41ST PARLIAMENT

Economics and Industry Standing Committee

Report 7

DOMESTIC GAS SECURITY IN A CHANGING WORLD

Inquiry into the WA Domestic Gas Policy: Interim Report

Presented by Hon P.C. Tinley, MLA

February 2024

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Economics and Industry Standing Committee

Domestic Gas Security in a Changing World

Inquiry into the WA Domestic Gas Policy
Interim Report

Report No. 7

Presented by

Hon P.C. Tinley, MLA

Laid on the Table of the Legislative Assembly on 22 February 2024

Inquiry Terms of Reference

The Economics and Industry Standing Committee will inquire into matters relating to the WA Domestic Gas Policy.

In particular, the inquiry will consider:

1. The adequacy of mechanisms to ensure:
    a. Timely delivery of gas into the domestic market.
    b. Transparency of supply and prices of gas available to the domestic market.
2. The State Government's role in ensuring adequate availability of domestic gas into the future, particularly over the short to medium term.
3. The findings and recommendations of the 2011 Inquiry into Domestic Gas Prices, prepared by the previous Economics and Industry Standing Committee (2008–2013), to the extent that they are relevant to the current inquiry's terms of reference 1 and 2.

Chair's Foreword

When the WA Domestic Gas Policy was formalised in 2006, it was a contentious position for the Carpenter Government to take. The Policy was widely criticised by industry, who cried 'sovereign risk' and claimed it would have serious consequences for future LNG projects. Yet with the privilege of hindsight, it is apparent that introducing the Policy was extraordinarily prescient and demonstrated outstanding determination by the government of the day.

Today, over 17 years after it was formalised, our domestic gas policy is viewed with envy across the Commonwealth. Industry representatives who have appeared before the committee have uniformly accepted the role the Policy plays in the State. Many have pointed out that, thanks to the Policy, WA has managed to avoid many of the pricing and supply issues that have impacted the east coast markets for the past several years.

However, this inquiry has shown that we cannot be too complacent when it comes to our gas supply. Western Australia's economy is changing; not only is it becoming more diversified, it is also decarbonising. As we discuss in this report, these changes confirm the important energy security role that gas will continue to play—at least until we successfully transition to net zero emissions.

This inquiry was driven by recent forecasts issued by the Australian Energy Market Operator (AEMO), which have demonstrated WA can expect a constrained supply. This shortfall will inevitably impact industry in terms of their energy and feedstock needs. Considering these predictions, the Committee wanted to review the viability of the WA Domestic Gas Policy as we move into the future and better understand its application across the Western Australian economy.

The Committee was originally scheduled to report back to Parliament by 30 November 2023. Once the inquiry began, however, it became evident that its complexity and span of stakeholders would require us to revise our initial tabling date to 30 May 2024.

This report is an interim measure, setting out the evidence we have gathered to date and drawing logical conclusions in the form of findings. We are seeking to test our findings with industry and the wider public and engage in a more focused dialogue about possible solutions to WA's forecast gas shortfall. Interested parties who wish to comment on the findings are welcome to submit further evidence; any feedback provided will help to inform our final report.

Determining exactly what is in the public good is never easy for any government and at times it requires the least bad decision to be made based on the circumstances presented. When seeking to secure gas for domestic use in 2006, the Carpenter Government would have had to weigh up the benefits of imposing a domestic market obligation through a policy approach or legislative response. In the end, it erred on the side of flexibility in the form of state agreements and a loose but evolved policy. A future government may not be disposed towards such an approach.

HON P.C. TINLEY, MLA
CHAIR

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Executive Summary

Western Australia is endowed with significant reserves of natural gas that make important contributions to the State's economic growth: they support a large liquefied natural gas (LNG) export industry, and also provide household and industry consumers with an affordable source of energy.

For this latter reason, key features of the WA Domestic Gas Policy (the Policy) are designed to ensure the State's domestic gas requirements do not go unmet, even in circumstances where it may be more profitable for producers to export LNG than market gas to West Australian consumers.

Western Australia has not experienced a shortfall of domestic gas since the Policy's inception, and the State has generally been spared the gas price and supply volatilities which have troubled the east coast. However, the Economics and Industry Standing Committee (the Committee) has been presented with evidence that WA is likely to experience a shortfall of gas in the short and medium term. It believes this evidence to be credible, and notes that a potential shortfall could lead to higher energy prices, a loss of industry and jobs, and threaten the State's decarbonisation agenda. Considering this evidence, the Committee has concluded that the Policy is no longer fit-for-purpose.

Submissions to the Committee indicate there are several reasons WA is likely to experience a shortfall of domestic gas under the current policy framework. These include issues pertaining primarily to the inconsistency of contract-based policy enactment and the difficulty of enforcing compliance.

LNG exporters have on average delivered around eight per cent of domestic gas relative to LNG exports since their commitments started, although there is considerable variation between producers. It does appear that some producers are not operating within the spirit of the Policy.

Given that the Policy is unlikely to satisfy the State's future domestic gas requirements in its current form, the Committee believes there is a case for government intervention, up to and including a legislative response. Chapter 5 of this report outlines several potential measures that the WA Government could implement if it chose to intervene.

Industry-led solutions to the likely gas shortfall are preferable and could ultimately mitigate the need for government intervention. However, there is currently no indication that industry is likely to provide a solution.

The range of potential government measures presented in this report should be read as an attempt to solicit comment from industry on the most appropriate form of government response. With a view to safeguarding West Australian consumers and the prosperity of the State, the Committee welcomes additional submissions from stakeholders who wish to provide comment on these matters.

Findings

Chapter 2 – The forecast shortfall

Finding 1 **Page 21**

Since the inception of the WA Domestic Gas Policy, Western Australia has enjoyed secure and relatively affordable supplies of gas. It has been spared the gas price and supply volatilities which have troubled Australia's east coast.

Finding 2 **Page 21**

The Australian Energy Market Operator (AEMO) has forecast that Western Australia will experience a shortfall and there is no indication that AEMO is incorrect. Thus, there is a credible risk that the State will face a substantial gas supply shortfall starting in the near term and continuing for most of the next decade.

Finding 3 **Page 21**

If the forecast shortfall materialises, it will likely produce adverse consequences for the State, for example: higher electricity prices; loss of industry and jobs; and the presentation of a very real threat to the State's decarbonisation agenda.

Chapter 3 – Domestic gas commitments under the WA Domestic Gas Policy

Finding 4 **Page 27**

The present reliance on implementation of the WA Domestic Gas Policy by contracts lacks consistency, transparency and enforceability. The final report will include recommendations on this.

Finding 5 **Page 27**

To date, the WA Domestic Gas Policy has provided a framework that encourages market responses to gas surpluses or shortfalls but, given that the WA gas market is facing extended and significant shortfalls, the Policy is evidently no longer fit-for-purpose.

Finding 6 **Page 27**

Since their commitments started, LNG producers have on average delivered around eight per cent of domestic gas relative to LNG exports; just over half of what is required to be reserved under the WA Domestic Gas Policy. In 2022 this increased to 10 per cent of LNG being supplied as domestic gas. However, there is considerable variation between LNG producers, and it appears that some producers are not operating within the spirit of the Policy.

Finding 7 **Page 28**

Some gas producers strictly apply the terms of their domestic gas agreements seemingly without regard to either the spirit of the WA Domestic Gas Policy or their social contract with the Western Australian community.

Chapter 4 – Gas pipeline export ban

Finding 8 **Page 35**

LNG exports are favoured by producers because they provide exposure to larger international markets; deeper pools of international capital; and attract higher prices than deliveries of domestic gas. For this reason, some submitters to the inquiry claim that LNG exports from the Perth Basin could incentivise the development of new gas resources.

Finding 9 **Page 35**

There is competing evidence as to whether allowing onshore producers to export LNG would increase the volume of gas delivered to domestic consumers. It is not clear whether this action alone would provide a timely remedy to the forecast gas shortfall. However, if greater pools of capital were available, this may facilitate the faster development of the resource and deliver greater volumes to the domestic market.

Chapter 5 – Possible market interventions

Finding 10 **Page 41**

Given the forecast domestic gas shortfall and credible risk of imminent and material economic harm, there is a case for the State Government to intervene in the domestic gas market. This could include a legislative response.

Finding 11 **Page 41**

Industry-led responses to the forecast domestic gas shortfall are preferred and to be encouraged. In some cases, it may be appropriate for government intervention to be deferred or suspended if a timely and effective industry-led response is addressing the problem.

Finding 12 **Page 42**

Government interventions should be sensitive to the sovereign risk issue, but should also have regard to the following:

- industry in any jurisdiction faces the risk of regulatory change as circumstances and policies change over time
- not all sovereign interventions are equal in effect
- while the State's economic prosperity may depend in part on its reputation as a low sovereign risk jurisdiction, it also depends on other factors including having a secure and affordable supply of energy and feedstock gas.

Finding 13 **Page 42**

Government interventions do not have to apply across the board. If some gas producers are acting in accordance with the spirit of the WA Domestic Gas Policy while others are not, it may be appropriate for a government intervention to target only the latter.

Chapter 1

Why an interim report?

Based on the nature of the evidence received so far as part of this inquiry, the Committee resolved to publish an interim report to keep stakeholders abreast of the key issues identified during its investigations to date. This chapter sets out the principles of the WA Domestic Gas Policy, and the current problem which led to the Committee's inquiry.

The WA Domestic Gas Policy

Policy development

1.1 Since helping to underwrite the North West Shelf Project in 1979, successive Western Australian governments have maintained a domestic gas policy. The Carpenter Government formalised its policy position in 2006 with the release of what is now known as the official WA Domestic Gas Policy (the Policy). Subsequent WA governments maintained the Policy with updates in 2011, 2020, and most recently in 2023.[1] These updates are referred to as necessary through the report.

1.2 The WA Domestic Gas Policy forms part of the State's broader regulatory framework for gas, and key elements of this framework are summarised by Box 1.1 below.

Box 1.1: Broader regulatory framework for gas

The WA Domestic Gas Policy forms part of the State's broader regulatory framework for gas, which includes:

- The Gas Services Information regime (GSI regime) which governs the Western Australia Gas Statement of Opportunities (WA GSOO) and the Western Australian Gas Bulletin Board (WA GBB) (see Box 1.2).
- The pipeline gas quality specifications regime which sets out a mechanism for broader-specification gas to enter the State's major pipelines.
- The National Gas Law and Rules which in WA govern access to certain gas pipelines, so that gas producers can reach the market. In other States in Australia, this regime also governs the national GSOO and GBB.
- The gas emergency regime which provides the Department of Energy, Mines, Industry Regulation and Safety with the power to coordinate with buyers and sellers in response to a gas emergency on behalf of the Government.
- Various State and Commonwealth petroleum legislation governing the exploration, production and transport of fossil gas from onshore and offshore fields, and associated legislation dealing with matters such as the environment, safety, tenure and heritage, and carbon emissions, storage and offsets.

Sources: The GSI regime consists of the *Gas Services Information Act 2012* (WA), *Gas Services Information Regulations 2012* (WA) and Gas Services Information Rules. The pipeline gas quality specifications regime consists of the *Gas Supply (Gas Quality Specifications) Act 2009* (WA) and *Gas Supply (Gas Quality Specifications) Regulations 2010* (WA). The National Gas Law and Rules were implemented in WA under the *National Gas Access (WA) Act 2009* (WA). The gas emergency regime consists of the *Energy Coordination Act 1994* (WA), *Fuel Energy and Power Resources Act 1972* (WA) and *Emergency Management Act 2005* (WA).

1 Submission 6, Department of Jobs, Tourism, Science and Innovation, pp. 5–6; and Submission 6A, Department of Jobs, Tourism, Science and Innovation.

Policy objectives

1.3 The WA Domestic Gas Policy is designed to secure enough gas to provide for the State's energy needs and economic development into the future. It does this by setting out principles which govern approval of liquefied natural gas (LNG) projects that fall within State jurisdiction. These principles aim to ensure that LNG exporters make gas available to the domestic market even though LNG exports may be more profitable. Numerous submissions to this inquiry have stated that the Policy has to date been successful in this goal, although a range of issues and potential improvements have also been identified.

Key policy features

1.4 The three pillars of the Policy 'are gas reservation, domestic supply infrastructure and marketing in good faith.'[2] It is given effect by contractual agreements between LNG project developers and the State, which are 'struck at project inception to provide certainty for LNG export and onshore project developers and allow for a sustained supply of gas into the local market.'[3]

1.5 Each agreement is different, and the provisions have evolved over successive projects. In general, LNG export project developers commit to making domestic gas available by:

- Reserving domestic gas equivalent to 15 per cent of LNG production from each LNG export project.
- Developing and obtaining access to the necessary infrastructure (including a domestic gas plant, associated facilities and offshore pipelines) to meet their domestic gas commitments.
- Showing diligence and good faith in marketing and making available gas to existing and prospective consumers.

Additional policy features

1.6 Six of the eight current agreements have now been published online, and the Department of Jobs, Tourism, Science and Innovation (JTSI) has committed to publishing all new commitment agreements in full.

1.7 Prices and contracts for domestic gas are determined by market participants, but any unsold gas must be reserved, not exported.

1.8 LNG exporters report on compliance against their obligations to the WA Government. These reports are confidential, but JTSI provides a degree of market transparency through summary reporting of exporters' progress in meeting commitments.

1.9 Most of the agreements contain dispute provisions which provide for investigation and resolution in the case of a default in meeting obligations.

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2 Submission 6, Department of Jobs, Tourism, Science and Innovation, p. 4.

3 Department of Jobs, Tourism, Science and Innovation, *WA Domestic Gas Policy*, 15 February 2024, accessed 20 February 2024, <https://www.wa.gov.au>.

1.10 LNG exporters can propose to offset their domestic gas commitments by supplying gas or other energy from alternative sources (i.e. solar); however, offsets must provide a net addition to WA's domestic energy supply. JTSI is developing a framework and guidelines for offset applications.

1.11 The Policy does not provide for the export of gas via the existing WA pipeline network, ensuring that gas which enters the pipeline network is reserved for local consumers to support WA's economic and industrial development.[4]

The current problem facing Western Australia

1.12 For many years the Western Australian domestic gas market has been oversupplied, with West Australians enjoying plenty of affordable gas.

1.13 Around mid-2020 this began to change due to supply-side issues such as decreasing production from the North West Shelf fields, declining supply from domestic-only gas projects, reserves downgrades, delays in the commencement of new domestic-only developments such as West Erregulla, outages, and, on the demand side, coal generation issues which increased demand for gas.[5]

1.14 The organisation tasked with providing forecasts about Western Australia's domestic gas demand and potential supply, the Australian Energy Market Operator (AEMO), expects the WA gas market to fall five per cent short of forecast demand in 2024, and up to 11 per cent short by 2026. By 2033 this figure is likely to have increased to 27 per cent (a supply deficit of 362 terajoules per day (TJ/day)). (See Chapter 2 for more detail about AEMO's forecast).

1.15 The Committee believes that this forecast is credible, even with recent industry developments potentially impacting future demand. Alcoa of Australia (Alcoa), one of Western Australia's largest domestic gas consumers, recently announced that it intends to curtail production at the Kwinana Alumina Refinery during 2024.[6] This announcement was made after the most recent Western Australia Gas Statement of Opportunities (WA GSOO) (see Box 1.2) was published in December 2023. However, Alcoa has advised the Committee that this change is unlikely to significantly alleviate the forecast gas shortages.[7]

1.16 The Committee will continue to investigate the possibility of the forecast shortfalls through further discussion with key stakeholders.

