

2022 Gas Statement Of Opportunities (GSOO) report and Victorian Gas Planning Report (VGPR) Update

Release webinar

1 April 2022



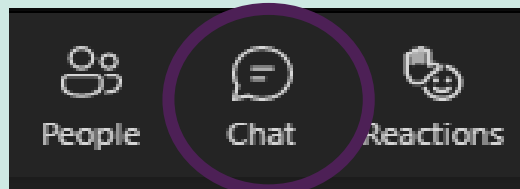
We acknowledge the Traditional Owners of country throughout Australia and recognise their continuing connection to land, waters and culture. We pay our respects to Elders past, present and emerging

Agenda

2022 Gas Statement of Opportunities (GSOO) report and 2022 Victorian Gas Planning Report (VGPR) Update

1. About the 2022 GSOO and VGPR
2. Summary of key messages
3. Gas consumption forecasts
4. Gas supply outlook
5. Adequacy assessment

Using the chat for Q&A



Click the chat icon

Type your questions at any time

Neale will facilitate Q&A

About the 2022 GSOO and VGPR

The GSOO incorporates:

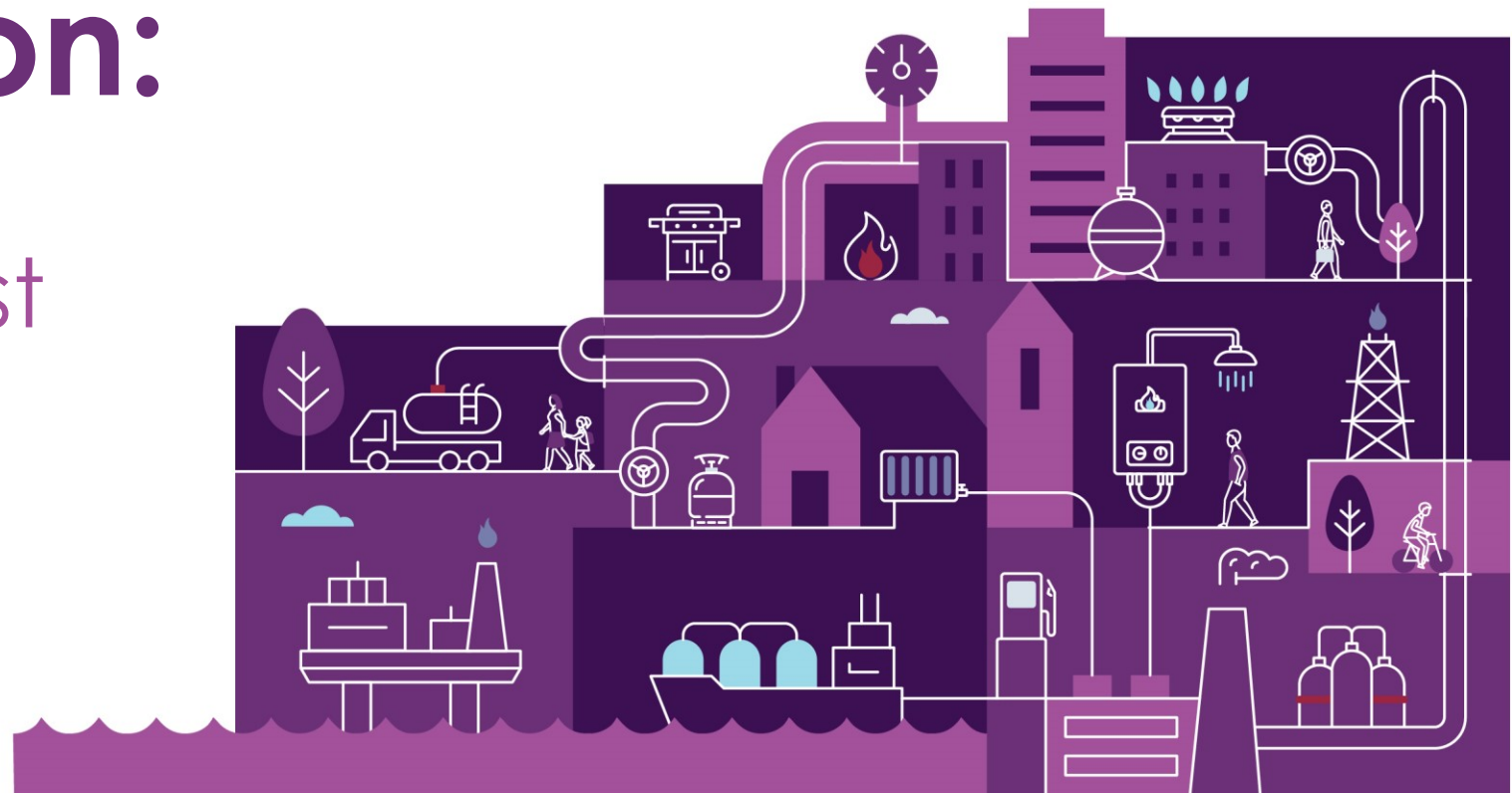
- Gas demand forecasts of the eastern and south-eastern gas markets
- Gas supply adequacy assessment over a 20-year outlook period to 2041
- Discussions about potential actions and opportunities in the short and long term

The VGPR provides a more detailed look at Victoria, and incorporates:

- Gas supply adequacy assessment for the Declared Transmission System (DTS) over a 5 year outlook period to 2026
- A discussion on the capacity and adequacy of the DTS to meet forecast changes in supply and demand, and present potential solutions

An energy sector under transformation:

