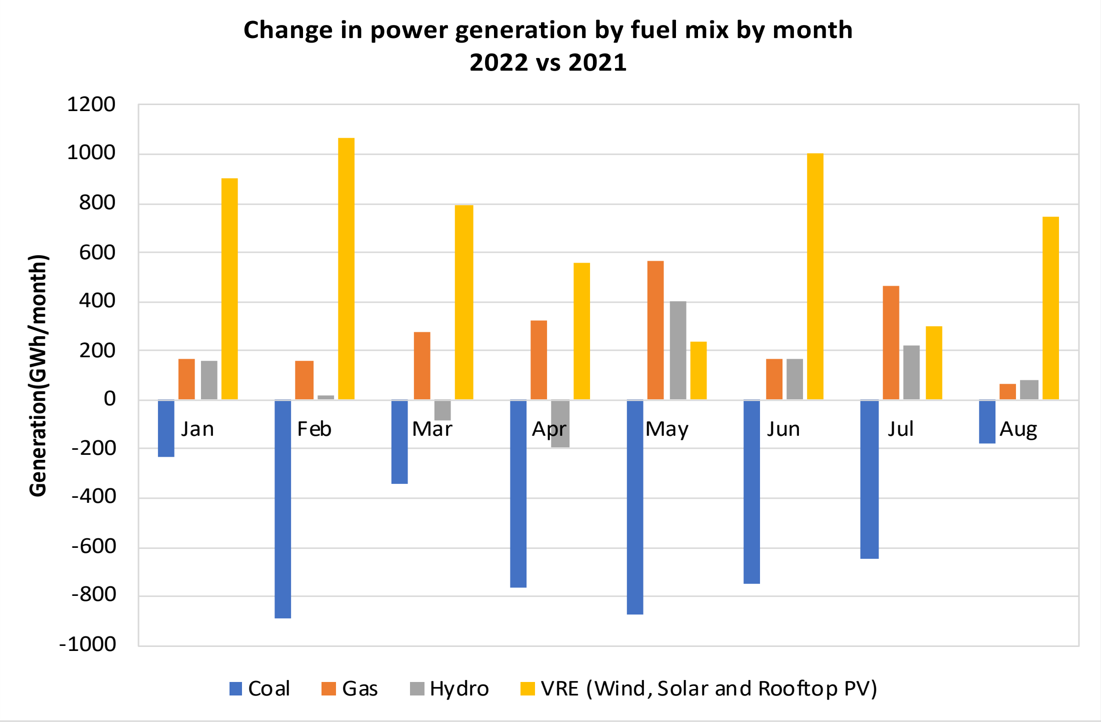


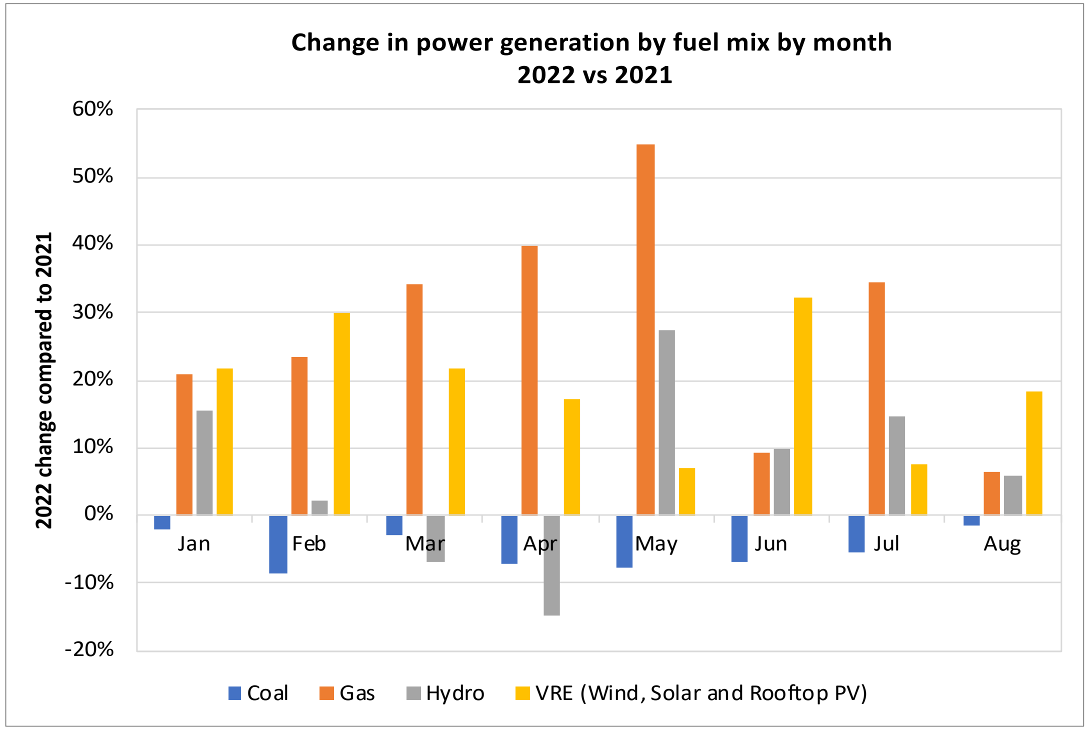


Source: AEMO, EnergyQuest analysis

Electricity – fuel mix

- Compared to last year, 2022 coal-fired power generation was down in every month to August, offset by substantial gains in gas, hydro and variable renewable energy.
- This caused very large increases in the non-coal fuels to offset the lower CPG. GPG increased 54% in May 2022 compared to last year.