1.17 The Committee has concluded that the WA Domestic Gas Policy has provided a framework which encourages market responses to gas surpluses or shortfalls. However, given that the WA gas market is now facing extended and significant shortfalls, the Policy is evidently no

4 Submission 6, Department of Jobs, Tourism, Science and Innovation, pp. 4, 16; Department of Jobs, Tourism, Science and Innovation, *Implementation of the WA Domestic Gas Policy*, 27 October 2023, accessed 23 January 2024, <https://www.wa.gov.au>.

5 Submission 6, Department of Jobs, Tourism, Science and Innovation, p. 12.

6 Alcoa Australia, *Alcoa announces curtailment of Kwinana Alumina Refinery in Western Australia*, media release, 8 January 2024.

7 Nick Eaton, Energy Director, Australia and John Dagostino, Director, Government Affairs, Alcoa of Australia, Letter, 10 January 2024, p. 1.

longer fit-for-purpose. This means that something needs to change; whether this change comes from industry, government, or a combination of both remains to be seen.

Box 1.2: Western Australia Gas Statement of Opportunities

The Western Australia Gas Statement of Opportunities (WA GSOO) is:

> *an annual report that presents forecasts of WA domestic gas demand and potential supply over a 10-year period, including an overview of gas infrastructure and emerging issues affecting the WA gas industry. Importantly, it provides gas market participants and other stakeholders with information about the WA gas industry, including assessments relating to medium and long-term natural gas supply and demand and natural gas transmission and storage capacity.*

Established and regulated under the *Gas Services Information Act 2012* (WA), *Gas Services Information Regulations 2012* (WA) and Gas Services Information Rules, the WA GSOO is developed each year by the Australian Energy Market Operator.

Source: Submission 10, Australian Energy Market Operator, p. 2.

The national picture

1.18 In the eastern states the gas supply shortfall is even more challenging. Australia's east coast has been in a state of 'energy crisis'[8] since as far back as 2016.[9] More recently in 2022 a combination of factors including the delayed maintenance of generation plants, flooding of coal mines, crisis in Ukraine and a colder winter saw the temporary introduction of administered gas market price caps.[10]

1.19 Although the Australian Competition and Consumer Commission expects the east coast gas market to have enough supply for 2024, southern states are likely to rely on surplus gas from Queensland, and the winter months will remain 'challenging.'[11]

1.20 In the absence of a nation-wide domestic gas reservation policy, the Australian Government has taken the following steps as part of an Energy Price Relief Plan, with a view to retaining a sufficient onshore supply of gas:

- Reforms to the Australian Domestic Gas Security Mechanism (ADGSM) obligate east coast LNG exporters to supply 'sufficient, competitively priced gas to Australian users' during shortfalls.[12]
- A 12-month emergency cap on gas prices will apply 'to new domestic wholesale gas contracts by east coast producers.'[13]

8 Victoria State Government, *What's happening in the energy market? Australia's energy crisis – your questions answered*, 21 March 2023, accessed 23 January 2024, <https://www.energy.vic.gov.au>.

9 Joanna Crothers, 'Gas supply issues could force Australia's largest domestic wool producer to close its doors', *ABC NEWS* (web-based), 2 December 2016, accessed 19 February 2024, <https://www.abc.net.au>. The ADGSM was introduced in 2017. See *Customs (Prohibited Exports) Amendment (Liquefied Natural Gas) Regulations 2017* (Cth).

10 International Energy Agency, *Australia 2023: Energy Policy Review*, France, April 2023, p. 14.

11 Australian Competition and Consumer Commission, *Gas supply outlook for 2024 improves but risk of winter shortfalls remains*, media release, 30 June 2023.

12 Department of Industry, Science and Resources (Cth), *Australian Domestic Gas Security Mechanism reforms*, 30 March 2023, accessed 15 December 2023, <https://www.industry.gov.au>.

13 Department of Climate Change, Energy, the Environment and Water (Cth), *Energy Price Relief Plan*, 3 December 2023, accessed 15 December 2023, <https://www.dcceew.gov.au>.

- A mandatory Gas Code of Conduct anchors 'wholesale contract negotiations between gas producers and buyers' at an initial price of $12 per gigajoule.[14]

1.21 Theoretically, the ADGSM could be extended by the Australian Government to the WA domestic gas market. This is discussed in Chapter 5, along with other options potentially open to the State Government to address future supply shortfalls.

The Committee's inquiry and evidence received (to date)

1.22 The Committee was made aware of the situation facing the domestic gas market early in 2023, receiving several formal and informal approaches about the ongoing efficacy of the WA Domestic Gas Policy to secure enough domestic gas in a rapidly changing world.

1.23 In June 2023 the Committee resolved to conduct an inquiry into the Policy. The Legislative Assembly was advised of the inquiry terms of reference by way of letter to the Speaker on 26 June 2023. More detail on the inquiry process can be found at Appendix Two.

1.24 The Committee has tasked itself with investigating the efficacy of the Policy and identifying reform where needed as the State faces a worsening domestic gas outlook over the next decade. Inquiry terms of reference can be found at the start of this report.

1.25 Issues raised in relation to the Policy, which are briefly outlined in Chapter 3, include:

- A lack of transparency.
- Difficulty in enforcement.
- A lack of consistency and clarity in agreements which enact the Policy.
- The absence of a link between supply and time periods in some agreements.

1.26 The latter creates a risk that reserved gas may not be brought to market until end of field life, if at all (with the additional complication that this places reserve risk on the domestic market).

1.27 Some submitters recommend changes to the Policy and implementation framework to increase domestic gas supply to alleviate impending shortfalls. For example, gas users in particular want enforcement mechanisms in place to encourage gas producers 'lagging in delivering against their domestic gas obligations [to] bring that gas to market without delay.'[15]

1.28 LNG exporters are particularly (although not exclusively) hesitant about changes to aspects of the Policy. They argue that the current Policy has served WA well to date and advocate for regulatory stability.[16] Although regulatory certainty has obvious merits, the difficulty is that

14 Department of Climate Change, Energy, the Environment and Water (Cth), *Fact sheet: Design of the Gas Market Code*, Australian Government, July 2023, p. 1.

15 Submission 12, Wesfarmers Chemicals, Energy and Fertilisers, p. 2. See also Jai Coppen, Senior Energy Sourcing Manager, Yara Pilbara Fertilisers, *Transcript of Evidence*, 18 October 2023, p. 4; Submission 30, CITIC Pacific Mining, pp. 2–3; Submission 16, Chemistry Australia, p. 2; Submission 22, DomGas Alliance, p. 14; Submission 31, Synergy, p. 3; Submission 33, Alcoa of Australia, p. 6.

16 See Submission 21, Mineral Resources, p. 2; Submission 24, BP Developments Australia, p. 2; Submission 25, Shell Australia, p. 4; Submission 35, Australian Petroleum Production and Exploration

the current policy settings, on their own, seem unlikely to mitigate the forecast shortfall and its attendant undesirable consequences.

1.29 Evidence suggests that the forecast gas shortfall presents a plausible threat to WA's prosperity, decarbonisation objectives and critical minerals aspirations. Therefore, it is not unreasonable to expect the State Government to take steps to intervene in the market to mitigate potential shortfalls, up to and including a legislative response.

1.30 It is likely that the Committee's final report will include recommendations that the State Government consider one or more policy or regulatory interventions to reduce the risk of a supply shortfall. In Chapter 5 the Committee makes some interim observations on a number of possible interventions, ranging from modest to significant.

What this report does

1.31 Following a busy evidence-gathering period during the second half of 2023, the Committee resolved to publish an interim report to keep stakeholders abreast of the key issues identified during its investigations.

1.32 This interim report makes no recommendations, as the inquiry is ongoing. Rather, the Committee seeks with this report to consolidate key themes to inform gas market participants and the wider community.

1.33 Given that WA faces a potential market shortfall as early as this year (2024), there is an urgent continuing need for informed public debate about the State's energy future. Stakeholders wishing to comment on matters raised in this report should submit these to the Committee in writing or contact the Committee Secretariat for guidance.

Association, p. 3; Patrick Beashel, General Manager, Gas Supply and Trading, Chevron Australia, *Transcript of Evidence,* 20 September 2023, p. 2; Virang Gadoya, Vice President, Commercial, Shell Australia, *Transcript of Evidence*, 11 October 2023, p. 5.

Chapter 2

The forecast shortfall

Gas supplied into the domestic market from commitment holders under the WA Domestic Gas Policy accounts for around half the State's domestic gas supply. As Western Australia faces potential supply shortfalls in the short and medium term, the importance of each joint venture partner meeting its respective domestic gas commitments cannot be overstated.

The WA gas market is facing a shortfall in supply

2.1 After decades of relative stability, Western Australia's gas market is entering a period of increased turbulence. The Australian Energy Market Operator (AEMO) predicts that there will be a supply deficit for all but one of the years in its 10-year forecast period. Between 2024 and 2029 the deficit will be as large as 11 per cent below forecast demand (during 2026).[17]

2.2 This year (2024), AEMO forecasts that gas supply will be up to five per cent short of forecast demand (see Table 2.1).[18]

Table 2.1: Potential gas supply and domestic demand forecasts, Expected scenario (TJ/day), 2023 to 2033

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	10-year annual average growth rate
Potential gas supply	1,053	1,077	1,044	1,023	1,098	1,191	1,241	1,160	1,122	985	963	-0.9%
Domestic gas demand	1,066	1,133	1,153	1,147	1,124	1,249	1,241	1,237	1,310	1,340	1,325	2.2%
Difference	-13	-56	-109	-125	-26	-58	0	-77	-188	-354	-362	-
Difference as % of demand	-1.2%	-5%	-9%	-11%	-2%	-5%	0%	-6%	-14%	-26%	-27%	-

Source: Australian Energy Market Operator, *2023 Western Australia Gas Statement of Opportunities*, December 2023, p. 24.

17 Australian Energy Market Operator, *2023 Western Australia Gas Statement of Opportunities*, December 2023, p. 3.

18 All forecasts discussed in this chapter relate to the Australian Energy Market Operator's Expected scenario. The Australian Energy Market Operator typically presents forecasts for three scenarios, Low, Expected and High, to 'reflect variations in the economic outlook, commodity production, gas prices, population growth, technological innovations, climate policy commitments of the Australian and WA governments, as well as new gas project development (including gas demand reduction due to a transition to renewables.' See Australian Energy Market Operator, *2023 Western Australia Gas Statement of Opportunities*, December 2023, pp. 31–32.

2.3 From 2030 onwards, things are likely to get even worse. In 2030, six per cent of WA's gas demand will go unmet. By 2032, however, AEMO forecasts that WA will encounter shortfalls of over 350 terajoules per day (TJ/day)—almost 30 per cent of WA's total gas demand at that time (see Figure 2.1).[19]

2.4 To put this amount in context, 350 TJ/day is approximately:

- 3.9 times more gas than Yara Pilbara (Yara) currently uses to power and feed its daily operations.[20]
- 1.7 times more gas than the State's main electricity network, the South West Interconnected System (SWIS), is forecast to use in 2024.[21]
- 1.4 times more gas than Alcoa of Australia (Alcoa) was using to power and feed its daily operations in September 2023.[22]
- 4–5 times more than the total quantity of gas forecast to be supplied to the over 800,000 domestic and commercial consumers who obtain gas through ATCO Australia's WA gas distribution systems.[23]

2.5 Should AEMO's forecasts come to pass, the implications for WA's electricity supply and industrial production will be significant.

2.6 The Committee believes it would be prudent to heed AEMO's forecasts. Most inquiry participants, including producers,[24] consumers,[25] and government bodies,[26] indicated that they regarded AEMO's conclusions to be broadly credible. The possible implications of the shortfalls are discussed at the end of this chapter.

19 Australian Energy Market Operator, *2023 Western Australia Gas Statement of Opportunities*, December 2023, p. 3.

20 Yara Pilbara indicated they use around 90 TJ/day. See Laurent Trost, General Manager, Yara Pilbara, *Transcript of Evidence*, 18 October 2023, p. 2.

21 Gas demand for gas generation of electricity in the South West Interconnected System is forecast to be 201 TJ/day in 2024. See Australian Energy Market Operator, *2023 Western Australia Gas Statement of Opportunities*, December 2023, p. 9.

22 At its hearing in September 2023, Alcoa said it used around 250 TJ/day. See Nicholas Eaton, Energy Director, Australia, Alcoa of Australia, *Transcript of Evidence*, 20 September 2023, p. 2.

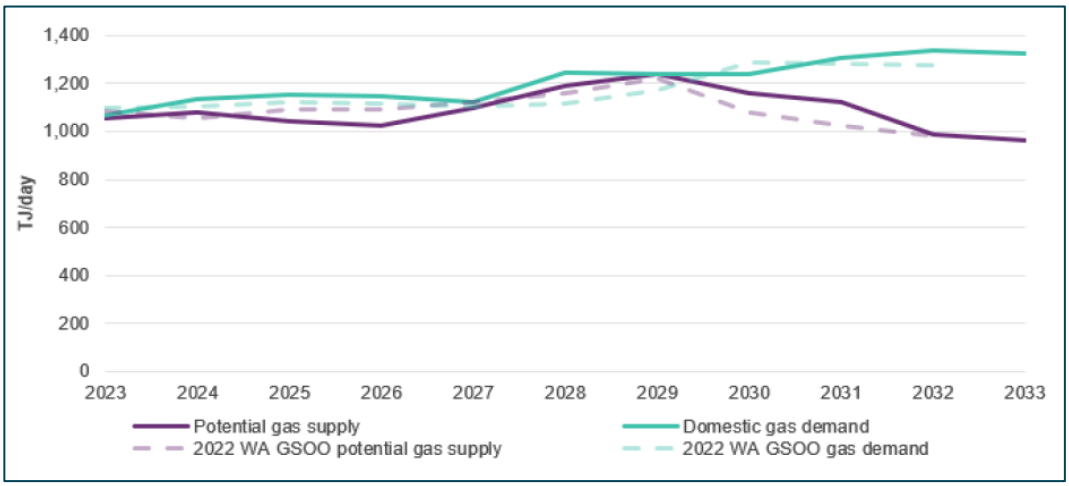
23 The Australian Energy Market Operator's *2023 Western Australia Gas Statement of Opportunities* (WA GSOO) forecasts gas distribution system throughput to be between 83 and 86 TJ/d for the years 2030 to 2033, or 69 to 66 TJ/d if an allowance is made for reduced gas demand due to electrification. See Australian Energy Market Operator, *2023 GSOO Data Register – Figures*, Figure 11, 14 December 2023, accessed 23 January 2024, <https://aemo.com.au>.

24 Rachael Risucci, Vice President Australia - Gas and Low Carbon Energy, BP Developments Australia, *Transcript of Evidence*, 20 October 2023, pp. 7, 10; Jason Ridley, Domestic Gas Commercial Operations Team Lead, Chevron Australia, *Transcript of Evidence*, 20 September 2023, p. 8.

25 David Fyfe, Chief Executive Officer, Synergy, *Transcript of Evidence*, 20 October 2023, p. 2; Nicholas Rea, Manager, Wholesale and Low Carbon Fuels, Wesfarmers Chemicals, Energy and Fertilisers, *Transcript of Evidence*, 13 October 2023, p. 4; Richard Harris, Chair, DomGas Alliance, *Transcript of Evidence*, 13 September 2023, p. 7.

26 Alistair Jones, Director General, Department of Jobs, Tourism, Science and Innovation, *Transcript of Evidence*, 16 August 2023, p. 5; Jai Thomas, Coordinator of Energy, Energy Policy WA, Department of Mines, Industry Regulation and Safety, *Transcript of Evidence*, 16 August 2023, p. 10.