Impacts on the East Coast gas sector



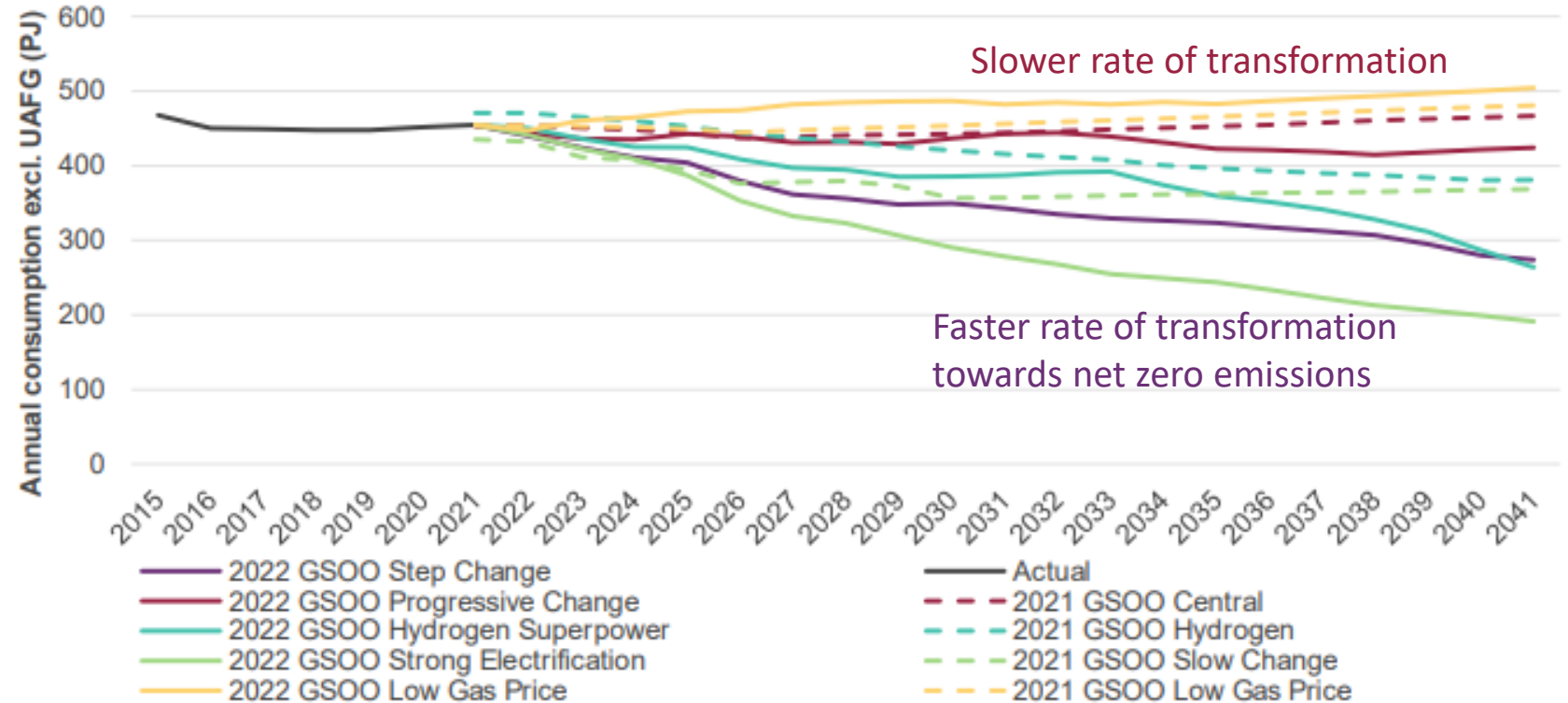
Key messages

The future path for gas is uncertain, as Australia transitions towards a net-zero emissions economy.

- From next year, the forecast supply-demand balance is tight:
 - Shortfall risks exist in winter 2023 under extreme (1-in-20) conditions.
 - New greenfield infrastructure solutions unlikely to be operating in time to resolve these risks
 - Curtailment of gas generation is key mechanism available to mitigate shortfall risks
- In the longer term:
 - New gas resources will be needed to offset declining production.
 - The timing and magnitude of future supply gaps is uncertain, influenced by gas consumption decline as consumers shift to electricity or zero-emission fuels.
 - Flexible infrastructure solutions will be needed to cover peaks that are significant but infrequent

Domestic gas consumption outlook (excluding gas generation)

Transition to a net zero economy is anticipated to affect future gas system needs

