



elements of broader gas markets under the national energy market framework. Regulation of the upstream industry is split between onshore and offshore with the Commonwealth regulating exploration and production of gas in Australian Commonwealth waters, between 3 and approximately 200 nautical miles from shore, while States and Territories regulate exploration and production of gas onshore. The two-tiered regulatory framework results in occasional misalignment of policy drivers for the gas industry. Notably, State and Territory governments' regulatory restrictions on onshore unconventional gas exploration and development have been highlighted by both the Australian Energy Regulator and the Australian Competition and Consumer Commission (ACCC) as factors tightening gas supply on the east coast.

Australian east - west gas divide

Another Australia-specific nuance is that, despite being 'national' or 'Australian' by title, some regulatory acts and policy papers do not have direct application in Western Australia. Until recently, Australia had three distinct gas regions separated on the basis of the gas basins and pipelines that supply them – eastern gas region, western gas region, and northern gas region. Since commissioning of the Northern Gas Pipeline in January 2019, the northern and eastern gas regions have become linked, although substantial further infrastructure developments are required to consider these two regions truly interconnected. Western Australia remains an entirely separate gas region with its own regulatory landscape.

Australian Competition and Consumer Commission gas inquiry

Since 2012, the Australian east coast gas market has undergone unprecedented changes attributed to large scale LNG projects in Queensland withdrawing gas from the domestic market and, at the same time, declining investment in gas exploration and development due to moratoria imposed by States and Territories. In April 2017, the ACCC was directed by the Commonwealth Government to conduct an inquiry into the east coast gas market. The inquiry is ongoing and broadly covers pricing, volumes and availability of gas (domestically and for export), and availability of other goods and services that facilitate the supply and transportation of gas, such as drilling, gas storage, and processing.

Gas reservation mechanisms

The Australian Domestic Gas Security Mechanism (ADGSM) came into effect on 1 July 2017 in response to the ACCC forecasting gas shortfalls in the east coast market. This regulation is, somewhat misleadingly, titled 'Australian' yet does not apply to the entire country. In Western Australia, a domestic gas reservation policy requiring gas equivalent to 15% of reserves to be sold into the Western Australia domestic market has been in place since 2006. The ADGSM allows the relevant minister to make a decision that a shortfall exists in the east coast gas market which triggers restrictions on LNG projects requiring them to limit their exports or find new gas sources for the domestic market. The ADGSM has not been triggered by the minister to date and is scheduled automatically to be repealed in 2023.

In the meantime, representatives of all three LNG projects in Queensland have agreed with the Commonwealth that uncontracted gas will not be offered to the LNG spot market unless equivalent volumes of gas have first been offered with reasonable notice on competitive market terms to the Australian domestic gas market. The document, titled 'Heads of Agreement – the Australian East Coast Domestic Gas Supply Commitment', is viewed as an industry led solution to east coast gas shortfalls and is effective until 1 January 2023. Separately and in addition to the ADGSM, in Queensland, the Gas Security Amendment Act 2011 allows the Queensland Government to impose a condition on certain gas tenures that requires the tenure holder to supply gas produced under the tenure to the Australian market.

The current state of affairs

Against the context set out above, there are three factors that are probably most characteristic of the current state of the gas industry in Australia.

Imminent threat of domestic gas shortages

The ACCC continues closely to monitor supply and pricing with warnings of east coast gas shortages continuing. The latest ACCC report released in January 2022 warns that the long-term supply outlook has deteriorated and gas shortfalls are expected in the southern states as early as this year unless new supply is brought online.

Skyrocketing LNG netback price

As part of the gas inquiry 2017 - 2025, the ACCC is tasked with publishing regular information on the supply and pricing of gas to improve transparency of gas prices in the east coast gas market. LNG netback price is calculated by the ACCC as an export parity price that an LNG seller can expect to receive for exporting its LNG. It is calculated based on Asian LNG spot prices by netting back liquefaction and shipping costs. In the past two years, ACCC's LNG netback price has increased from AUS\$2.29/GJ in July 2020 to AUS\$41.24/GJ in January 2022 with forward LNG netback price not expected to fall below AUS\$20 in the next two years.

Consistently entrenched role of gas in economic policies

As part of the National Gas Infrastructure Plan, the Commonwealth Government foreshadows that Australia's Global Resources Strategy will look at current and potential LNG markets to understand current and future demand. On 23 February 2022, the Department of Industry, Science, Energy, and Resources released 'Global Resources Strategy Commodity Report: Liquefied Natural Gas' highlighting the trade and investment opportunities for Australia's LNG industry to 2050. The report assesses Australia's established LNG markets and emerging markets where Australia has the best opportunity to strengthen LNG trade. It is the latest in a number of Commonwealth policy documents entrenching the Government's commitment to maintain a leading role for Australian gas as a transition fuel powering economic recovery.