Figure 2.1: Expected scenario WA gas market balance, 2023 to 2033 (TJ/day)



Source: Australian Energy Market Operator, *2023 Western Australia Gas Statement of Opportunities*, December 2023, p. 5.

Where is the demand coming from?

2.7 A gas shortfall occurs when gas supply does not meet gas demand. According to the evidence the Committee has received, gas demand in the WA domestic market is forecast to grow over the next decade, driven by both decarbonisation activities and expansion opportunities within industry.

Decarbonisation

2.8 Like the rest of the world, WA is on a path to decarbonisation. Both industry and government are seeking to reduce the greenhouse gas (GHG) emissions that experts such as the Intergovernmental Panel on Climate Change conclude are 'unequivocally' causing global warming.[27] This has been driven, at least in part, by international treaties like the United Nations Framework Convention on Climate Change, the Kyoto Protocol and—most significantly—the Paris Agreement.[28]

2.9 Signed by 196 parties, the legally-binding Paris Agreement has two central goals, to:

- Hold the increase in the global average temperature to well below 2°C above pre-industrial levels.
- Limit the temperature increase to 1.5°C above pre-industrial levels.[29]

27 'Summary for Policymakers', in H. Lee and J. Romero (eds.), *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, Intergovernmental Panel on Climate Change, Geneva, 2023, p. 10.

28 *Ibid*, p. 10.

29 United Nations Climate Change, *The Paris Agreement*, n.d., accessed 30 November 2023, <https://unfccc.int>.

2.10 As part of the Paris Agreement, the Australian Government has committed to:

- Reducing Australia's GHG emissions by 43 per cent below 2005 levels by 2030.
- Achieving net zero emissions by 2050.[30]

2.11 The WA Government has its own targets, which are to:

- Reduce the emissions from all government agencies in WA by 80 per cent below 2020 levels by 2030.
- Transition out of coal-fired power generation by 2030.
- Achieve net zero GHG emissions by 2050.[31]

2.12 Meeting these goals requires action by every part of the WA economy, including the gas industry. In 2023, the International Energy Agency (IEA) issued a special report focusing on the oil and gas industry in the transition to net zero emissions. It said that producing, transporting, and processing oil and gas currently emits just under 15 per cent of the world's energy-related GHG emissions. To meet the 1.5°C target set out in the Paris Agreement, these will need to be cut by more than 60 per cent by 2030.[32]

2.13 Most major companies within WA, including some of the State's biggest gas users, are aiming to reduce their GHG emissions. For example:

- WA's largest domestic gas consumer, Alcoa, is examining the possibility of electrifying some of its processes through the use of mechanical vapour recompression and electric calcination.[33]
- WA's second-largest industrial consumer of gas, Yara, is trialling the production of ammonia using renewable hydrogen as a feedstock at its ammonia plant near Karratha.[34]
- Wesfarmers Chemicals, Energy and Fertilisers (WesCEF) told the Committee that, between 2012 and 2020, it reduced its emissions by 40 per cent by investing in emissions reduction technologies such as abatement catalysts, which converts nitrous oxide into gases with smaller global warming potentials. By 2030, WesCEF aims to have reduced its emissions by a further 30 per cent below its 2019–20 levels.[35]

2.14 Perhaps counterintuitively, AEMO forecasts that industry's decarbonisation efforts will result in gas demand increasing in the short-to-medium term as businesses electrify their processes, increasing their electricity demand. At present, roughly 60 per cent of the State's

30 Hon Chris Bowen MP, Minister for Climate Change and Energy, *Stronger action on climate change*, media release, 16 June 2022.
31 Department of Water and Environmental Regulation, *Government Emissions Interim Target*, 23 September 2022, accessed 27 November 2023, <https://www.wa.gov.au>; Department of Water and Environmental Regulation, *Western Australian Climate Policy*, Government of Western Australia, Perth, November 2020, p. 8.
32 International Energy Agency, *The Oil and Gas Industry in Net Zero Transitions*, France, 2023, pp. 13–14.
33 Nicholas Eaton, Energy Director, Australia, Alcoa of Australia, *Transcript of Evidence*, 20 September 2023, p. 6.
34 Submission 28, Yara Pilbara, p. 2.
35 Submission 12, Wesfarmers Chemicals, Energy and Fertilisers, p. 2.

electricity comes from gas-powered generation (GPG),[36] and the reduction of coal and diesel-fired generation will increase this percentage. While the aim is to have renewable energy sources replace gas, coal and diesel, WA does not, at this point in time, have enough renewable energy to completely offset the fossil fuels (and, in particular, the retirement of coal-fired generators). Gas will have to fill the void in the interim, the rationale being that gas is less emissions intensive than coal and diesel.[37]

2.15 Gas will also be used as a firming solution to maintain electricity when the wind is not blowing, the sun is not shining and/or demand outstrips the capacity of renewable sources. As Synergy explained, gas 'does give you that ability to flex up and down very quickly.'[38] Depending on the season, Synergy uses from 40 TJ/day to 200 TJ/day to fill electricity supply gaps in the SWIS.[39]

2.16 The variability of gas consumption will increase. Synergy Chief Executive Officer (CEO) David Fyfe explained:

> The thing that gas gives you is that instantaneous ability to increase generation on the SWIS. As more renewables come into the system, that variability increases. We can have, in a one-hour period, a 500 or 600-megawatt swing when cloud cover comes over, or from one day to the next go from 600 megawatts of wind down to eight megawatts of wind. That instantaneous ability with gas is key.[40]

2.17 The SWIS Demand Assessment (SWIS DA), completed by the WA Government to understand electricity demand and infrastructure needs through to 2042, considers the use of batteries to store energy and deploy it when needed, but batteries are shorter duration storage technologies than gas and can also take up considerably more space.[41] Yara explained that to generate the amount of electricity it needs to feed its plants would require 2,000 hectares for solar generation and another 2,000 hectares for the associated battery technology needed to power it at night.[42] Gas firming will continue to be required, at least until alternative technologies are commercially viable and able to be deployed at scale.

Expansion and diversification opportunities

2.18 Electricity demand is expected to grow significantly over the next two decades. According to the SWIS DA, the expansion and electrification planned by industry connected to the SWIS will see demand will almost triple by 2042.[43]

36 Department of Climate Change, Energy, the Environment and Water (Cth), *Table O: Electricity Generation by Fuel Type 2021–22 and 2022*, Tables O5.1 and O5.2,15 June 2023, accessed 23 January 2024, <https://www.energy.gov.au>.
37 Submission 6, Department of Jobs, Tourism, Science and Innovation, pp. 12–13.
38 David Fyfe, Chief Executive Officer, Synergy, *Transcript of Evidence*, 20 October 2023, p. 6.
39 ibid., p 2.
40 ibid., p. 5.
41 Government of Western Australia, *SWIS Demand Assessment 2023 to 2042: A future ready grid*, Department of Mines, Industry Regulation and Safety, Perth, May 2023, p. 8.
42 Laurent Trost, General Manager, Yara Pilbara, *Transcript of Evidence*, 18 October 2023, p. 6.
43 Government of Western Australia, *SWIS Demand Assessment 2023 to 2042: A future ready grid*, Department of Mines, Industry Regulation and Safety, Perth, May 2023, p. 4.

2.19 A key driver will likely be battery and critical minerals industries which offer WA an opportunity to realign its mining sector and support decarbonisation, as many of the minerals required in electric vehicles, energy storage systems, renewable energy technologies, and high-technology electronics are found in WA.[44] WA has significant reserves of the minerals used in batteries, such as lithium, nickel, cobalt, manganese and alumina,[45] and the WA Government is keen to see the establishment of downstream processing operations, including the development of battery precursor operations to diversify the State's economy.[46]

2.20 Gas is required to support these industries. WesCEF told the Committee of its plans to produce lithium hydroxide at a refinery in Kwinana, which will be exported to produce electric vehicle batteries. To manufacture the approximately 50,000 tonnes per annum of lithium hydroxide that it aims to produce, WesCEF submitted that around four TJ/day of gas will need to be consumed.[47]

2.21 One new project, the Perdaman Urea Project, will also play a significant role in WA's growing gas demand. Based around 20 kilometres north-west of Karratha, the urea plant is expected to consume approximately 130 TJ/day from around 2028,[48] adding over 10 per cent to the State's daily domestic gas demand.[49] Perdaman has managed to secure the required gas by entering into a 20-year agreement with Woodside Energy (Woodside), which will provide the gas from the yet-to-be-completed Scarborough Project. While this is good news for Perdaman, it means that this gas is not available for the rest of the domestic gas market. Woodside's commitment to Perdaman equates to around 60 per cent of Scarborough's domestic market obligation under the WA Domestic Gas Policy (the Policy).[50]

2.22 Other industry witnesses spoke about proposed expansions to existing operations.[51] According to a 2021 report commissioned by the DomGas Alliance, if all of the largescale projects being proposed at that time were fully developed, by 2030 gas demand would have experienced an approximately 65 per cent increase on 2020 demand,[52] compared with

44 Economics and Industry Standing Committee, *Intergenerational Challenges and Opportunities for the Western Australian Economy to 2041*, March 2022, pp. 47–50, 53–55; Economics and Industry Standing Committee, *A Long-Term Partnership: Developing Stronger Ties with Indonesia*, August 2023, pp. 91–97.

45 Government of Western Australia, *Future Battery Industry Strategy Western Australia*, Department of Jobs, Tourism, Science and Innovation, Perth, January 2019, pp. 6, 9.

46 Government of Western Australia, *Strategy Update: Western Australia's Future Battery and Critical Minerals Industries, November 2020–November 2022*, Department of Jobs, Tourism, Science and Innovation, Perth, 2020, p. 4.

47 Submission 12, Wesfarmers Chemicals, Energy and Fertilisers, pp. 3–4.

48 Mark Abbotsford, Executive Vice President, Marketing and Trading, Woodside Energy, *Transcript of Evidence*, 20 October 2023, p. 2; Australian Energy Market Operator, *2023 Western Australia Gas Statement of Opportunities*, December 2023, p. 3.

49 Submission 12, Wesfarmers Chemicals, Energy and Fertilisers, p. 4.

50 Mark Abbotsford, Executive Vice President, Marketing and Trading, Woodside Energy, *Transcript of Evidence*, 20 October 2023, p. 2.

51 Laurent Trost, General Manager, Yara Pilbara, *Transcript of Evidence*, 18 October 2023, p. 7; Submission 24, BP Developments Australia, p. 2; Submission 34, Strike Energy, p. 11; Submission 22B, DomGas Alliance, p. 49.

52 Submission 22B, DomGas Alliance, p. 49.

AEMO's more conservative forecast of a 16 per cent increase over the same period under its "Expected" scenario.[53]

Demand should decline beyond 2033

> ***There will be a … time in the future when we do not need gas [as] battery technology gets cheaper. There are other technologies coming in.***
>
> *- Steve Edwell, Chair, Economic Regulation Authority (ERA)*

2.23 The forecasts released by AEMO provide the best insight into WA's future when it comes to the potential gas supply and domestic demand. However, at present AEMO only examines the next decade; 2033 is as far as it goes. While such timeframes are understandable—as the Department of Jobs, Tourism, Science and Innovation told the Committee, 'forecasting beyond a few years is always crystal-ball gazing'[54]—it means we do not have an authoritative forecast of the decline in gas demand that is expected to take place after 2033.

2.24 The level of demand that the State is expected to experience over the next decade will not—and cannot, if the world is to meet our emission targets—continue. The IEA has previously said that to reach net zero emissions, global gas demand will have to fall by more than five per cent each year on average to 2050, at which point it will sit at around 930 billion cubic metres—75 per cent lower than 2022.[55]

2.25 IEA Executive Director Dr Fatih Birol has said the gas industry needs to come to terms with this 'uncomfortable truth,' namely that a successful energy transition will require gas production to be scaled back over time.[56] Under a net zero scenario, any gas investment would be directed towards existing fields and the reduction of oil and gas operations, not the development of new projects.[57] The IEA says that in the net zero emissions scenario by 2050 none of the liquefied natural gas (LNG) export projects that are currently under construction would be required and any 'long lead time upstream conventional projects' in fact risk becoming stranded assets if they proceed.[58] (The steep drop off in gas that will occur will mean that some production will need to be closed before the fields have reached the end of their lives.)[59]

2.26 The Committee expects a similar trend in WA, where the transition to net zero will result in an increase in demand from current levels before dropping off as renewable energy replaces gas. Exactly what this trend looks like in WA is unclear.[60]

53 Australian Energy Market Operator, *2023 GSOO Data Register – Figures*, Figure 10, 14 December 2023, accessed 23 January 2024, <https://aemo.com.au>.
54 Alistair Jones, Director General, Department of Jobs, Tourism, Science and Innovation, *Transcript of Evidence*, 16 August 2023, p. 5.
55 International Energy Agency, *The Oil and Gas Industry in Net Zero Transitions*, France, 2023, pp. 19, 30, 32.
56 Dr Fatih Birol, 'Foreword', in ibid., pp. 4, 6.
57 International Energy Agency, *The Oil and Gas Industry in Net Zero Transitions*, France, 2023, p. 60.
58 ibid., pp. 61, 149.
59 ibid., p. 149.
60 Kate Ryan, Executive General Manager Western Australia and Strategy, Australian Energy Market Operator, *Transcript of Evidence*, 8 November 2023, p. 11.

2.27 It would not be a stretch to say that while WA requires a significant amount of gas, the volumes that are needed over the next 10 or so years will not be required forever. Multiple inquiry participants argued that bringing on more supply by streamlining the approvals process for new gas projects was the answer to the forecast shortfall over the next decade (discussed in Chapter 5), but this approach would go against the net zero pathway mapped out by the IEA. This is a tension that the Government will need to resolve.

… we talk about gas as being a transition fuel through the [coming years]. I am not sure when that transition ends, quite frankly. I could see gas having a really important role to play in our electricity supply well into the 2040s and maybe beyond; we just do not know that yet.

- Kate Ryan, Executive General Manager Western Australia and Strategy, Australian Energy Market Operator (AEMO)

Where is the supply?