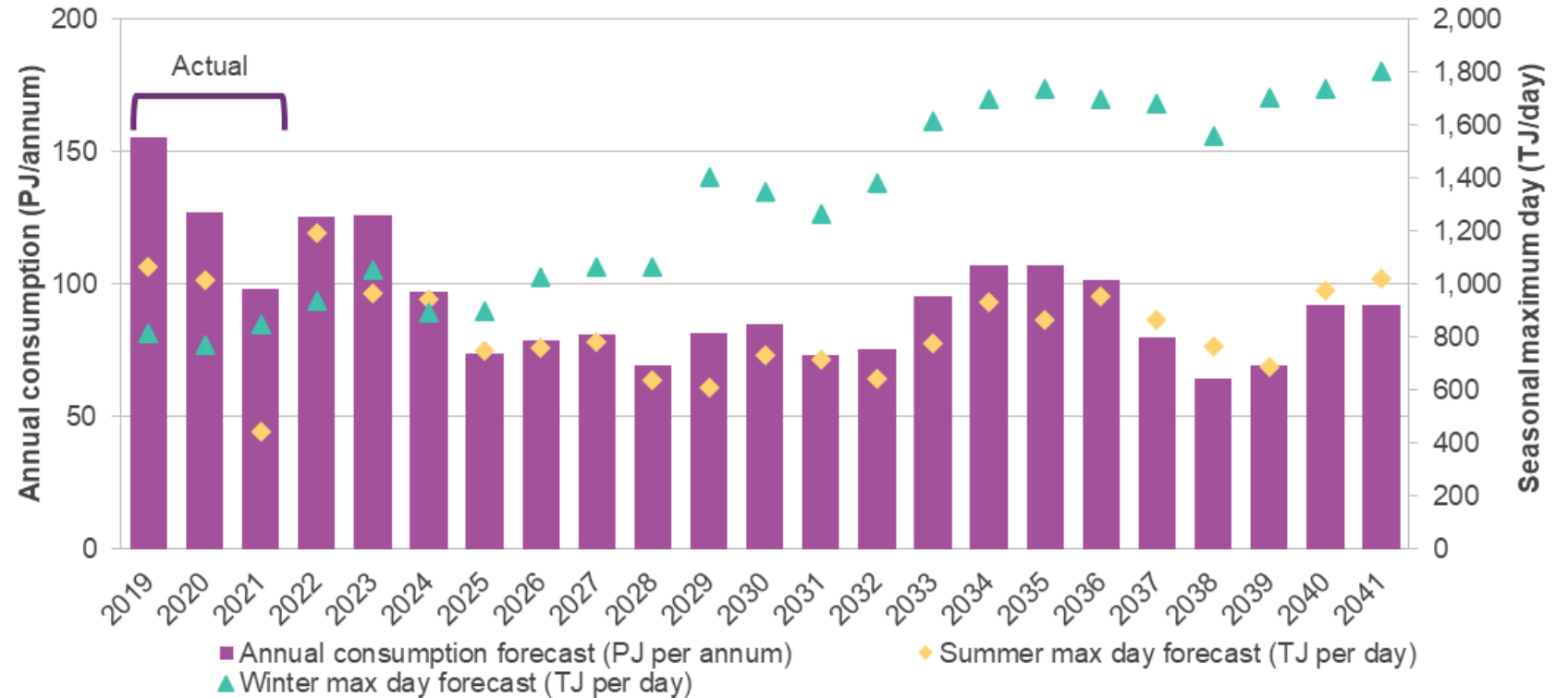


The future role of natural gas as Australia transitions towards net zero emissions is a major uncertainty, exemplified by the speed of electrification and the potential impact of hydrogen

Gas generation consumption and demand outlook

Gas generation projected to become increasingly peaky

Gas will retain a critical role in maintaining reliability and security in the NEM.



- As consumers electrify heating loads, winter peak gas generation demand will increase
- Despite falling consumption, the value of gas generation in firming the NEM increases

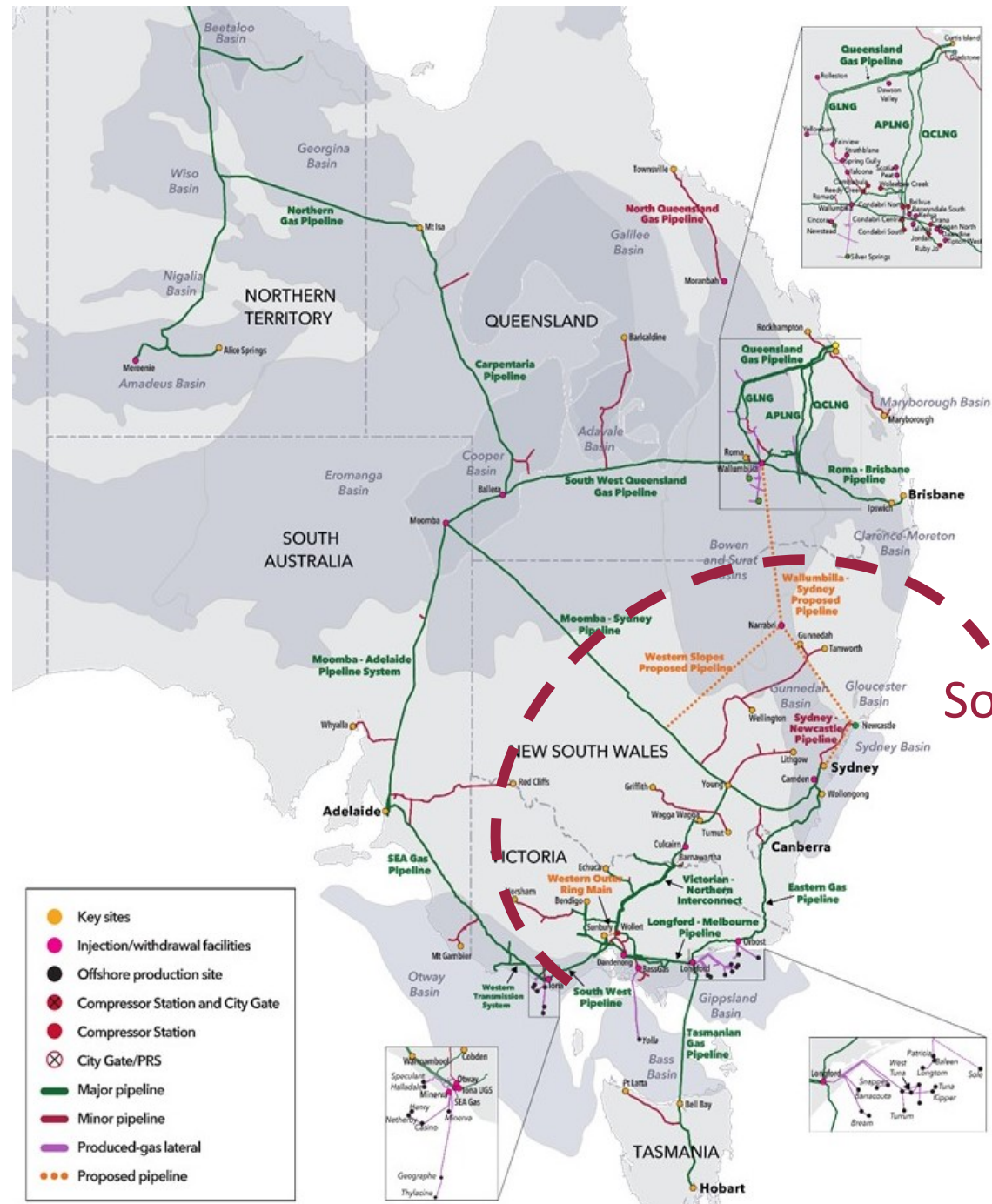
Main domestic demand in south-east but most reserves are in the north

Basin	2P reserves
Bowen/Surat/Gunnedah	21,818
Clarence-Moreton	2,083
Cooper/Eromanga	1,337
Galilee-Drummond	3
Bass	147
Gippsland	2,014
Otway	832
Sydney (Camden)	5
Total	31,900