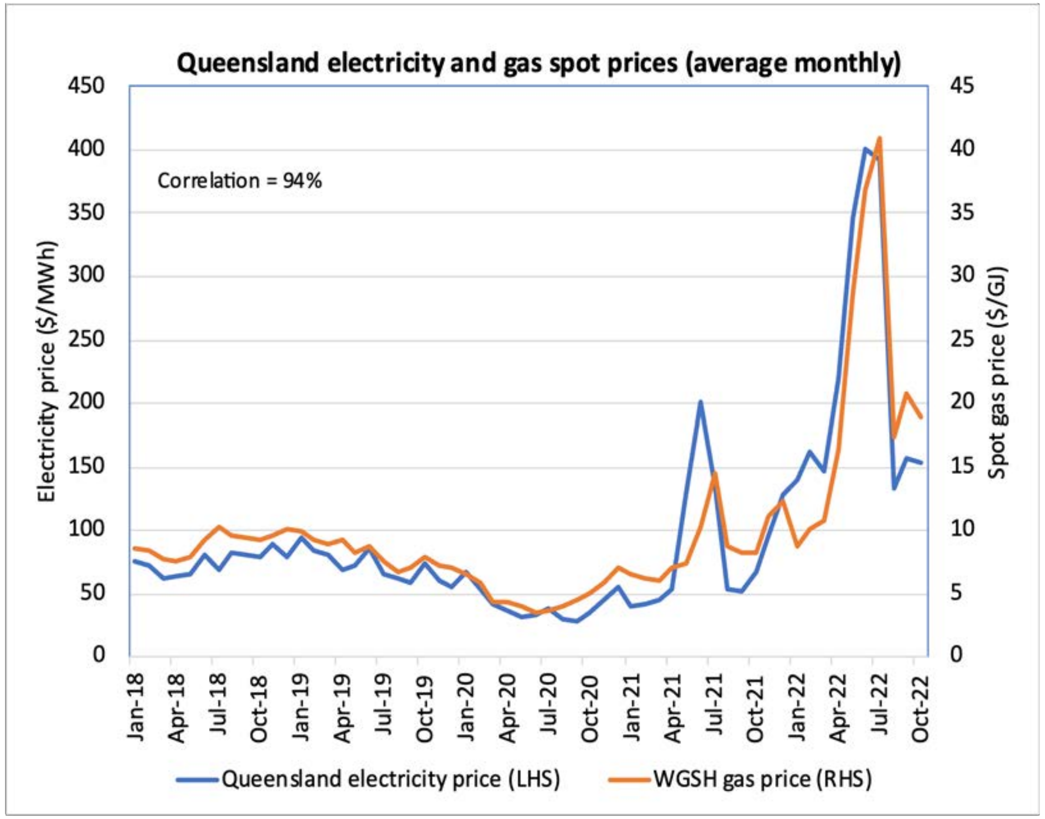




Source: AEMO, EnergyQuest analysis

East coast domestic gas prices

- Spot gas prices on the east coast are well correlated to electricity prices...
- ...not international gas prices or exported LNG volumes



Source: AEMO, EnergyQuest ECGO 2022 analysis

Government action

In face of the energy price volatility, the government stepped in:

- **$12/GJ price cap** on new domestic wholesale gas contracts for 12 months – December legislation passed
- a **mandatory code of conduct** for the gas market including a **reasonable price provision**
- major changes to the **Australian Domestic Gas Security Mechanism (ADGSM)** announced in February 2023, to impact LNG exports