2.28 WA's gas supply is currently produced by:

- Domestic-only projects—all the gas produced by these projects is provided to the WA domestic market.
- Domestic gas supplied by LNG exporters—these exporters are expected to market an equivalent of 15 per cent of their exports to the WA domestic market, in accordance with the WA Domestic Gas Policy.[61]

2.29 Despite the importance of gas to WA, the inquiry has been told that the gas market is 'relatively illiquid and concentrated' with a constrained number of supply sources.[62]

2.30 In preparing the Western Australia Gas Statement of Opportunities (WA GSOO), AEMO includes not only existing production facilities, but also those future gas projects which AEMO judges should be included in its "Expected" scenario, on the following basis:

> AEMO's supply model does not project how much gas *will* be produced, but how much *could* be produced. It distinguishes between existing, committed, and prospective projects by including prospective projects when the forecast price (WA domestic gas price or Asian LNG price) exceeds production costs [emphasis in original].[63]

2.31 The existing and potential facilities included in the 2023 WA GSOO's "Expected" scenario are shown in Table 2.2.

2.32 As Table 2.2 shows, of the prospective supply sources only one—the Scarborough Project—is an LNG project. This reflects the complexity associated with developing LNG projects: their exploration costs are higher,[64] they often have trickier gas compositions,[65] and they must

61 Submission 5, Department of Mines, Industry Regulation and Safety, p. 3.
62 Submission 17, Woodside Energy, p. 7.
63 Australian Energy Market Operator, *2023 Western Australia Gas Statement of Opportunities*, December 2023, p. 47.
64 Energy Quest, *Oil and Gas Industry Cost Trends*, commissioned by the Australian Petroleum Production and Exploration Association, Adelaide, 2014, p. 12.
65 Submission 22B, DomGas Alliance, p. 66; Sean Pitt, Vice President, Marketing, Trading and Shipping, Santos, *Transcript of Evidence*, 3 November 2023, p. 3.

transport their gas significant distances from their gas fields to onshore processing facilities.[66] On average, it takes a decade for LNG projects to go from exploration to production,[67] including the five or more years between Final Investment Decision (FID) and production.[68]

Table 2.2: Sources of potential gas supply included in the 2023 WA GSOO, Expected scenario

Production facility	Category	Assumed supply
Beharra Springs	Existing domestic gas only	28 TJ/day throughout the outlook period
Devil Creek	Existing domestic gas only	Ceases production end of Q1 2024
Gorgon	Existing LNG-linked with DMO*	270 TJ/day throughout the outlook period
Karratha Gas Plant (KGP)	Existing LNG-linked with DMO	90 TJ/day throughout the outlook period
Macedon	Existing domestic gas only	167 TJ/day in 2024, with declining production limited by remaining reserves for the rest of the outlook period
Pluto	Existing LNG-linked with DMO	28 TJ/day: 3 TJ/day via LNG truck-loading and 25 TJ/day via pipeline
Pluto acceleration	Existing LNG-linked with DMO	18 TJ/day between 2024 and 2025, with an additional 25 TJ/day from 2025 (Pluto gas to be delivered via the KGP)
Spartan	Existing domestic gas only	55 TJ/day in 2024, reducing through the outlook period, delivered through Varanus Island
Varanus Island (John Brookes and Spar-Halyard)	Existing domestic gas only	177 TJ/day from 2024 with declining production limited by remaining reserves for rest of the outlook period
Waitsia	Existing LNG-linked	At least 20 TJ/day from 2024 delivered via Xyris
Walyering	Existing domestic gas only	25 TJ/day from late-2023
Wheatstone	Existing LNG-linked with DMO	194 TJ/day throughout the outlook period

DMO – Domestic market obligation
Source: Australian Energy Market Operator, *2023 Western Australia Gas Statement of Opportunities*, December 2023, p. 49.

66 Submission 22B, DomGas Alliance, p. 66; Dr Philip Gorey, Deputy Director General, Department of Jobs, Tourism, Science and Innovation, *Transcript of Evidence*, 16 August 2023, p. 8.
67 Stuart Nicholls, Managing Director and Chief Executive Officer, Strike Energy, *Transcript of Evidence*, 13 September 2023, p. 2.
68 ibid.; Marcia Evans, Vice President, Upstream, Santos, *Transcript of Evidence*, 3 November 2023, p.4.

Table 2.3: Prospective gas supply included in 2023 WA GSOO, Expected scenario

Production facility	Category	Assumed supply
Corvus	New domestic gas only	Not developed
Gynatrix	New domestic gas only	Not developed
Lockyer Deep	New domestic gas only	50 TJ/day from mid-2028
Scarborough	New LNG-linked with DMO*	180 TJ/day from mid-2027
South Erregulla	New domestic gas only	40 TJ/day from mid-2026
Trigg Northwest	New domestic gas only	Not developed
Waitsia Stage 2	New domestic gas only	20 TJ/day between 2024 and 2028. An additional 100 TJ/day from 2029
West Erregulla	New domestic gas only	Not developed

DMO – Domestic market obligation
Source: Australian Energy Market Operator, *2023 Western Australia Gas Statement of Opportunities*, December 2023, p. 49.

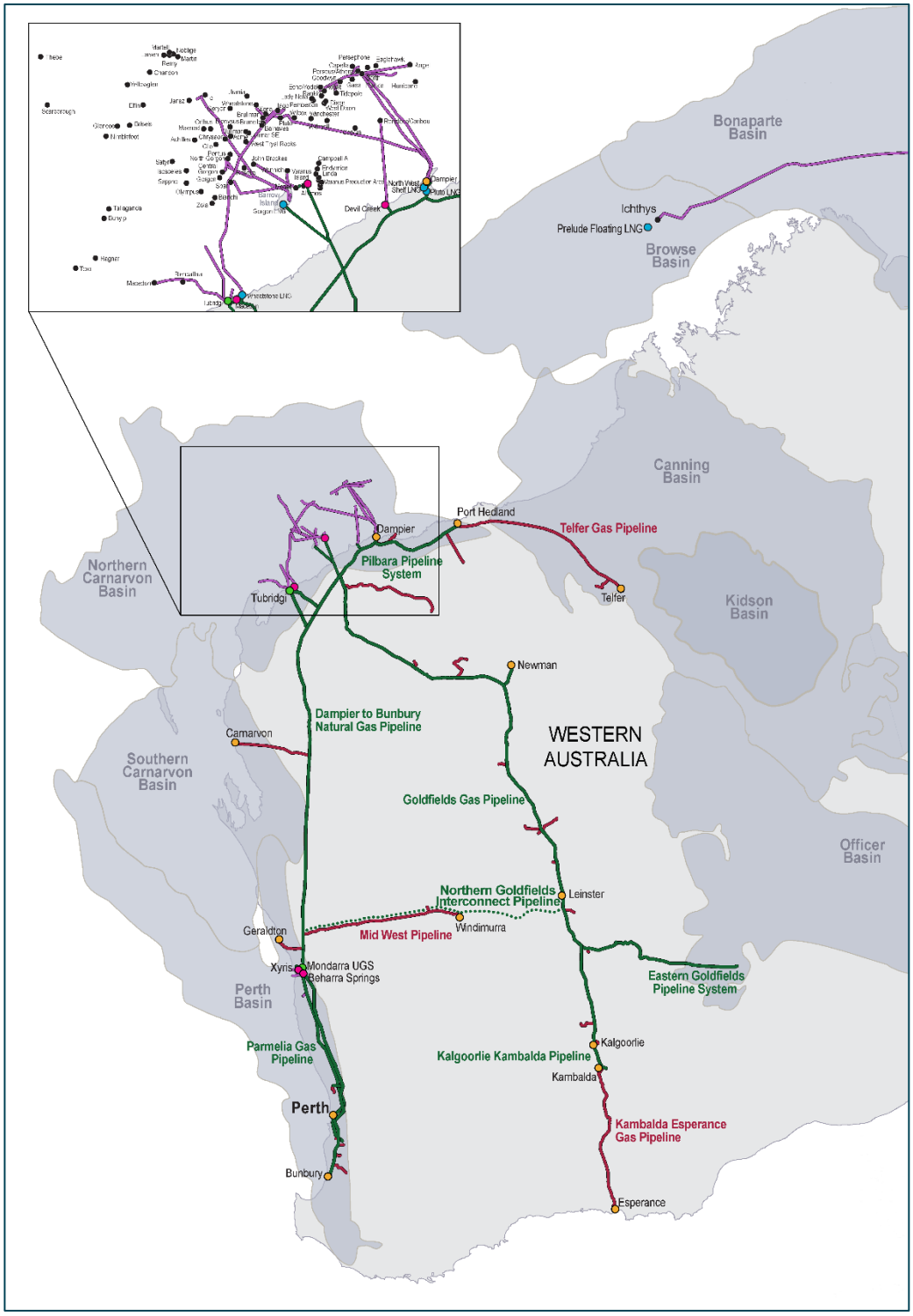
2.33 There seemed to be general agreement amongst witnesses that the 'easy' LNG projects have already made their way through the approvals process.[69] For example, the proposed Browse Project, which Woodside is hoping to bring online during the 2030s,[70] will require gas to be piped over 900 kilometres along the sea floor to the Karratha Gas Plant.[71] Many inquiry participants regard Browse as offering WA a 'crucial boost' to its domestic gas supplies beyond 2030.[72] Others, however, seem doubtful whether it will reach FID, expressing their belief that it is unlikely any new LNG projects will be developed in WA after the Scarborough Project,[73] particularly in light of the IEA analysis discussed above.

2.34 Onshore projects offer alternative sources of gas, particularly those based in the Perth Basin (see Figure 2.2). These projects are typically smaller and able to be developed faster than LNG projects. As Managing Director and CEO Stuart Nicholls explained, Strike Energy drilled its first well in the Perth Basin in 2019 and by 2023 was producing gas from the Walyering gas field.[74]

2.35 However, these smaller projects currently produce smaller volumes of gas than LNG projects. As shown in Table 2.3, AEMO expects Lockyer Deep's daily production to be 50 TJ/day, the equivalent of just under 28 per cent of Scarborough's daily supply. Walyering is forecast to produce 25 TJ/day, or just under 14 per cent of Scarborough's daily supply.[75] While these volumes may make a dent in WA's forecast shortfall, they will not eliminate it.

69 Sean Pitt, Vice President, Marketing, Trading and Shipping, Santos, *Transcript of Evidence*, 3 November 2023, p. 3; Dr Philip Gorey, Deputy Director General, Department of Jobs, Tourism, Science and Innovation, *Transcript of Evidence*, 16 August 2023, p. 8.
70 Submission 17, Woodside Energy, p. 12.
71 Woodside Energy, *Project Browse*, 2023, n.d., accessed 6 December 2023, <https://www.woodside.com>; Submission 17, Woodside Energy, p. 9.
72 Submission 24, BP Developments Australia, p. 1; Submission 17, Woodside Energy, pp. 1, 7; Submission 22, DomGas Alliance, p. 18.
73 Submission 30, CITIC Pacific Mining, p. 4; Submission 34, Strike Energy, p. 5.
74 Stuart Nicholls, Managing Director and Chief Executive Officer, Strike Energy, *Transcript of Evidence*, 13 September 2023, p. 2.
75 Australian Energy Market Operator, *2023 Western Australia Gas Statement of Opportunities*, December 2023, p. 49.

Figure 2.2: Map of basins and selected gas infrastructure in WA



Source: Australian Energy Market Operator, *About the Gas Bulletin Board (GBB)*, n.d., accessed 14 December 2023, <https://aemo.com.au/>.

Implications of a gas supply shortfall

2.36 The phrase 'keeping the lights on' is often used when talking about energy shortfalls. Where these notional lights may be located, and what happens if they go off, is less frequently discussed. Nevertheless, the Committee believes it is important to understand these nuances.

Most lights connected to the SWIS will likely remain on with an increase in price

2.37 WA's largest electricity network, the SWIS, provides electricity to more than 85 per cent of the State's population.[76] Government-owned Synergy is the largest retailer operating in the SWIS, providing electricity to over one million residential, business and industry customers from its thermal power stations and renewable energy generation facilities.[77] Amongst its generators are three GPG assets located in:

- Pinjar (a 584 megawatt (MW) facility).
- Cockburn (240 MW).
- Kwinana (200 MW).[78]

2.38 Based on the evidence received, it is unlikely that Synergy will have trouble securing the gas needed to generate electricity. It has a long-term agreement with the Gorgon Joint Venture that ensures it will be supplied with gas at least until the 2030s.

2.39 During periods of peak demand (such as during summer and winter), it sometimes needs to supplement this supply with gas from the spot market.[79] Synergy should be able to pay the higher prices usually demanded on the spot market; however, it may pass its increased costs onto the consumer, causing WA electricity bills to rise.[80]

2.40 The east coast has experienced a similar trend in recent years when global instability and increased international demand for LNG contributed to predicted shortfalls in the domestic gas market. According to the Australian Competition and Consumer Commission (ACCC):

- Offers by producers for 2023 supply reached over $70 per gigajoule (GJ) in some instances in August 2022, before falling back to around $20/GJ in November. Producer offers averaged just over $32/GJ between September and December 2022.[81]
- Offers by retailers (i.e. entities such as AGL, Alinta Energy and Origin Energy that purchase gas on the wholesale market to sell to retail customers) for 2023 supply peaked at just under $30/GJ in August 2022.[82]

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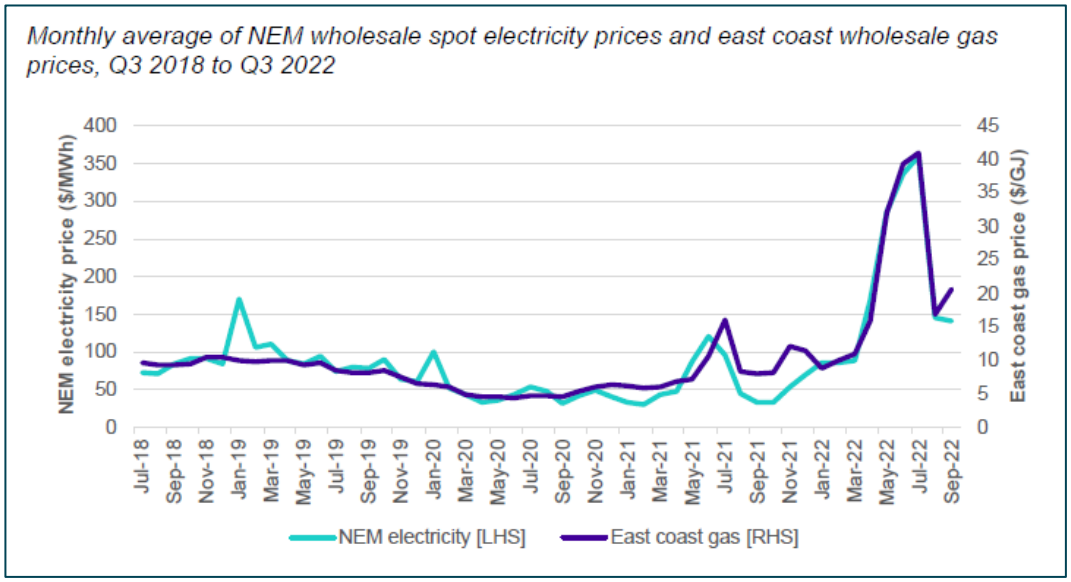
76 Department of Energy, Mines, Industry Regulation and Safety, *South West Interconnected System (SWIS) Demand Assessment*, n.d., accessed 23 January 2024, <https://www.brighterenergyfuture.wa.gov.au>.
77 Submission 31, Synergy, p. 1.
78 ibid. Synergy also buys electricity from private GPG generators.
79 David Fyfe, Chief Executive Officer, Synergy, *Transcript of Evidence*, 20 October 2023, pp. 1–2.
80 *Transcript of Evidence*, Closed session, 29 November 2023, p. 4.
81 Australian Competition and Consumer Commission, *Gas Inquiry 2017 – 2030: Interim update on east coast gas market*, Australian Competition and Consumer Commission, Canberra, June 2023, pp. 11, 40.
82 ibid., pp. 93, 11.

2.41 These elevated prices, which continued through much of 2022, impacted electricity bills. The ACCC cited data from AEMO showing a very close correlation between the east coast gas price and the National Electricity Market wholesale spot price (see Figure 2.3). The ACCC forecasts that the 2022 wholesale market prices will continue to put upward pressure on electricity bills in the east coast market throughout 2023.[83]

Figure 2.3: National Electricity Market electricity and east coast gas prices follow similar trajectories



Source: Australian Competition and Consumer Commission, *Inquiry into the National Electricity Market: November 2022 Report*, Canberra, November 2022, p. 17.

Potential loss of industry and jobs

2.42 Industry, dependent as it is on keeping costs as low as possible to remain profitable, is sensitive to rising prices. Once gas prices rise above a certain point, businesses may become unprofitable and choose to cease operations. According to AEMO, demand destruction (defined as the 'permanent or sustained decline in the demand for a certain good in response to high prices or limited supply') could happen in WA when prices reach $9.50/GJ.[84]

2.43 Some analysis indicates that WA's larger industrial consumers may be able to absorb the increased cost of gas and remain profitable.[85] Representatives of these consumers, however, suggested to the Committee that they were very price sensitive.[86] WesCEF, for example, pointed out that they were competing against companies that source their gas from the

83 Australian Competition and Consumer Commission, *Inquiry into the National Electricity Market: June 2023 Report*, Australian Competition and Consumer Commission, Canberra, June 2023, p. 2.