North

South-east

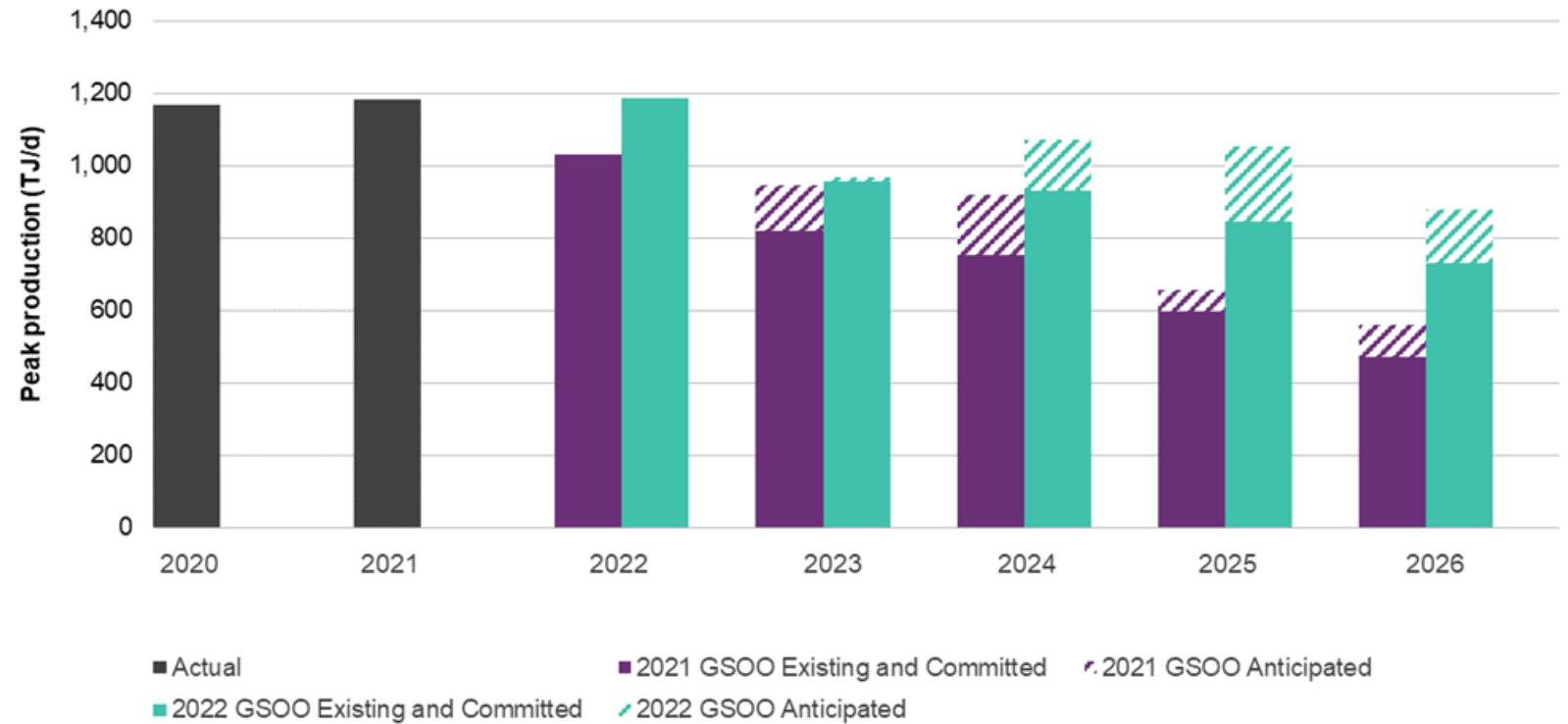
Reserves and resources as at December 2021
Source: Rystad Energy



South-east

Improved outlook for south-eastern daily production

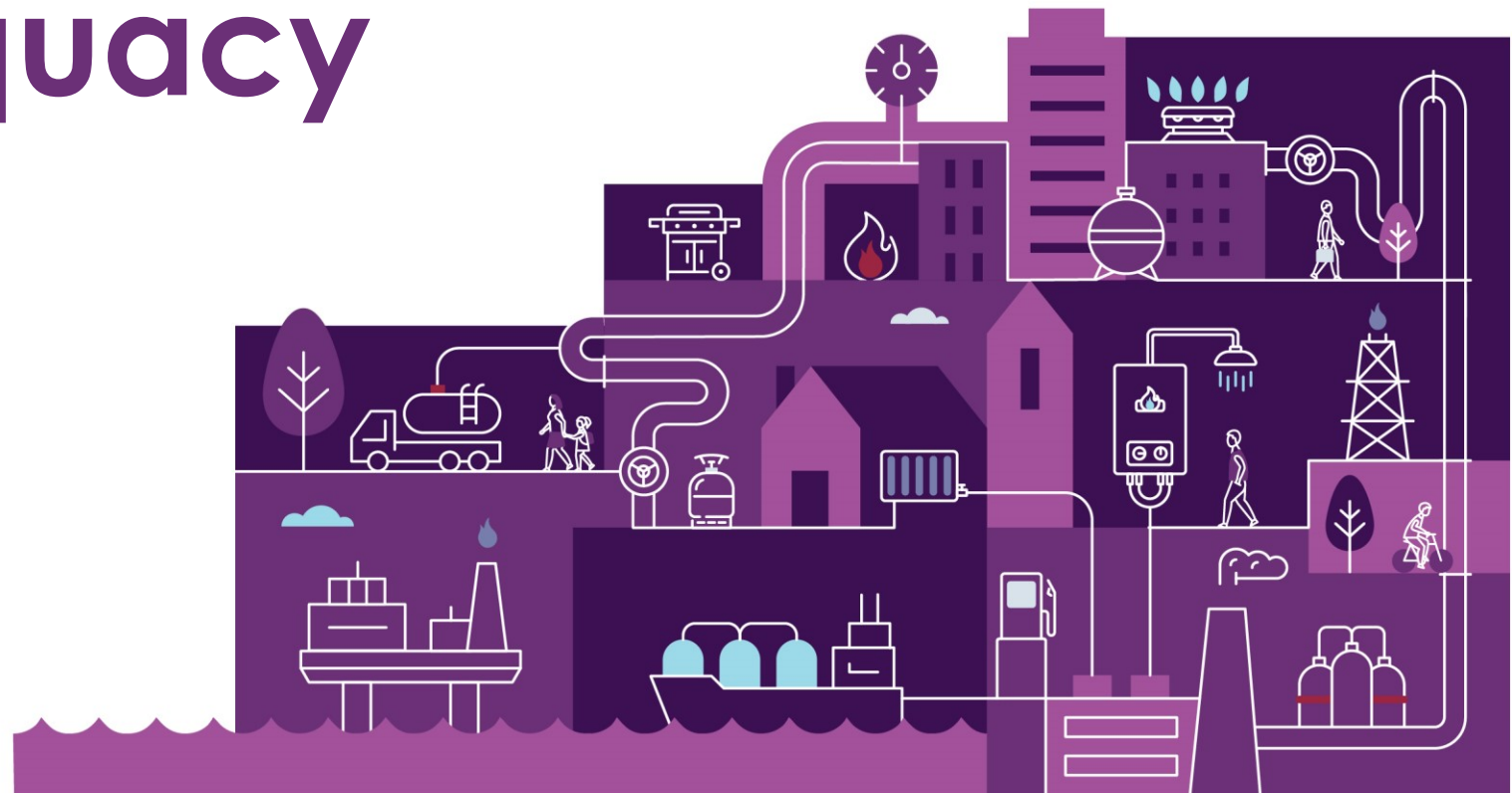
- Higher production from legacy gas fields than forecast in 2021 GSOO
- Decline in production capacity continues to be forecast from 2023