A few recent developments are highlighted next against the regulatory and policy context to draw out a short-term and long-term perspective on gas and LNG infrastructure in Australia.

National Gas Infrastructure Plan

In 2018, the IEA issued an energy policy review report on Australia. A key recommendation in the report was that Australia should develop competitive, liquid, and adequate domestic gas supplies and transportation capacity by swiftly completing the gas market reforms and support the sustainable development of domestic oil and gas reserves. While this recommendation may not be consistent with the later IEA announcement that, in their Net-Zero Emissions by 2050 Scenario, there is no need for investment in new oil and gas fields beyond projects already committed in 2021, the latest Australian government policies do not seem to be swayed by the Net-Zero Emissions by 2050 Scenario.

On 26 November 2021, the Australian Government released the first National Gas Infrastructure Plan developing IEA's 2018 recommendations into action items. The Plan is a blueprint for the development of the Australian east coast gas market to 2041 and identifies a development path to ensure that more gas can be delivered at minimum cost.

According to the Plan, in the short-term, supply should be maximised from existing onshore and offshore gas basins and, before 2030, new gas basins will need to be unlocked to service existing long-term LNG supply contracts and domestic customers. Among the five priority actions identified in the Plan are prioritising exploration and appraisal of new upstream gas resources in both existing and new basins and advancing early stage infrastructure design and development.

The Plan anticipates that, at least for the next 20 years, gas will continue to play a key role in the Australian economy. It provides that the Commonwealth Government will support development of the priorities identified in the Plan through the Future Gas Infrastructure Investment Framework which sets out principles to guide government support. The support may come in a form of grants, loans, and non-financial support such as help to navigate regulatory approval processes.

Recent institutional investments

In addition to the government's policy initiatives, there has also been a recent wave of large investments by global infrastructure and private equity players into Australian LNG projects.

Since 2020, the three LNG projects in Queensland and Woodside's Pluto LNG expansion project all announced sales of interest to infrastructure funds. While the four deals vary in structure, from share or asset sale to a throughput-based tolling structure that unbundles the commodity price from the infrastructure return, a few common themes can be drawn:

- Gas majors focused on energy transition seek to monetise LNG infrastructure assets and decarbonise their balance sheets.
- Infrastructure investors are increasingly attracted to Australian LNG assets, so far focusing on brownfield projects to avoid construction and development risk, and devising structures to avoid taking commodities risk.

 Debt to fund, or partially fund, the investments is being procured under novel structures where, in contrast to traditional project finance, the security package is underpinned by long-term revenue stream agreements and not the underlying project assets.

Repurposing gas infrastructure for energy transition

In the short- to medium-term, the development of gas infrastructure in Australia is firmly in focus for both governments and investors and, in the longer-term, existing natural gas infrastructure forms part of Australian energy transition strategy.

For example, Australia is gearing its regulatory framework to support the introduction of hydrogen and biomethane into natural gas networks.

On 20 August 2021, to meet the needs of a transitioning energy market, Australia's Commonwealth, State, and Territory energy ministers agreed to reform the national gas regulatory framework to bring hydrogen blends, biomethane, and other renewable gases within the scope of the National Gas Law, National Energy Retail Law, and subordinate regulation.

The declared aim of the reforms is two-fold: to provide regulatory certainty to support investment in innovative projects that will reduce emissions in gas networks and to ensure consumer protections will remain in place when hydrogen blends and renewable gases are supplied in the gas network. A draft legislative package is expected in 2022. Although the reform is nascent, it is a sign of regulatory focus on preparing natural gas assets for transition.

Today's global context

While Australian domestic developments are predominantly shaping the industry upstream from liquefaction plants, factors external to Australia are critical in shaping the demand end of the value chain. These factors are multidirectional and, in recent months particularly, are evolving very fast. At the time of writing, oil prices were at a seven-year high, sanctions against Russia have just been announced with their final scope and effect on gas markets remaining to be seen. The European Commission President has declared that the continent can retain acceptable margins of energy security even in case of full termination of gas supplies from Russia.

Whether these developments present a long-term opportunity for Australia to increase its share of the global LNG markets remains to be seen. What proportion of close to 40% of pipeline gas supplied from Russia can be replaced with LNG? Can geopolitics propel LNG to become a global commodity?

To what extent will climate considerations will play into decisions on the European energy mix? One of the key findings of Wood Mackenzie's 'Upstream carbon emissions: LNG vs pipeline gas' report is that LNG projects typically have significantly higher emissions compared with pipeline gas projects and are some of the highest in the upstream oil and gas sector. What role will LNG play in balancing European climate ambitions against geopolitical and energy security considerations?

While offering an outlook on global LNG markets in the current set of events may be akin to crystal ball gazing, what remains certain is that Australia is focused on maximising its competitiveness in global LNG markets and optimising its gas infrastructure while preparing it for the energy transition. LNG