84 Australian Energy Market Operator, *2023 Western Australia Gas Statement of Opportunities*, December 2023, p. 28.

85 *Transcript of Evidence*, Closed session, 29 November 2023, pp. 4–5.

86 Ian Hansen, Managing Director, Wesfarmers Chemicals, Energy and Fertilisers, *Transcript of Evidence*, 13 October 2023, p. 7; Submission 22, DomGas Alliance, p. 5; Submission 27, Chamber of Minerals and Energy of Western Australia, p. 5; Submission 33, Alcoa of Australia, p. 2; Laurent Trost, General Manager, Yara Pilbara, *Transcript of Evidence*, 18 October 2023, p. 2.

United States or the Middle East, where gas prices and their overall costs are now considerably lower than those encountered in WA.[87]

2.44 Smaller consumers who source almost all their gas from the spot market, such as small-to-medium gold mining companies, are even more at risk. If prices rise past a certain point, it is likely that they will switch to diesel to power their operations, impacting WA's pathway to decarbonisation (discussed further below). If their operations continue to remain unprofitable, they will then be forced to close.[88]

2.45 Any closure or reduction in production will impact the employment of Western Australians. It is not known how many jobs may be lost, but it is not realistic to expect that companies will remain open in the face of declining revenues. In early 2024, for example, Alcoa announced its decision to curtail production at its Kwinana Alumina Refinery from the second quarter of 2024. Although Alcoa stressed the curtailment was based on multiple factors and not specifically the forecasted gas shortage, it highlights the impact on WA employment when companies wind back their operations. Alcoa currently employs around 800 people at the refinery; by the third quarter of 2025, only 6.25 percent—or 50 employees—will remain.[89] This is an early indication of what could eventuate in the future if gas prices continue to rise.

Decarbonisation threatened

2.46 Past short-term disruptions to gas supply have shown that, rather than halt production, industry in WA tends to switch to diesel generators in order to power operations. For example, Alcoa retains around six megalitres of diesel that it uses when there is a shortfall in gas.[90] This occurred in early January 2023, when incidents at three separate facilities (Varanus Island, Devil Creek and Wheatstone) removed around 20 per cent of total gas production from the WA gas market. This, in turn, caused linepack on the Dampier to Bunbury Natural Gas Pipeline to approach critical levels.[91] Although Alcoa withdrew as much gas as possible from the storage facilities where it keeps gas for such emergencies, it was forced to revert to diesel to sustain the heat at its refineries.[92] Not only is this use of diesel very expensive,[93] but it also increases the GHG emitted by WA.[94]

87 Ian Hansen, Managing Director, Wesfarmers Chemicals, Energy and Fertilisers, *Transcript of Evidence*, 13 October 2023, p. 7; Submission 12, Wesfarmers Chemicals, Energy and Fertilisers, pp. 8–9.
88 *Transcript of Evidence*, Closed session, 29 November 2023, pp. 4–5.
89 Alcoa, *Alcoa announces curtailment of Kwinana Alumina Refinery in Western Australia*, media release, 8 January 2024.
90 Nicholas Eaton, Energy Director, Australia, Alcoa of Australia, *Transcript of Evidence*, 20 September 2023, p. 2.
91 As the Australian Energy Market Operator explains, "Linepack" is the total volume of gas physically stored in a pipeline and must remain within a tolerance determined by the pipeline operator. Linepack levels are managed by monitoring and controlling supply and withdrawals.' See Australian Energy Market Operator, *Quarterly Energy Dynamics Q1 2023*, April 2023, p. 50; Submission 5, Department of Mines, Industry Regulation and Safety, p. 7.
92 Nicholas Eaton, Energy Director, Australia, Alcoa of Australia, *Transcript of Evidence*, 20 September 2023, pp. 7–8.
93 ibid., p. 4.
94 Russell Godsall, Executive General Manager Gas Operations, ATCO Gas Division, *Transcript of Evidence*, 3 November 2023, p. 8.

Finding 1

Since the inception of the WA Domestic Gas Policy, Western Australia has enjoyed secure and relatively affordable supplies of gas. It has been spared the gas price and supply volatilities which have troubled Australia's east coast.

Finding 2

The Australian Energy Market Operator (AEMO) has forecast that Western Australia will experience a shortfall and there is no indication that AEMO is incorrect. Thus, there is a credible risk that the State will face a substantial gas supply shortfall starting in the near term and continuing for most of the next decade.

Finding 3

If the forecast shortfall materialises, it will likely produce adverse consequences for the State, for example: higher electricity prices; loss of industry and jobs; and the presentation of a very real threat to the State's decarbonisation agenda.

Chapter 3

Domestic gas commitments under the WA Domestic Gas Policy

The WA Domestic Gas Policy is not enshrined in legislation. Rather, its principles are given effect by contractual agreements between LNG project developers and the State. This contract-based approach has led to a lack of transparency, consistency, clarity, and enforceability. Most importantly, it appears in some cases to be ineffective in ensuring the delivery of domestic gas in a timely manner.

Domestic gas commitment agreements

3.1 The WA Domestic Gas Policy (the Policy) is set out in a collection of policy and related documents which can be found at the Government of Western Australia website.[95] It is not enshrined in legislation; rather, it is given effect by contractual agreements between liquefied natural gas (LNG) project developers and the State. These agreements generally come in the form of State Agreements, Domestic Gas Producer Agreements and Domestic Gas Commitment Agreements. These agreements are negotiated at the beginning of the project and incorporate the principles set out in the Policy at that time.

3.2 There are some differences between agreements; however, the three main principles (or 'pillars') of the Policy are that LNG exporters must make domestic gas available by:

- Reserving gas equivalent to 15 per cent of LNG production from the project for the domestic market.
- Ensuring that necessary infrastructure is in place to meet the domestic gas commitment.
- Marketing this gas in good faith to existing and prospective consumers.

3.3 Information provided by Department of Jobs, Tourism, Science and Innovation (JTSI) identifies eight domestic gas commitment agreements currently in place at the project level. Domestic gas commitment agreements are also struck with each project's joint venture companies who must comply with the requirements to make domestic gas available on an individual basis according to their equity share in the project (although at times there are

95 Department of Jobs, Tourism, Science and Innovation, *WA Domestic Gas Policy*, 15 February 2024, accessed 20 February 2024, <https://www.wa.gov.au>.

exceptions to this).[96] Currently 'there are 23 LNG exporters with domestic gas commitments (domestic gas commitment holders) with the State', some with multiple commitments.[97]

3.4 Although the Government's statements of the Policy do not include any explicit reference to commercial viability, two older agreements, Gorgon (2003) and Pluto (2006), do provide that the obligation to market and make available gas is subject to it being commercially viable to do so.[98] Woodside has referenced this provision in respect of its Pluto obligation, and continues to rely on it.[99]

Implications of a contract-based approach to enacting the Policy

3.5 The Committee heard that this contract-based approach has implications for transparency, consistency and enforcement. Furthermore, while it provides certainty to the parties, implementing the Policy by contract does not allow flexibility over time to respond to the evolving market and the State's interests when circumstances change. These matters will be explored more fully in the final inquiry report. Here, we list some key observations made so far.

One key issue is the lack of clarity of how the delivery rate for each obligation is calculated, and whether that changes over time to match the rate of export of LNG. JTSI's website seems to indicate that the rate of domestic delivery should increase if LNG exports increase. This is a critical point and it shows how the policy has evolved over time.

- DomGas Alliance

A lack of consistency and clarity

3.6 Some stakeholders point out that the Policy does not have a clearly stated objective or enforcement mechanisms, but merely describes the obligations of LNG exporters.[100]

3.7 There are also differences in the various agreements setting out obligations for LNG exporters, which have been negotiated by the State at different points in time. This has led to differences in the nature of the agreements (generally State Agreements, Domestic Gas Producer Agreements and Domestic Gas Commitment Agreements) and the specifics of the obligations in them. Reporting requirements also differ.[101]

96 Pluto is the current exception to this practice, with Woodside marketing gas under the 2006 Pluto commitment on behalf of its joint venture partners. See Department of Jobs, Tourism, Science and Innovation, *Implementation of the WA Domestic Gas Policy*, 27 October 2023, accessed 12 December 2023, <https://www.wa.gov.au>.

97 Submission 6, Department of Jobs, Tourism, Science and Innovation, p. 9.

98 Mark Abbotsford, Executive Vice President, Marketing and Trading, Woodside Energy, *Transcript of Evidence*, 20 October 2023, p. 4; Stephen Dawson, Executive Director, Project Facilitation, Department of Jobs, Tourism, Science and Innovation, *Transcript of Evidence*, 16 August 2023, p. 10.

99 Mark Abbotsford, Executive Vice President, Marketing and Trading, Woodside Energy, *Transcript of Evidence*, 20 October 2023, p. 4.

100 Submission 22, DomGas Alliance, pp. 3, 8.

101 Submission 6, Department of Jobs, Tourism, Science and innovation, p. 16.

A lack of transparency on policy compliance

3.8 Transparency issues have been widely raised in evidence. For example, Wesfarmers Chemicals, Energy and Fertilisers submits that 'some producers are subject to clear obligations that are recorded in State Agreement Acts that are publicly accessible, the precise arrangements for other producers have not been disclosed publicly and it is unclear to market participants the extent to which there are concrete and legally enforceable obligations.'[102]

3.9 Each joint venture company involved in an LNG export project is individually responsible for their equity share of the domestic gas obligation and must report on compliance to JTSI. However public reporting by JTSI on compliance includes progress in volume against domestic gas commitments at the project level but does not disclose progress at the individual joint venture level. [103] This lack of transparency around compliance at the individual company level means that obligation holders are not kept accountable in the public eye, which has been highlighted by gas users as a key issue.[104]

… the objective of [the proposed annual Domestic Gas Commitment Statement] is to improve the operation of the market and the policy by providing gas market participants with the information on how much gas has been supplied and is available for sale to the market under each commitment by company.

- Stephen Dawson, Executive Director, Project Facilitation, Department of Jobs, Tourism, Science and Innovation (JTSI)

3.10 JTSI advised that it has been working on improving transparency, consulting with market participants, particularly gas producers, on a proposed Domestic Gas Commitment Statement which it plans to publish annually from June 2024. This statement will provide transparency over gas available from each of the joint venture project participants, whereas currently this is only available at the project level. The statement will provide clarity on the amount of 'gas expected to be available in the WA market and from whom' as per domestic gas commitments made in accordance with the Policy. Industry participants and the wider public will be able to see 'how LNG exporters are progressing with implementation of the domestic gas commitments.'[105]

Inadequate compliance and enforcement mechanisms

3.11 Due to inadequate compliance and enforcement mechanisms, there is an apparent inability to ensure the timely delivery of reserved gas. For the Policy to operate effectively there is an assumption of 'good faith' on behalf of gas producers to adhere to the spirit of the Policy.

102 Submission 12, Wesfarmers Chemicals Energy and Fertilisers, p. 9.
103 Department of Jobs, Tourism, Science and Innovation, *Implementation of the WA Domestic Gas Policy*, 27 October 2023, accessed 7 December 2023, <https://www.wa.gov.au>.
104 Jai Coppen, Senior Energy Sourcing Manager, Yara Pilbara Fertilisers, *Transcript of Evidence*, 18 October 2023, p. 4; Nicholas Eaton, Energy Director, Australia, Alcoa of Australia, *Transcript of Evidence*, 20 September 2023, p. 3; Submission 4, South32, pp. 4–5; Submission 30, CITIC Pacific Mining, pp. 5–7; Submission 22C, DomGas Alliance, p. 3.
105 Stephen Dawson, Executive Director, Project Facilitation, Department of Jobs, Tourism, Science and Innovation, *Transcript of Evidence*, 16 August 2023, p. 11.

3.12 The DomGas Alliance submits 'that when parties do not adhere to the policy in good faith, there is no mechanism to enforce' the Policy and ensure that gas is delivered to the domestic market at the rate envisaged by it.[106]

3.13 This is compounded by variations in the contracts which give effect to the Policy. One way in which agreements vary is how and when the gas reserved for the domestic market is required to be supplied.

> ***There is uncertainty about the mechanisms that exist to enforce compliance with obligations, and the Government's ability and willingness to follow through with enforcement activity. This flexibility may be taken advantage of by producers to the detriment of customers.***
>
> *- Wesfarmers Chemicals, Energy and Fertilisers (WesCEF)*

3.14 There is some concern amongst gas users that without an enforceable obligation to deliver gas to the domestic gas to market in a timely manner, the WA domestic market will be offered less than its 15 per cent share when LNG prices are high. Furthermore, the untimely delivery of domestic market obligations (DMOs) increases the risk of the domestic market receiving less than the total amount of the reserved 15 per cent of gas by the end of the field life, particularly in the case of reserves downgrades.[107] There is a double risk here – first, the field may become exhausted before the reserved gas can be recovered and sold. But second, even if reserved gas remains in the reservoir and is recoverable, it may become stranded if the producers choose to discontinue the project at that point.

Enforcement of compliance through dispute provisions

3.15 The Committee has been advised that theoretically the State may initiate an independent arbitration (or other dispute) process if there is a dispute regarding compliance with the Policy. If no resolution is possible, the State may subsequently suspend LNG sales in certain circumstances (although these actions may then be disputed by commitment holders and arbitrated again).[108]

3.16 In practice, this has never occurred: despite consulting with commitment holders about their annual reports on a regular basis, JTSI has never breached a proponent under the Policy.[109] The primary lever of enforcement available to the State is a 'sabre-rattling' approach to policy compliance. Compliance is pursued in a strongly worded request that producers take additional efforts to get back on track with their domestic gas commitments.[110]

106 Submission 22, DomGas Alliance, p. 2.
107 Submission 22, DomGas Alliance, p. 11.
108 Closed submission 6D, Department of Jobs, Tourism, Science and Innovation, p. 5.
109 Submission 6, Department of Jobs, Tourism, Science and Innovation, pp. 14, 19; Stephen Dawson, Executive Director, Project Facilitation, Department of Jobs, Tourism, Science and Innovation, *Transcript of Evidence*, 16 August 2023, p. 7.
110 See Submission 6, Department of Jobs, Tourism, Science and Innovation, p. 19.

Assessment of compliance with obligations

3.17 JTSI collects data from domestic gas commitment holders as part of its annual compliance process under the Policy and has provided this information to the Committee in confidence. This information suggests that not all LNG projects and joint venture partners are operating within the spirit of the Policy.

3.18 The Committee will make more specific findings and associated recommendations on this in its final report. However, the Committee notes here that some producers strictly apply the terms of their domestic gas agreements seemingly without regard to either the spirit of the Policy or their social contract with the Western Australian community.

3.19 According to the information provided by JTSI, LNG exporters have on average collectively delivered around eight per cent of domestic gas relative to LNG exports. This is just 'over half of what is required to be reserved under the Policy.' In 2022 this increased to 10 per cent of LNG being supplied as domestic gas, although there is considerable variation between producers.[111]

3.20 While the market was in surplus this level of delivery was not a cause for concern because the intent of the Policy is to ensure an adequate supply of gas to the domestic market, not to mandate a particular volume for delivery. As JTSI has noted, 'flexible application of the Policy enables producers to increase supply in response to conducive market conditions.'[112] But now that WA is facing a potential shortfall it appears that not all producers are upholding the spirit of the Policy.

Finding 4

The present reliance on implementation of the WA Domestic Gas Policy by contracts lacks consistency, transparency and enforceability. The final report will include recommendations on this.