Beyond production, south-eastern supply is helped by:

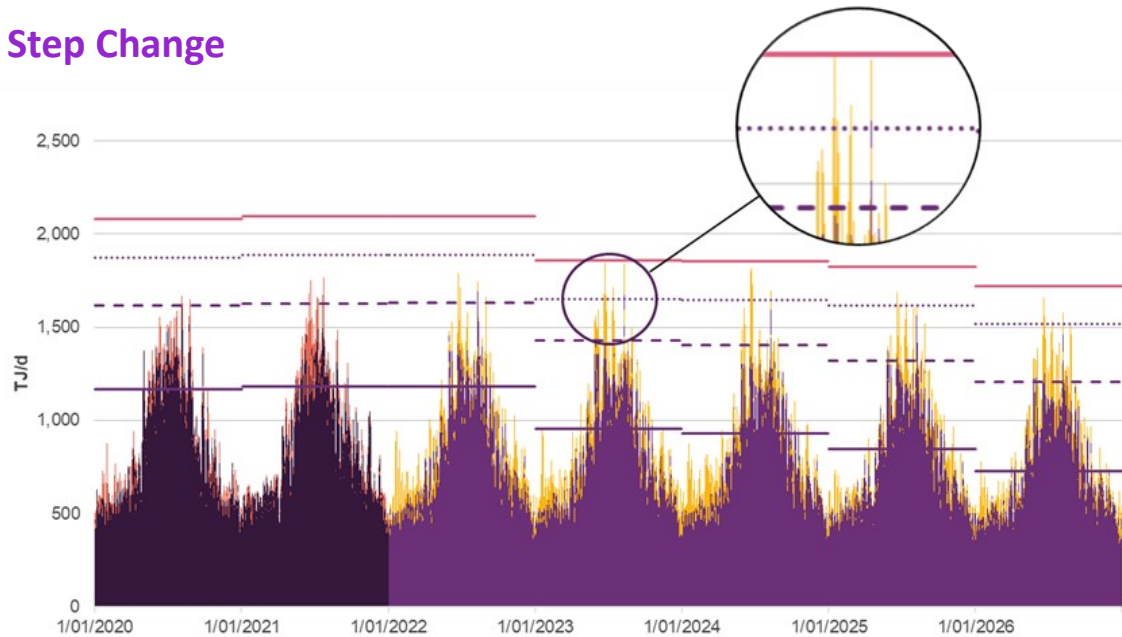
- Committed increase in pipeline capacity supplying the region (MSP/SWQP and WORM)
- Anticipated development of Port Kembla Energy Terminal (PKET)

Supply adequacy



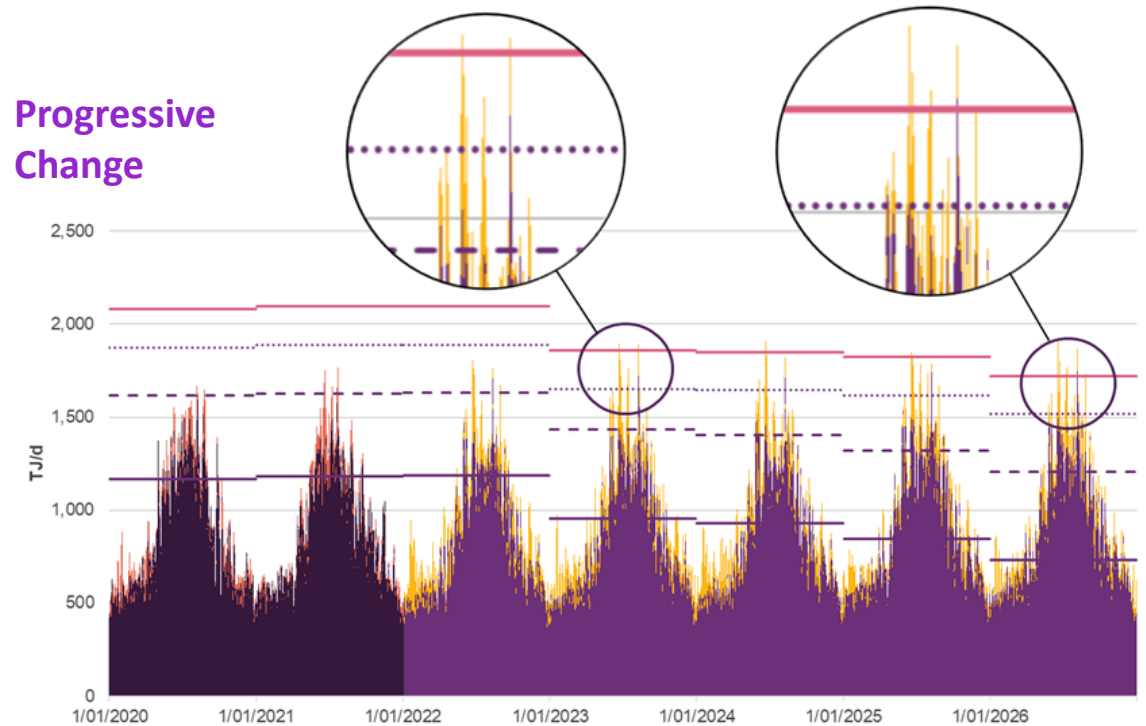
Daily adequacy assessment – shortfall risks depends on future demand outlook