Government action

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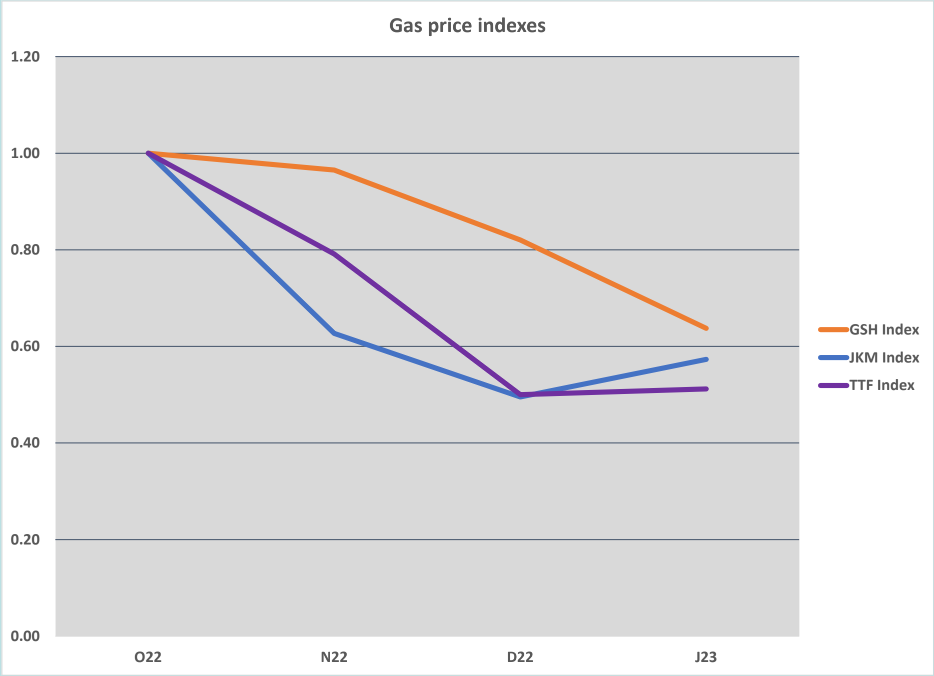
- **$12/GJ price cap** on new domestic wholesale gas contracts for 12 months – December legislation passed
  - The government press release stated that the primary reason for the sharp increase in gas and electricity prices was Russia's war on Ukraine. EnergyQuest cannot find a correlation.
  - The intervention was a response to forecasts by Treasury of further steep rises in energy bills in 2023 and 2024 and is part of a larger package of measures that includes a price cap of $125/tonne on thermal coal.
  - Both the EU and Australia announced gas price caps in the week before Christmas. However, the timing is where the similarity ends.
  - The EU cap triggers if the Dutch TTF month ahead price exceeds A$76/GJ for three days and if it is A$14 higher than a reference price for LNG on global markets for the same period. Once triggered the mechanism will remain active for at least 20 days. The TTF benchmark was A$20/GJ on 1 March.



Government action

In face of the energy price volatility, the government stepped in:

- a **mandatory code of conduct** for the gas market including a **reasonable price provision** in a proposed Bill, which proposes government controls:
  - **A maximum, minimum, and reasonable price** (defined by the government).
  - **The terms** on which gas is to be supplied or acquired.
  - Requirements for participants to supply gas, even where the participant is no longer active in the market.
  - Matters that will be taken into account in determining whether a participant is dealing in **good faith.**
  - **When participants must enter into or not enter into an agreement** to supply or acquire gas.

Government action

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- major changes to the **Australian Domestic Gas Security Mechanism (ADGSM)** announced in February 2023, to impact LNG exports
  - The Government's draft gives the Minister for Resources the power to "**prohibit exports of LNG during a domestic shortfall quarter".**
  - The Minister will have the **ultimate power to decide whether a shortfall is imminent**. These will be difficult decisions involving judgements about future weather (affecting energy demand and renewables performance), offshore Victorian gas field performance and future unplanned coal generator outages.
  - Foundational LNG sales contracts, once considered sacrosanct, are explicitly in play with government making it clear **it will, if necessary, force gas produced for LNG export to be diverted** to the domestic market.

Government action

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- major changes to the **Australian Domestic Gas Security Mechanism (ADGSM)** announced in February 2023, to impact LNG exports
  - The ACCC Wallumbilla LNG netback for February 2023 is $33.42/GJ. If a producer is forced to sell gas domestically for $12/GJ rather than exporting it for $33.42/GJ, the loss is $21.42/GJ or $1.2 billion per million tonnes of LNG diverted
  - In 2022, Australia supplied 42.7% of Japan's LNG imports, 34.5% of China's imports and 25.1% of Korea's imports. Gladstone provided 19.6% if China's LNG
  - APLNG spends over $2 billion pa and said the pricing intervention will be a significant factor in whether investment continues to flow Similarly, GLNG will spend more than $1 billion this year in drilling wells and developing infrastructure to support supply into its long-term contracts
  - LNG import projects are dead at $12/GJ price caps

So what?

When prices are capped, demand goes up, not down

- "We economists don't know much, but we do know how to create a shortage. If you want to create a shortage of tomatoes, for example, just pass a law that retailers can't sell tomatoes for more than two cents per pound. Instantly you'll have a tomato shortage. It's the same with oil or gas." – **Milton Friedman, Nobel laureate economist**

Supply is challenged, and capital moves on

- BHP, ConocoPhillips, ExxonMobil, Santos, Beach Energy, Cooper Energy and Mitsui have all warned this will worsen the availability of energy and harm the environment for investment just when vast amounts of capital are needed to fund the energy transition

The risk profile of Australia for international investors and customers just changed forever

- Barossa/Caldita, Sunrise, Egypt or Gladstone?

Industry must change its narrative, and look at the world through the eyes of politicians and voters

Thank you

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