Finding 5

To date, the WA Domestic Gas Policy has provided a framework that encourages market responses to gas surpluses or shortfalls but, given that the WA gas market is facing extended and significant shortfalls, the Policy is evidently no longer fit-for-purpose.

Finding 6

Since their commitments started, LNG producers have on average delivered around eight per cent of domestic gas relative to LNG exports; just over half of what is required to be reserved under the WA Domestic Gas Policy. In 2022 this increased to 10 per cent of LNG being supplied as domestic gas. However, there is considerable variation between LNG producers, and it appears that some producers are not operating within the spirit of the Policy.

111 Department of Jobs, Tourism, Science and Innovation, *WA Domestic Gas Policy: Implementation and Compliance Report*, Government of Western Australia, Perth, 2022, p. 31 in Closed submission 6E, Department of Jobs, Tourism, Science and Innovation, p. 44.

112 ibid.

Finding 7

Some gas producers strictly apply the terms of their domestic gas agreements seemingly without regard to either the spirit of the WA Domestic Gas Policy or their social contract with the Western Australian community.

Chapter 4

Gas pipeline export ban

Since August 2023, Perth Basin gas reserves have been subject to an effective 100 per cent domestic reservation policy. Some producers have argued against this policy position, stating that if they were allowed to export LNG they could produce more gas than is possible under current conditions. And that if they were also subject to a domestic market obligation the volume of domestic gas entering the WA domestic market could increase. In this chapter the Committee presents the evidence it has received about this.

The WA Domestic Policy and the export of gas via the local pipeline network

4.1 In 2020, the WA Government updated the WA Domestic Gas Policy (the Policy) to clarify the WA Government's policy position in relation to the export of gas through the local pipeline network (particularly gas in the onshore Perth Basin). Prior to the update, the State had not taken a position on the matter.[113]

4.2 The 2020 update made it clear that the WA Government would not support the export of gas through the local pipeline network other than in 'exceptional circumstances.'[114] At the time, the Waitsia Project met the threshold, influenced by the fact that:

- WA had declared a state of emergency amid the global pandemic and economists were predicting the State would be unable to escape some of the forces driving a wider Australian recession.[115]
- The Australian Energy Market Operator (AEMO) was predicting that the gas market would be oversupplied for the next decade.[116]

4.3 Under its domestic gas commitment agreement with the WA Government, the Waitsia Project is approved to export liquefied nature gas (LNG) until the end of 2028. This has come with a domestic market commitment; from 2020 to the end of 2028, it must provide around 20 terajoules per day (TJ/day)—or around 15 per cent of its LNG exports—to the domestic market. From 2029 onwards, the Waitsia Project will switch to a domestic-only project, providing 100 per cent of its gas to the WA market.[117]

113 Submission 6, Department of Jobs, Tourism, Science and Innovation, p. 6.
114 ibid.
115 Nelson Aston and Besa Deda, *Data Snapshot: WA Economic Outlook*, BankSA, July 2020, pp. 2–3.
116 Australian Energy Market Operator, *2019 Western Australia Gas Statement of Opportunities*, December 2019, pp. 4–5.
117 Submission 6, Department of Jobs, Tourism, Science and Innovation, p. 7; Submission 6A, Department of Jobs, Tourism, Science and Innovation, p. 2

4.4 Waitsia has an agreement to process its LNG through the Karratha Gas Plant (KGP), the production facility attached to the North West Shelf Project. As Box 4.2 explains, the KGP has spare capacity in its processing trains and can therefore be used to process third-party gas.

4.5 Since the Waitsia domestic gas commitment agreement was signed, the state of emergency has ended,[118] and the WA gas market's forecasted surplus has become a forecasted shortfall. However, gas producers have continued to seek exemptions from the Policy to export onshore gas as LNG through the pipeline network.

4.6 Consequently, the Department of Jobs, Tourism, Science and Innovation announced in August 2023 that it would not consider exempting from the Policy any further onshore gas developments that are connected to the existing pipeline network. In practice, this means that gas projects based in the Perth Basin—the only onshore projects connected to the pipeline network—are not able to export LNG. (Gas projects in WA's other major onshore basin, the Canning Basin, are not connected to the pipeline network. If they wish to export LNG, developers will have to make a 'normal application' under the Policy and be subject to the requirement to supply 15 per cent of their exports to the domestic market).[119]

4.7 It is possible that this ban could be lifted, although the detail of how such an amendment to the Policy might work has not been announced. WA Premier Roger Cook has indicated that this aspect of the Policy is being reviewed, with a decision expected by mid-2024. AEMO's supply shortfall forecast is reported to be behind the review.[120]

Box 4.1: Perth Basin

The Perth Basin is an onshore and offshore sedimentary basin which extends along Australia's southwest coast (see Figure 2.2 in Chapter 2). It covers approximately 205,000 square kilometres, 50,000 of which are onshore. According to the Department of Energy, Mines, Industry Regulation and Safety, the Basin yielded 20.4 gigalitres of gas between 1949 and 2019, and gas production is likely to rise significantly considering recent discoveries.

Source: Department of Energy, Mines, Industry Regulation and Safety, Perth Basin, n.d., accessed 2 February 2024, <https://www.dmp.wa.gov.au>.

118 Department of Health, *COVID-19 State of Emergency ends but work continues for the WA Health system*, 3 November 2022, accessed 12 January 2024, <https://www.health.wa.gov.au>.

119 Submission 6A, Department of Jobs, Tourism, Science and Innovation, p. 2.

120 Josh Zimmerman, 'Premier Roger Cook: Decision on lifting onshore gas export ban expected within six months', *The West Australian* (web-based), 11 January 2024, accessed 22 January 2024, <https://thewest.com.au>.

Reasons for permitting the export of gas from the local pipeline network

4.8 Numerous gas producers submitted that the Policy should be amended to allow the export of least a portion of onshore gas production.[121] The following sub-sections canvass the main arguments provided in support of this.

Incentivising the development of new and larger gas projects

4.9 It stands to reason that gas market conditions impact investment decisions. Factors such as the size of the gas market, gas prices and infrastructure costs all influence whether a gas project is developed and, if so, its eventual size and scope. For example, at least one onshore gas producer has publicly indicated that the prices it can secure on the domestic gas market only justify the development of comparatively small projects.[122]

4.10 Being able to access the higher-priced LNG market, according to some producers, would encourage them to invest more into exploration, development and production.[123] In essence, the returns a company could achieve by selling would drive them to initiate new projects and/or invest in larger facilities capable of processing greater amounts of gas. As Rachael Risucci, Vice President Australia, Gas and Low Carbon Energy at BP Developments Australia explained, 'Gas developments are extremely capital intensive, and it is about making an economic return. It is about making a payback in a reasonable timeframe.' [124] If these projects were subject to a domestic market obligation (or so the argument goes), this would increase the amount of domestic gas entering the WA market. Without LNG prices to entice producers, the gas may never be extracted.

4.11 Similarly, Strike Energy submitted that exporting LNG would give it access to 'deeper, liquid pools of international capital.'[125] International investment in onshore projects is currently limited. First, international companies are not interested in entering into offtake contracts with onshore producers because the gas is unable to leave WA. Second, the opaqueness of the WA gas market means investors are unable to understand the volumes and prices (and therefore the profits) that may be realised.[126] Managing Director and Chief Executive Officer (CEO) Stuart Nicholls said that when he conducted an equity roadshow a few years ago, investors did not understand the opportunity for gas developments in WA:

> I was sitting there looking at the market and seeing that the existing investment, the rates of drilling were ultimately going to create a market where price was going to rise. There is not enough information out there for generalist investors to be

121 Submission 17, Woodside Energy, p. 12; Submission 20, Mitsui E&P Australia, p. 3; Submission 24, BP Developments Australia, p. 2; Submission 32, Santos, p. 2; Submission 34, Strike Energy, p. 7; Submission 35, Australian Petroleum Production and Exploration Association, p. 6; Submission 26, Beach Energy, pp. 3–4.

122 Adrian Rauso, 'Gas ultimatum and FMG Bulls***!', *West Australian*, 17 November 2023, p. 56.

123 Submission 17, Woodside Energy, p. 12; Submission 35, Australian Petroleum Production and Exploration Association, p. 6; Submission 30, CITIC Pacific Mining, p. 5; Submission 32, Santos, p. 2.

124 Rachael Risucci, Vice President Australia - Gas and Low Carbon Energy, BP Developments Australia, *Transcript of Evidence*, 20 October 2023, p. 3.

125 Submission 34, Strike Energy, p. 6.

126 Stuart Nicholls, Managing Director and Chief Executive Officer, Strike Energy, *Transcript of Evidence*, 13 September 2023, p. 6.

> able to look at and say, "Actually I agree with the CEO who is completely biased and trying to tell me that the price of gas will be rising Western Australia."[127]

4.12 The higher prices achieved on the international market makes it easier for generalist investors to recognise the valuable investment opportunities offered by onshore projects in WA.

Bringing greater volumes of gas online faster

4.13 Timeliness of gas supply will be a key consideration for WA over the coming decades and, according to some onshore gas producers, allowing onshore projects to export LNG may ensure that additional gas is provided to the domestic market sooner rather than later.

4.14 According to Strike Energy, providing access to LNG markets will enable more domestic gas to be extracted from its reserves than might otherwise be possible. Without the levels of international investment that it could attract through the export of LNG, Mr Nicholls said Strike is forced to 'incrementally invest in its business over time in order to reach the size and the scale of production that we would otherwise be able to reach a lot earlier through attracting international investment through LNG markets.'[128]

4.15 Mr Nicholls used Strike's current drilling infrastructure arrangements as an example of how increased investment could speed up the development of Strike's reserves. Transporting an onshore rig from the east coast to WA is cost prohibitive for Strike alone, so it has entered into a rig-sharing arrangement with Mineral Resources, another onshore producer, which slows down the rate of 'drilling, exploration, appraisal and development.' With more capital, Strike says it would be able to bring its own drilling infrastructure, speeding up the process.[129]

Third party tolling through North West Shelf infrastructure

4.16 Irrespective of whether the amount of gas supplied to the WA market would increase, some inquiry participants submitted that a positive outcome of lifting the export prohibition would be the maintenance of LNG processing infrastructure at the KGP.[130]

4.17 The KGP has scaled LNG back production in recent years due to the declining reserves at the North West Shelf fields (see Box 4.2). Woodside Energy said that without new third party gas like that offered by onshore producers, there may have to be 'staged infrastructure retirements' with potentially only two of the five LNG trains operational by 2030.[131]

127 ibid., p. 9.
128 ibid., p. 2.
129 ibid., p. 4.
130 Submission 30, CITIC Pacific Mining, p. 5; Submission 24, BP Developments Australia, p. 2; Submission 17, Woodside Energy, p. 10.
131 Submission 17, Woodside Energy, p. 10.

Box 4.2: Karratha Gas Plant

Operated by Woodside Energy as part of the North West Shelf Project, the Karratha Gas Plant (KGP) produces liquefied natural gas (LNG), domestic gas, condensate and liquefied petroleum gas (LPG). It covers about 200 hectares and consists of five LNG processing trains; two domestic gas trains; six condensate stabilisation units and three LPG fractionation units.

The KGP has an export capacity of 16.9 million tonnes per annum; however, the depletion of reserves at the North West Shelf fields has meant that, since 2022, it has had spare capacity in its LNG processing trains.

KGP's domestic gas trains are also not running at full capacity. The DomGas Alliance submits that the KGP actually has an oversized processing capacity—it can produce 630 terajoules of domestic gas per day (TJ/day) (or 19.2 petajoules (PJ) a month) but the North West Shelf Project only has a domestic gas obligation of around 70–90 TJ/day. In addition, evidence from the Department of Jobs, Tourism, Science and Innovation shows that KGP's share of the domestic market has declined from 48 per cent in 2014 to six per cent in 2022, although this could be due to a diversification of gas supply sources and declining North West Shelf fields.

Consequently, the KGP has scaled back its production in recent years. Between 2013 and late 2018, the KGP produced an average of 13.6 PJ/month. However, much of the production took place in the early years because from the end of 2016–late 2018, the plant was only producing 11.4 PJ/month.

Third parties—specifically Pluto and Waitsia—have signed agreements to process their gas through the KGP, which is using some of the spare capacity. But Woodside Energy submits that it is not enough. It claims that, without 'timely development of Browse' (a proposed joint venture that, if it reaches the Final Investment Decision phase, will be operated by Woodside and will see gas piped to the KGP for processing), it cannot maintain the infrastructure supporting the 630 TJ/day domestic gas capacity.

Sources: Woodside Energy, *NWS assets: Karratha Gas Plant*, n.d., accessed 6 October 2023, <https://www.woodside.com>; Submission 22, DomGas Alliance, p. 11; Submission 22B, DomGas Alliance, p. 22; Submission 17, Woodside Energy, p. 14; 'Australia's Woodside starts sending Pluto gas to NW Shelf LNG plant', *Reuters* (web-based), 31 March 2022, accessed 24 January 2023, <https://www.reuters.com>; Submission 6, Department of Jobs, Tourism, Science and Innovation, pp. 11, 12.

The Committee's findings

4.18 The main question facing the Committee is whether lifting the export ban would in fact produce an amount of gas that would substantially mitigate the forecast shortfall. The Committee has observed that if the current 15 per cent reservation was applied in an onshore context where currently 100 per cent of production is reserved for domestic use, the intervention would need to produce an almost seven-fold increase in total volumes for the domestic market to 'break even.'[132]

4.19 No evidence has been received that changing the current 100 per cent reservation would unlock this volume of production. In fact, Alcoa of Australia spoke against lifting the export prohibition on the basis that rather than increasing gas supply, would actually 'introduce risk to the domestic market.'[133]

4.20 Other gas users submitted that onshore producers should not be able to export LNG, with some indicating there is sufficient demand in the domestic market to support onshore

132 Stuart Nicholls, Managing Director and Chief Executive Officer, Strike Energy, *Transcript of Evidence*, 13 September 2023, pp. 4–5, 11; Richard Harris, Chair, DomGas Alliance, *Transcript of Evidence*, 13 September 2023, p. 8; Nicholas Eaton, Energy Director, Australia, Alcoa of Australia, *Transcript of Evidence*, 20 September 2023, p. 9.

133 Nicholas Eaton, Energy Director, Australia, Alcoa of Australia, *Transcript of Evidence*, 20 September 2023, p. 9.

projects.[134] The Committee has received evidence that there are onshore reserves which could be brought to market profitably at a domestic gas price in the order of $4 per gigajoule.[135]

4.21 The Committee is of the view that there is a possibility that allowing onshore producers to export LNG could address a shortfall caused by insufficient gas being physically available, or by that gas already being contractually committed. However, it may not address a shortfall caused by producers who decide not to develop projects for their own strategic and commercial reasons (see Chapter 5).

4.22 If the export prohibition was lifted, there is support for the relevant producers being subject to the 15 per cent domestic gas reservation currently imposed on offshore LNG projects.[136] Others said that allowing any amount of onshore gas reserves to be exported would be an improvement.[137]

4.23 The Committee is presently considering the proposition that if the WA Government were to change the current 100 per cent reservation policy for onshore producers, the reservation percentage may need to be more than 15 per cent. One possible variant would be to allow staged or conditional LNG exports in a year, after a producer has delivered to the domestic market (or offered transparently for domestic sale) an agreed minimum volume in that year.

4.24 It should be noted that, even if this mechanism were implemented and successful in delivering more gas to WA consumers, it is unlikely that this gas would be available in much less than four or five years from today.