Step Change



- Actual south-eastern demand (gas generation)
- Actual south-eastern demand (industrial, residential and commercial)
- Forecast south-eastern demand (gas generation)
- Forecast south-eastern demand (industrial, residential and commercial)

Progressive Change



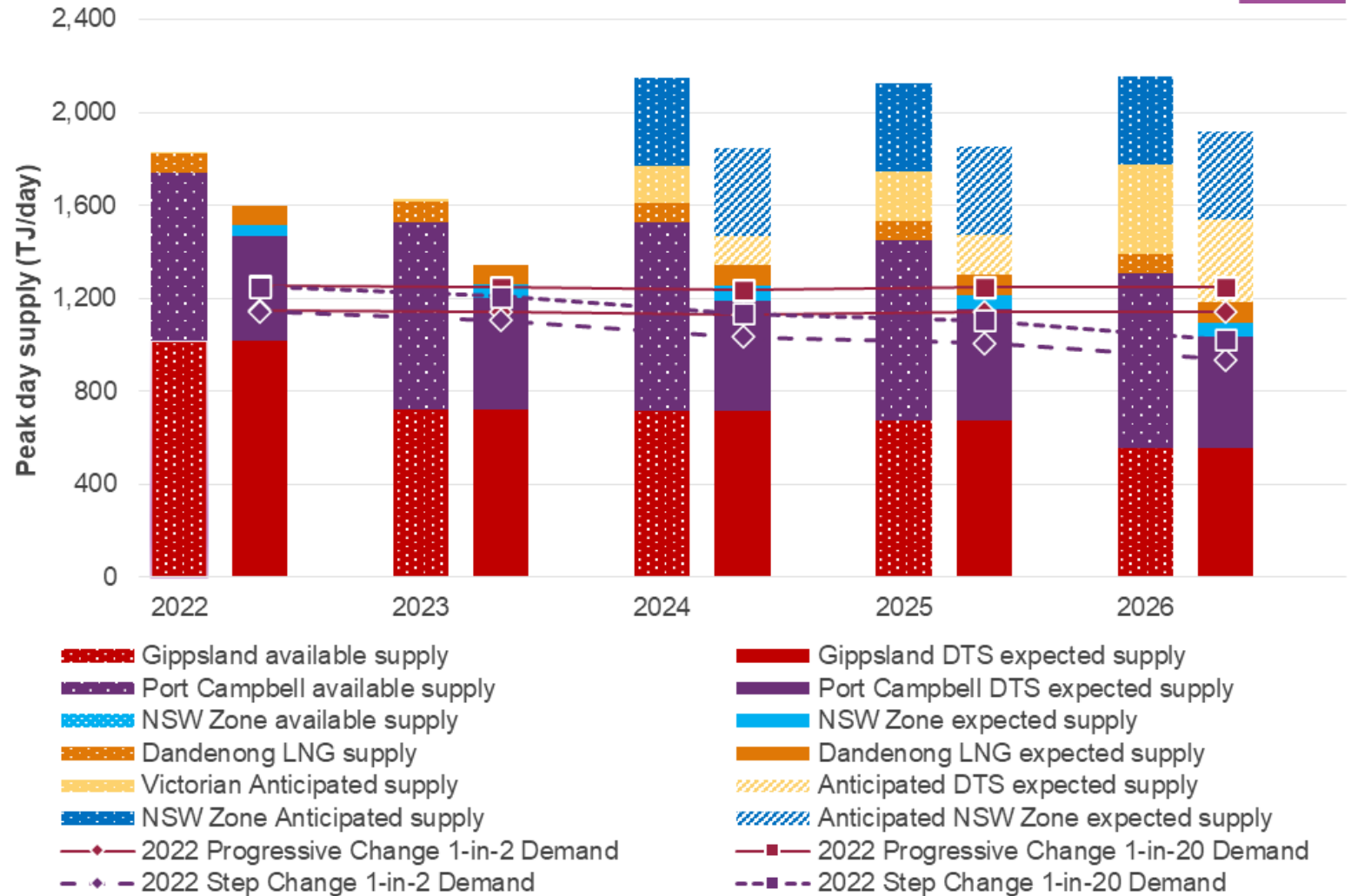
- Max. south-eastern production
- Max. south-eastern production and MSP pipeline capacity
- Max. south-eastern production, MSP and constrained deep storage
- Max. south-eastern production, MSP, constrained deep, and shallow storage

Step Change: If urgent action is undertaken to lower gas demand, a gas shortfall can be narrowly avoided

Progressive Change: If demand remains high due to slower transformation, small and infrequent shortfall risks are forecast

Victorian supply adequacy is tight over the outlook period

- Large reduction in Gippsland production in 2023.
- Large quantity of Port Campbell supply constrained by the South-West Pipeline (SWP)
- Finely balanced over the outlook period (2023-2026)
- Limited capacity to support gas generation.
- No anticipated projects are expected to be implemented prior to winter 2023.
- Development of anticipated projects from 2024 would reduce supply tightness.