4.25 If the Government is to adopt this approach and allow some onshore producers to export a proportion of their gas reserves, the Committee is of the opinion that it should keep the following considerations in mind. Is there convincing evidence for each of the following:

- That WA is forecast to have a gas surplus and that allowing onshore gas exports would not result in a tightening of the domestic gas market?
- Alternatively, that the export of onshore gas would accelerate the development of a gas resource and ease any forecast shortfall?
- That preventing the export of onshore gas would cause a proposed gas project to become uneconomic and therefore prevent the development from going ahead?
- That allowing the export of onshore gas would stimulate downstream processing?
- That the producer seeking to export onshore gas has a track record of acting in accordance with their social licence? (As an example, this could be evaluated by considering whether they have a track record of marketing in good faith if they are already subject to the Policy).

134 Submission 12, Wesfarmers Chemicals, Energy and Fertilisers, p. 12; Submission 16, Chemistry Australia, p. 2; Submission 22, DomGas Alliance, p. 16.

135 *Transcript of Evidence*, Closed session, 29 November 2023, p. 17.

136 Submission 21, Mineral Resources, p. 2; Submission 20, Mitsui E&P Australia, p. 3.

137 Submission 20, Mitsui E&P Australia, p. 3; Submission 24, BP Developments Australia, p. 2; Stuart Nicholls, Managing Director and Chief Executive Officer, Strike Energy, *Transcript of Evidence*, 13 September 2023, p. 3.

4.26 The Committee will continue to investigate this issue and provide further comment in its final report.

Finding 8

LNG exports are favoured by producers because they provide exposure to larger international markets; deeper pools of international capital; and attract higher prices than deliveries of domestic gas. For this reason, some submitters to the inquiry claim that LNG exports from the Perth Basin could incentivise the development of new gas resources.

Finding 9

There is competing evidence as to whether allowing onshore producers to export LNG would increase the volume of gas delivered to domestic consumers. It is not clear whether this action alone would provide a timely remedy to the forecast gas shortfall. However, if greater pools of capital were available, this may facilitate the faster development of the resource and deliver greater volumes to the domestic market.

Chapter 5

Possible market interventions

Forecasts indicate the WA Domestic Gas Policy is unlikely to prevent a shortfall of domestic gas in its current form. The Committee therefore believes a case for government intervention has emerged. This chapter presents possible market interventions that the Government could take to address causes of a potential gas supply shortfall in the absence of, or to supplement, any industry-led responses. Many of these were raised by submitters.

Where to from here – possible market interventions

5.1 The WA Domestic Gas Policy (the Policy) aims 'to secure WA's long-term energy needs and ongoing economic development by ensuring that … [producers] make gas available to the domestic market.'[138]

5.2 As noted in previous chapters, it does not appear to be achieving this goal. The Committee observes a credible risk that the State will face a substantial gas supply shortfall over the next decade, which the Policy in its current form seems unlikely to prevent. Unaddressed, this shortfall could be a material and imminent threat to WA's prosperity, jobs, decarbonisation objectives and critical minerals aspirations. As such, the Committee considers that there is a case for government intervention.

5.3 However, the Committee is of the view that an industry-led solution is preferable to government intervention. If WA gas producers are able and willing to bring additional gas to market, either using their own facilities or by tolling the gas through ullage (spare capacity) in other facilities, this might, on its own, be enough to alleviate the forecast shortfall.

There is a case for government intervention

5.4 To achieve its goals the Policy relies on there being an effectively functioning gas marketplace. While the Policy stops the gas being *exported*, its objective of ensuring that gas is *available* domestically will not be realised if the reserved gas sits in the reservoir unsold despite there being domestic demand. This now appears to be what's happening—the Committee has heard that in recent years, willing buyers have been unable to secure gas supplies.

5.5 Given that the WA gas market is facing extended and significant forecast shortfalls, the Policy is evidently no longer fit-for-purpose.

138 Department of Jobs, Tourism, Science and Innovation, *WA Domestic Gas Policy*, 15 February 2024, accessed 20 February 2024, <https://www.wa.gov.au>.

5.6 Accordingly, this chapter outlines some of the measures the WA Government could implement if it chose to intervene. These range from modest to substantial. Some could be implemented quite quickly; others would require legislation and considerable development.

5.7 For each of the interventions discussed in this chapter, the Committee has prepared a simplified at-a-glance scorecard, to show:

- The possible causes of the shortfall that the intervention might address.
- Whether the intervention is likely to involve any sovereign risk.
- The likely lead time before the intervention could bring new gas to market.

5.8 The elements of this scorecard are as follows.

An intervention must address the cause of the potential shortfall

5.9 To be effective, any regulatory intervention must address the underlying causes of the problem (see Box 5.1). These causes are not mutually exclusive.

Box 5.1: Possible causes for the gas supply shortfall

The Committee is presently considering four possible causes for the gas supply shortfall:

Physical availability—It could be that due to declining field production there is physically not enough gas available to be sold, or that available gas cannot physically be diverted or swapped for processing in a domestic gas plant with spare capacity.

Contractual availability—Alternatively, the gas could be physically available and able to be diverted or swapped through available domestic gas plant capacity, but it has already been allocated under inflexible long-term contractual commitments

Economic—On the other hand, perhaps the gas is physically and contractually available, but sales are not occurring due to a commercial misalignment between potential sellers and buyers. For example, a producer is capable of selling domestically but prefers to secure the higher margins to be had from liquefied natural gas export sales. As another example, lack of market transparency may make it hard for sellers and buyers to find each other.

Strategic—Each producer makes its own commercial decisions about when and how to develop its resources and sell gas. The Committee observes that even where the previous three constraints do not apply (i.e. where there are no physical, contractual or economic barriers), circumstances might arise in which a producer chooses not to bring gas to market for other reasons. For example, for new fields, if a producer also holds reserves in other jurisdictions its internal development schedule may not favour its Western Australian assets. Or for an existing field a producer may see a future commercial advantage in withholding supply for the time being.

5.10 Not all interventions will be effective against all underlying causes. For example, measures designed to increase transparency or to address the revenue gap between domestic and export sales, would be ineffective if the cause is physical or strategic.

Sovereign risk

5.11 Some of the potential measures discussed below would involve using the State's legislative power to impose additional or different requirements on existing gas projects. If a

government were to consider any of these, it would need first to consider the sovereign risk implications.[139]

5.12 Western Australia's economy has long benefited from domestic and foreign direct investment in resource development projects. As this Committee has argued in a previous report, WA is seen as a stable and attractive place to invest when compared to jurisdictions with similar mineral and energy wealth. There is a perception of very low risk that the government will shift the goalposts after an investment is made.[140] The Committee acknowledges this reputation and its value but makes three observations.

5.13 First, almost every discussion about regulatory reforms which might impact a project prompts a warning about 'sovereign risk,' but the label is not always justified. Making an investment in WA does not bestow a lifetime exemption from regulatory change. Circumstances change, and all businesses operating in WA—including those which started with foreign investment—should and do expect regulatory regimes to change with them.

5.14 Second, not all sovereign interventions are equal. At the extreme upper end would be nationalisation. Close to it would be an intervention that changes the project's profitability so substantially that the proponent would never have commenced it. But well short of such interventions lie measures which have modest or negligible impacts on overall project economics (see Box 5.2).

Box 5.2: Severity of sovereign risk

Recognising that not all manifestations of sovereign risk are equal, the Committee has provided the following very broad classification:

Substantial—A substantial intervention which impacts core project economics (e.g. materially changing the domestic market obligation percentage for an existing project, or overriding an existing binding offtake agreement). This includes any change which could so materially change a project's economics that potential future investors in other projects would regard it with concern.

Uncertain—The intervention may have a major impact (above), or only a medium one (below), depending on the detail of how it is implemented. In other words, while implementing this intervention is likely to have at least some sovereign impact, the impact need not necessarily be substantial.

Moderate—An intervention which does override an existing contractual right (e.g. to confidentiality) and so qualifies as a sovereign intervention, but which does not fundamentally change core project economics. For example an intervention which impacts opportunistic revenue or which impacts matters not factored into the original Final Investment Decision.

Minor or none—A general change in the legal landscape which does not seek to override existing contractual entitlements.

139 For the most extreme interventions, foreign trade issues may also need to be considered.

140 Economics and Industry Standing Committee, *Intergenerational Challenges and Opportunities for the Western Australian Economy to 2041*, March 2022, pp. 70–71.

5.15 Third, although the State's reputation as a low sovereign risk investment destination is one important contributor to its ongoing prosperity, it is not the only one. Another is having a sufficient and appropriately-priced supply of energy for business and residential consumers, and feedstock gas for industrial processes. As outlined in this Committee's previous report on challenges facing the WA economy into the future, if WA cannot offer affordable and available energy to prospective investors then this will pose a significant challenge to future prosperity.[141]

Timing

5.16 Every intervention will have some lead time. This has two aspects – how long it might take to implement the measure, and how long the measure, once implemented, might take to impact gas supply:

- Time to implement: Interventions which use existing (or no) legislative powers, or which are relatively uncontroversial so that less extensive consultation may be required, will be fastest to implement. Those which require a new Act or changes to an existing Act would likely take two or three years before they commence.
- Time to have an effect: Implementing a new measure may result in an almost immediate change in gas supplies, but not always. For example, if a measure is designed to encourage or facilitate new gas field development, gas will not flow until new fields are developed.

5.17 The Committee suggests that the interventions discussed in this chapter can be divided into four broad groups based on their possible lead times (see Box 5.3).

Box 5.3: Lead time to first additional gas

As a rough indication of how long an intervention may take to increase domestic gas supply, factoring in both time to implement and time to have an effect after implementation, the Committee has grouped interventions into the following categories:

0–2 years—Measures which are relatively easy to implement (no changes to Acts, and only modest consultation needed) and which are likely to start impacting gas supply soon after they are implemented.

2–4 years—Measures which will likely require legislation, but should start impacting gas supply shortly after the new laws come into effect.

3–5 years—Measures which rely on the development of new onshore resources, so that allowance must be made for the time taken for projects to reach Final Investment Decision and then be developed and commissioned. This interval (3–5 years) reflects projects which are already under development to some extent. Other projects may take much longer than this.

5+ years—Measures which likely depend on the development of new offshore projects, or which have both a long time to implement (changing an Act) and also will take some time after implementation to have an effect on gas supply.

141 ibid., p. 77.

An industry-led solution would be ideal

5.18 Most of this chapter discusses possible government interventions. But, as noted at the start of this chapter, if WA gas producers are able to bring additional gas to market, either using their own facilities or by tolling the gas through ullage (spare capacity) in other facilities, this might be enough to alleviate the forecast shortfall, forestalling or diminishing the need for government action.

Table 5.1: At a glance: An industry-led solution

Addresses shortfalls caused by:				Practicalities
Physically unavailable	Contractually unavailable	Economic factors	Strategic choice	Lead time 0-2 years; Sovereign risk MINOR/NONE
✗	✓	✓	✓	

5.19 As Table 5.1 shows, an industry-led solution will not help in the short term if there is no gas physically available to be supplied, but otherwise it would appear to be within gas producers' power to overcome all contractual, economic and strategic barriers to gas delivery. With sufficient will, an industry-led arrangement should be able to be implemented quickly.

5.20 This would be an ideal outcome. It would be able to address the shortfall in both the near term and the longer term—and of course an industry-led solution would have no sovereign risk implications.

Finding 10

Given the forecast domestic gas shortfall and credible risk of imminent and material economic harm, there is a case for the State Government to intervene in the domestic gas market. This could include a legislative response.

Finding 11

Industry-led responses to the forecast domestic gas shortfall are preferred and to be encouraged. In some cases, it may be appropriate for government intervention to be deferred or suspended if a timely and effective industry-led response is addressing the problem.

Finding 12

Government interventions should be sensitive to the sovereign risk issue, but should also have regard to the following:

- industry in any jurisdiction faces the risk of regulatory change as circumstances and policies change over time
- not all sovereign interventions are equal in effect
- while the State's economic prosperity may depend in part on its reputation as a low sovereign risk jurisdiction, it also depends on other factors including having a secure and affordable supply of energy and feedstock gas.

Finding 13

Government interventions do not have to apply across the board. If some gas producers are acting in accordance with the spirit of the WA Domestic Gas Policy while others are not, it may be appropriate for a government intervention to target only the latter.

Measures to facilitate new projects

Improve the approvals process

5.21 There seems to be consensus amongst gas users and gas producers that the existing approvals process for proposed gas projects is, as one inquiry stakeholder put it, 'unwieldy.'[142]

5.22 Entities wanting to begin gas exploration activities or bring new developments online must generally obtain permits from multiple State and/or Australian Government agencies, which according to some stakeholders results in unnecessary duplication and regulatory conflict.[143] For example, based on its experience of WA's approvals process, Talon Energy said that 'one agency may approve a particular activity but another agency interprets the same legislation differently and does not approve it.'[144]

5.23 Lengthy approvals processes may also delay gas projects which in turn impact gas consumers. Wesfarmers Chemicals, Energy and Fertilisers (WesCEF) used the example of the West Erregulla gas processing plant and pipeline, part of the joint venture between Strike Energy and Hancock Prospecting. It noted that a referral under section 38 of the *Environmental Protection Act 1986* (WA) was first made in relation to these developments in April 2021 but over two years later, a final decision was still yet to be made. WesCEF has a conditional contract with Strike for West Erregulla gas and said that any delay to its production will undoubtedly affect WesCEF operations.[145]

142 Submission 7, Talon Energy, p. 1. See also Kayleen Ewin, General Manager, Community and Government Affairs, WA, Northern Australia and Timor Leste, Santos, *Transcript of Evidence*, 3 November 2023, p. 9; Submission 20, Mitsui E&P Australia, pp. 3–4.

143 Patrick Beashel, General Manager, Gas Supply and Trading, Chevron Australia, *Transcript of Evidence*, 20 September 2023, p. 9; Rachael Risucci, Vice President Australia - Gas and Low Carbon Energy, BP Developments Australia, *Transcript of Evidence*, 20 October 2023, p. 8; Submission 1, Hon Dr Steve Thomas, p. 6.

144 Submission 7, Talon Energy, p. 7.

145 Submission 12, Wesfarmers Chemicals, Energy and Fertilisers, p. 10.

5.24 While acknowledging these submissions, the Committee does note that WA already tends to rank highly on international scorecards for regulatory approvals within the extractive sector.[146]

5.25 None of the inquiry participants suggested that the standards imposed through the approvals process should be reduced. Rather, there was a strong view that the government bodies responsible should be better resourced to maintain these standards while accelerating the assessment of applications.[147]

5.26 What stakeholders thought an appropriately-resourced body might look like is unclear. Despite looking for benchmarks both in Australia and internationally, WesCEF said it found that 'all the regulators struggle.'[148]

5.27 Other possible solutions to improve the approvals and permitting process which have been suggested to the Committee include:

- Digitising more processes.[149]
- Setting and maintaining specific timelines around the completion of assessment for key approvals.[150]
- Implementing the lead agency framework,[151] used in relation to Strike Energy's gas acceleration strategy and its development of Walyering, Ocean Hill and the South and West Erregulla gas field,[152] to guide proposals that may reduce the market shortfall through the approvals process.[153]

146 Fraser Institute, *Annual Survey of Mining Companies*, 4 May 2023, accessed 28 January 2024, <https://www.fraserinstitute.org>. For overall investment attractiveness, which includes minerals prospectivity, WA ranked second behind Nevada (down from first last year); for overall policy attractiveness, WA ranked 10th out of the 61 jurisdictions, with South Australia the only Australian jurisdiction to rank higher (third).