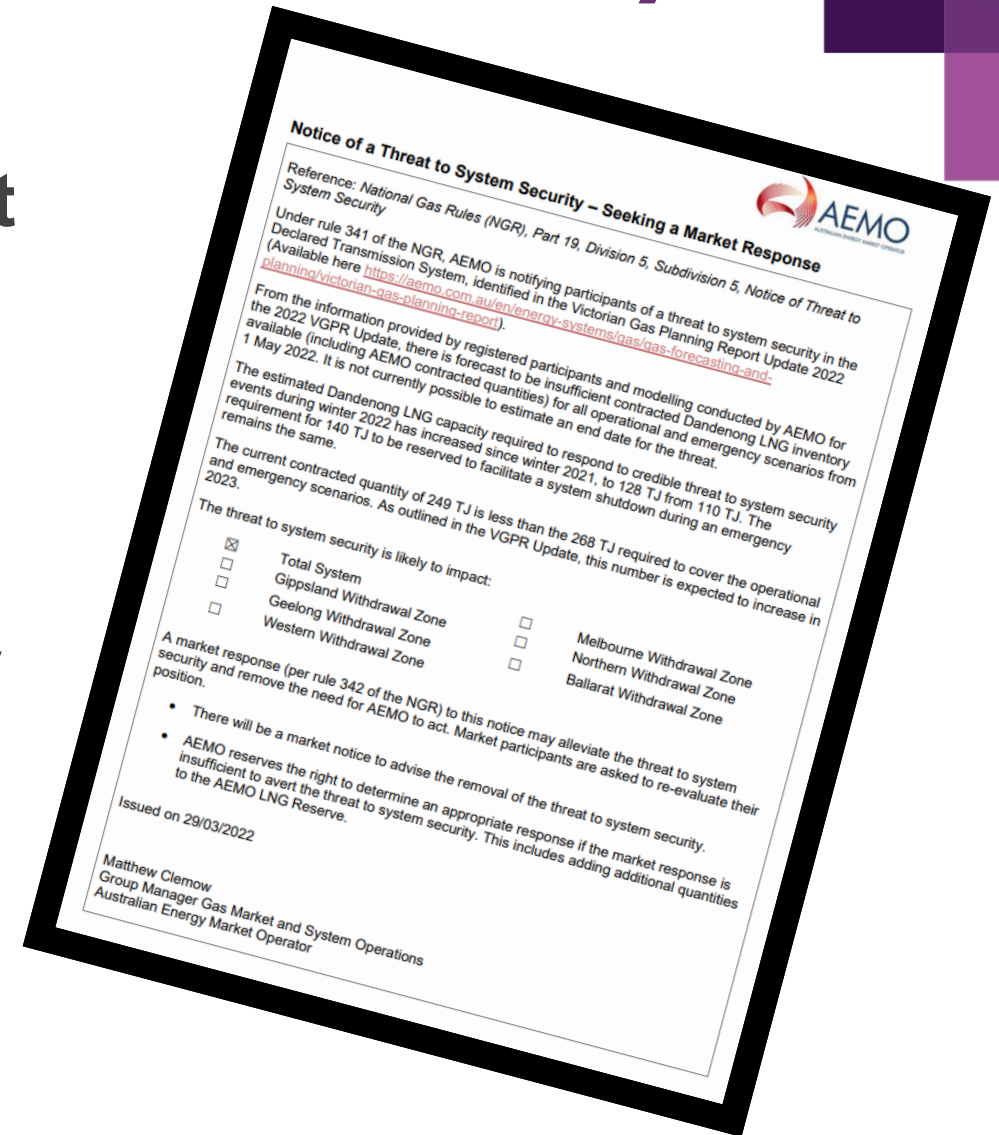


Victorian resilience challenges increase risk of supply shortfall

- Longford Gas Plant
 - Retirement of GP1 inlet may affect operations from winter 2022 (capacity could reduce to 500 – 650 TJ/d)
 - Reduced capacity from large legacy fields also results in reduced production system resilience from 2023 (less capacity to recover from trips and outages).
 - Full plant outages are required as early as late 2023.
- Dandenong LNG Facility
 - Key piece of infrastructure to respond to threats to system security and emergency events.
 - AEMO has observed ongoing low levels of retailer contracting in contrast to increased risk of supply disruption.

Victorian Threat to System Security

- AEMO has issued a notice of a **Threat to System Security** to market participants regarding low contracted Dandenong LNG and is seeking a market response
- Insufficient Dandenong LNG inventory increases the probability of gas load curtailment, including gas-fired generation



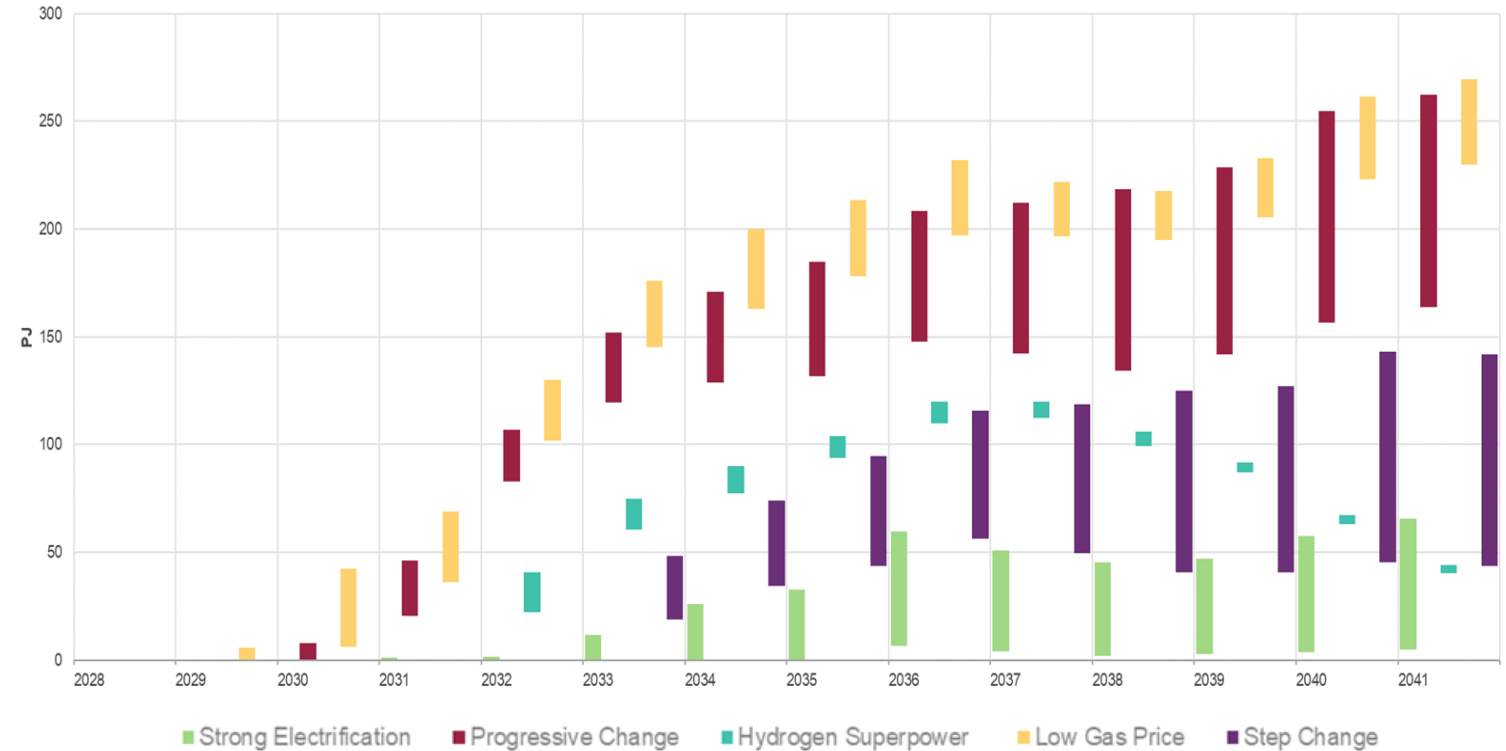
Long-term supply gap outlook across scenarios

Key factors driving the dispersion across scenarios are the level of:

- Electrification
- Economic and population growth
- Hydrogen use (offset)
- Gas for hydrogen production (SMR)

The dispersion within a given scenario is driven by weather, and its impact on:

- Demand for gas for heating
- Gas generation, reflecting the weather sensitivity of electricity demand



Range of domestic seasonal supply gaps in PJ forecast under different scenarios, with existing, committed, and anticipated developments.

Long term challenges and opportunities

Longer-term investment opportunities in gas supply exist, but must consider:

Uncertainty in future gas needs

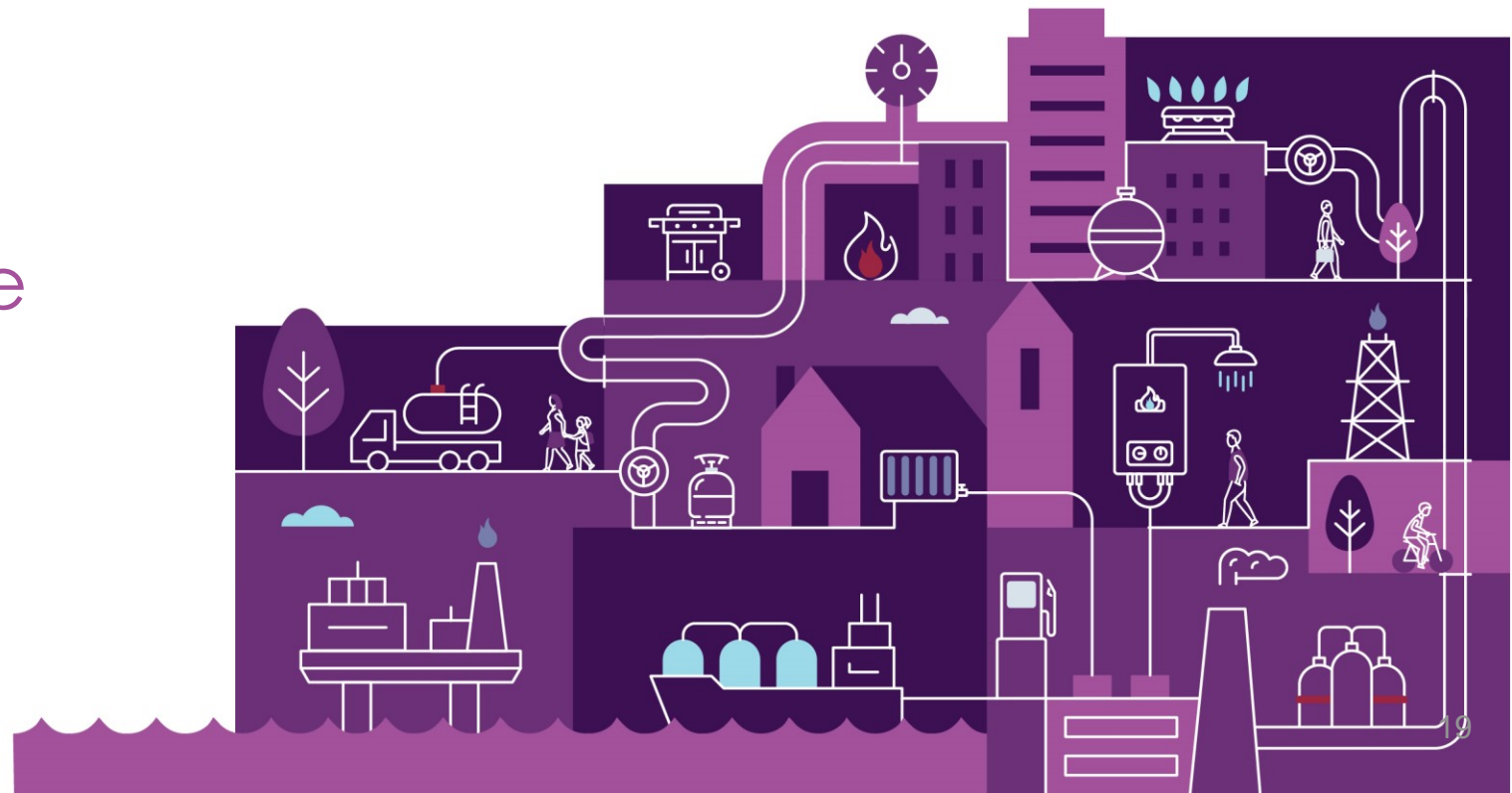
- While more frequent gas supply gaps are evident in all scenarios, the timing, profile and magnitude of these gaps varies.
- Investments are needed in gas supply and potentially connecting infrastructure. Solutions that may work best in this uncertain environment would be projects that are scalable, can be developed in stages as required, and ideally use existing infrastructure or share infrastructure with other investments.

Increased peakiness of gas demand

- Opportunities for response are likely to come from more flexible, agile solutions that can support gas demand that is uncertain and increasingly peaky.
- The flexible solutions can be either infrastructure-based (such as local storages), or demand side options, for example interruptible gas contracts.

Q&A Session

Add your question to the chat





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aemo.com.au