147 Submission 16, Chemistry Australia, p. 2; Submission 12, Wesfarmers Chemicals, Energy and Fertilisers, pp. 10–11; Submission 17, Woodside Energy, p. 12; Submission 24, BP Developments Australia, p. 4; Submission 35, Australian Petroleum Production and Exploration Association, p. 7; Submission 37, Molyneux Advisors, p. 4; Patrick Beashel, General Manager, Gas Supply and Trading, Chevron Australia, *Transcript of Evidence*, 20 September 2023, p. 9; Ian Hansen, Managing Director, Wesfarmers Chemicals, Energy and Fertilisers, *Transcript of Evidence*, 13 October 2023, p. 10; Rachael Risucci, Vice President Australia - Gas and Low Carbon Energy, BP Developments Australia, *Transcript of Evidence*, 20 October 2023, p. 8; Submission 21, Mineral Resources, p. 3.

148 Ian Hansen, Managing Director, Wesfarmers Chemicals, Energy and Fertilisers, *Transcript of Evidence*, 13 October 2023, p. 11.

149 Submission 15, Chamber of Commerce and Industry WA, p. 3.

150 Submission 17, Woodside Energy, p. 12.

151 Department of Treasury, *Lead Agency Framework*, 24 August 2021, accessed 12 December 2023, <https://www.wa.gov.au>.

152 Stike Energy, *Western Australian Government supports Strike's Gas Acceleration Strategy*, ASX announcement, 8 June 2023, accessed 30 January 2024, <https://app.sharelinktechnologies.com/announcement/asx/65add3b18b09d679d4e0f6e0dd4a2410>.

153 Submission 33, Alcoa of Australia, p. 4; Submission 13, Chevron Australia, p. 9.

Table 5.2: At a glance: Improve the approvals process

Addresses shortfalls caused by:				Practicalities
Physically unavailable	Contractually unavailable	Economic factors	Strategic choice	Lead time 3-5 years (at best); Sovereign risk MINOR/NONE
✓	✓	?	✗	

5.28 As the summary in Table 5.2 shows, because this intervention could help bring new fields to market, it could address both physical and contractual unavailability, and it is possible but not certain that this would overcome any economic barriers. However, this intervention would not bring to market any gas which was being withheld or not developed for other strategic reasons.

5.29 In terms of timing, to the extent that a streamlined approval process did make more gas available, it is unlikely to do so in the short term.

Changes to the pipeline specification

5.30 Strike Energy and Santos submitted that the pipeline specifications for gas sold in WA were a barrier to gas producers wanting to supply the WA market, because it is harder, and more costly, to meet the WA specification than the one in place on the east coast. Hence, they said that broadening this specification would increase gas availability.[154]

5.31 Gas pipelines must impose restrictions on the quality of the gas they receive for both commercial and operational reasons. However, according to Strike Energy, the conservative specification used in WA impacts the commerciality of its projects. It explained that gas in the Perth Basin consists of between six and seven per cent carbon dioxide (CO_2). In the east coast, Strike Energy would be able to put this into the pipeline; however, in WA, it must remove at least two per cent of CO_2 from the gas stream before it is compliant with the Dampier to Bunbury Natural Gas Pipeline reference specification, which permits only four per cent CO_2.[155]

5.32 Strike Energy Managing Director and Chief Executive Officer Stuart Nicholls explained the flow-on effect:

> Thirty-five per cent of the total capital that we spend is about bringing that two per cent of CO_2 out of the gas stream and bringing that down to four per cent. If we operated under the national specification, our reservoir gas would be compliant. We would be able to spend less money on infrastructure. We would be producing less greenhouse gas emissions at the site of the location, which would make environmental approvals of the sources of new gas supply faster, and we would need to invest less capital, therefore a lower return would be required and lower

154 Submission 34, Strike Energy, p. 10.
155 *Gas Supply (Gas Quality Specifications) Regulations 2010* (WA), Schedule 2, Clause 1 Table.

> prices ultimately—an acceptable outcome when you are spending less money at the end of the day.[156]

5.33 Santos agreed, submitting that the 'strict' specification limits 'may hamper efforts to bring incremental supply to market.'[157]

5.34 The State has legislated a pathway for producers to negotiate a variation of the pipeline specifications. The *Gas Supply (Gas Quality Specifications) Act 2009* and associated regulations enable would-be suppliers of gas to reach an agreement with the pipeline operator to allow broader specification gas into the pipeline, within certain bounds. However, because accepting higher levels of CO_2 could impact the pipeline's profitability, the producer would need to enter into a 'pipeline impact agreement' to compensate the pipeline operator for that loss.[158]

Table 5.3: At a glance: Changes to the pipeline specification

Addresses shortfalls caused by:				Practicalities
Physically unavailable	Contractually unavailable	Economic factors	Strategic choice	Lead time 3-5 years (at best); Sovereign risk MINOR/NONE
✓	✓	?	✗	

5.35 The Committee has not received evidence of the likely volumes of gas which might be liberated by this intervention, nor of the likely implications for gas price or the impact on pipeline operators and other users. It observes that allowing pipeline gas to contain higher levels of CO_2 may have implications for downstream gas consumers' own decarbonisation objectives.

5.36 Therefore, while the scorecard in Table 5.3 shows that this intervention could increase the amount of gas physically or contractually available, it is unclear whether it would address any economic barriers to additional supply, and it seems unlikely to address any strategic barriers. Further, in terms of lead time, assuming a suitable change in specification could be negotiated, growth in gas supply would likely need to await the development of further gas fields.[159]

156 Stuart Nicholls, Managing Director and Chief Executive Officer, Strike Energy, *Transcript of Evidence*, 13 September 2023, p. 11.
157 Submission 32, Santos, p. 3.
158 *Gas Supply (Gas Quality Specifications) Act 2009* (WA), s. 6 (1)(a).
159 A possible exception to this is the Pluto Project's high nitrogen content.

Permit onshore producers to export LNG

5.37 This is discussed in Chapter 4. Its scorecard is set out in Table 5.4.

Table 5.4: At a glance: Permit onshore producers to export

Addresses shortfalls caused by:				Practicalities
Physically unavailable	Contractually unavailable	Economic factors	Strategic choice	Lead time 3-5 years (at best); Sovereign risk MINOR/NONE
✓	✓	?	✗	

5.38 As noted in Chapter 4, it is not clear how much more gas this intervention would make available. As shown in Table 5.4, and as with changes to the pipeline specification, this intervention could address both physical and contractual unavailability, may address economic barriers, but is unlikely to address any strategic barriers to production. It is also likely to take time for new fields to be brought to market.

Measures to improve market effectiveness

Improve the Western Australia Gas Statement of Opportunities

5.39 Forecasting gas and electricity consumption during WA's transition to a decarbonised economy is a difficult task. As Kate Ryan, Executive General Manager Western Australia and Strategy from the Australian Energy Market Operator (AEMO) said, forecasters can come up with what they believe are 'very credible scenarios. But it is fair to say there is a lot that can change in relatively short periods of time.' [160] She described this is one of the 'perennial challenges' facing forecasters.[161]

5.40 Nonetheless, AEMO's annual Western Australia Gas Statement of Opportunities (WA GSOO) is and will likely remain the State's principal tool for forecasting Western Australian gas supply and demand, and numerous stakeholders expressed confidence in its broad accuracy (see discussion in Chapter 2).

5.41 Inquiry participants identified a range of information they believed would increase both market transparency and market effectiveness. Many of their suggestions could be incorporated into the development of the WA GSOO, including:

- Linking the WA GSOO to the WA Electricity Statement of Opportunities (ESOO), AEMO's 10-year forecast for peak electricity demand and operational consumption in the South West Interconnected System (SWIS).[162]

160 Kate Ryan, Executive General Manager Western Australia and Strategy, Australian Energy Market Operator, *Transcript of Evidence*, 8 November 2023, p. 7.
161 ibid., p. 6.
162 Tanya Rybarczyk, General Manager, Kleenheat, Wesfarmers Chemicals, Energy and Fertilisers, *Transcript of Evidence*, 13 October 2023, pp. 9–10; Rachael Risucci, Vice President Australia, Gas and Low Carbon Energy, BP Developments Australia, *Transcript of Evidence*, 20 October 2023, p. 12.

- Ensuring that AEMO has access to all the data being received by government, in particular the production data received by the Department of Jobs, Tourism, Science and Innovation (JTSI).[163]
- More information about gas held in storage and gas storage capacity.[164]
- Information regarding liquefied natural gas (LNG) demand.[165]
- Information from suppliers of their intention to supply, including information on reserves and what gas is available to be delivered.[166]
- Information on suppliers' past performance against their domestic market obligation (DMO).[167]
- Remedying the reporting mismatch between the WA GSOO (which is undertaken on a facility basis) and the DMO (which applies on an individual joint venture participant basis).[168]

5.42 In addition, the Committee observes that the Gas Services Information regime (see Box 1.1 in Chapter 1) permits AEMO to undertake the WA GSOO on a 20-year forecast basis.[169] Currently, forecasting is provided on a 10-year basis.

5.43 The Committee acknowledges that forecasting over a longer time horizon would be more difficult and would produce numbers which are more likely to change over time. Nonetheless, a 20-year look-ahead may help industry participants seeking to map WA's energy transition. The 2030s are likely to be the decade in which electrification and other decarbonisation measures begin to materially transform WA's gas consumption.

163 Christopher Meredith, Energy Analyst, Australian Energy Market Operator, *Transcript of Evidence*, 8 November 2023, pp. 3–4; Stephen Dawson, Executive Director, Project Facilitation, Department of Jobs, Tourism, Science and Innovation, *Transcript of Evidence*, 16 August 2023, p. 6.

164 Submission 4, South32, p. 8; Submission 10, Australian Energy Market Operator, p. 2.

165 Jai Coppen, Senior Energy Sourcing Manager, Yara Pilbara Fertilisers, *Transcript of Evidence*, 18 October 2023, p. 5; Tina Soliman-Hunter, Professor of Energy and Natural Resources Law, Macquarie University, *Transcript of Evidence*, 30 August 2023, pp. 3–4.

166 Submission 10, Australian Energy Market Operator, p. 2; Submission 27, Chamber of Minerals and Energy of Western Australia, p. 5; Submission 30, CITIC Pacific Mining, p. 6; Submission 31, Synergy, p. 3; Submission 33, Alcoa of Australia, p. 5.

167 Australian Energy Market Operator, *Review of the Western Australia Gas Statement of Opportunities*: *A five-yearly review of AEMO's WA gas market analysis*, Australian Energy Market Operator, October 2023, p. 20; Nicholas Rea, Manager, Wholesale and Low Carbon Fuels, Wesfarmers Chemicals, Energy and Fertilisers, *Transcript of Evidence*, 13 October 2023, p. 5; Submission 22, DomGas Alliance, p. 15; Kate Ryan, Executive General Manager Western Australia and Strategy, Australian Energy Market Operator, *Transcript of Evidence*, 8 November 2023, p. 2.

168 Kate Ryan, Executive General Manager Western Australia and Strategy, Australian Energy Market Operator, *Transcript of Evidence*, 8 November 2023, p. 3.

169 Gas Services Information Rules, rule 104(3).

Table 5.5: At a glance: Improve the Western Australia Gas Statement of Opportunities

	Addresses shortfalls caused by:				Practicalities
	Physically unavailable	Contractually unavailable	Economic factors	Strategic choice	
Near term	✗	✗	?	✗	Lead time 0-2 years; Sovereign risk MODERATE
Longer term	✓	✓	?	✗	Lead time 3-5 years; Sovereign risk MODERATE

5.44 As the scorecard in Table 5.5 shows, changes to the WA GSOO to improve market transparency can do little to increase gas supply gas in the near term if the gas is not physically available, is already contractually committed to someone else, or is unavailable for strategic reasons, although improved transparency may help a little to the extent that the shortfall is being exacerbated by information asymmetry between buyers and sellers.

5.45 In the longer term, however, the WA GSOO is intended to help future investment decisions in gas production by highlighting market opportunities,[170] so making the WA GSOO better may improve that outcome.

5.46 Some of the suggested improvements to the WA GSOO may require the disclosure of information in respect of which producers or other parties currently have a contractual or statutory right of confidentiality, and so the question of sovereign risk would need to be considered. However, as discussed in the introduction to this chapter, not all sovereign interventions are equal. The Committee considers that a change which imposes more disclosure than a proponent would prefer or was originally expecting, but which does not fundamentally change core project economics, would likely be towards the lower end of the scale.

5.47 On 14 February 2024 the Committee hosted a roundtable discussion with representatives from the main forecasting agencies, being Energy Policy WA, JTSI, and AEMO, to explore what refinements might be made to both rules and processes, to ensure that policymakers and market participants receive the best possible forecasts of gas supply and demand. The Committee may reference points from that roundtable in the final inquiry report.

Expand the Western Australia Gas Bulletin Board

5.48 The Western Australia Gas Bulletin Board (WA GBB) is a public website operated by AEMO that publishes forecast and historical data on the domestic supply, transmission, storage and usage of WA gas.[171] Established at the same time as the WA GSOO, it is 'designed to improve transparency and efficiency in the gas market in WA and support the dissemination of information needed to manage gas emergencies.'[172] Unlike the WA GSOO which, once

170 Hon Peter Collier, Legislative Council, *Hansard*, 30 November 2011, pp. 10086–10087.
171 Submission 6, Department of Jobs, Tourism, Science and Innovation, p. 17.
172 Submission 10, Australian Energy Market Operator, p. 1.

published, is static until the next year's WA GSOO, the WA GBB provides a dynamic source of information throughout the year.

5.49 While many inquiry participants said that they regarded the WA GBB as a useful tool,[173] there was general acceptance that improvements could be made to its operation. Some identified additional information that the Committee believes could be published on the WA GBB, such as:

- The quantities of gas being liquefied for export, so that market participants can see the state's full gas supply and demand landscape.[174]
- Details about gas in storage, including to help manage short term issues.[175]
- Forecasts about:
  - gas production into the domestic market; and[176]
  - uncontracted gas or gas availability.[177]
- Gas pricing, either current or forecast.[178]
- Forecasting domestic gas plant throughput (i.e. actual available domestic processing capacity, not nameplate capacity, to reflect how much gas is actually proposed to be delivered through a plant) and outages.[179]
- The unutilised capacity (ullage) in domestic gas plants which could potentially be used to toll others' gas.[180]

5.50 Others simply asked that it be updated more regularly. For example:

- Woodside pointed out that there is currently 'a two-day delay in publishing data on events impacting the market.' It said that improving the timeliness of information would assist 'better decision making by market participants.'[181]
- Synergy noted that capacity constraint information is largely restricted to a 12-month period and therefore only provides information over a 'short-term timeframe.'[182]

173 Submission 17, Woodside Energy, p. 11; Submission 31, Synergy, p. 3.
174 Submission 32, Santos, p. 3.
175 Kate Ryan, Executive General Manager Western Australia and Strategy, Australian Energy Market Operator, *Transcript of Evidence*, 8 November 2023, p. 9.
176 Submission 4, South32, p. 8.
177 ibid.
178 Mark Chambers, General Manager, Wholesale, Synergy, *Transcript of Evidence*, 20 October 2023, p. 6; Submission 9, PE Wheatstone, p. 2; Submission 4, South32, p. 4. Note: until 2018, the WA GSOO included domestic gas price forecasts but these were discontinued following the Australian Energy Market Operator's first five-yearly review of the WA GSOO.
179 Submission 17, Woodside Energy, p. 11; Kate Ryan, Executive General Manager Western Australia and Strategy, Australian Energy Market Operator, *Transcript of Evidence*, p. 9.
180 Submission 17, Woodside Energy, p. 11.
181 ibid.
182 Submission 31, Synergy, p. 3.

Table 5.6: At a glance: Expand the Western Australia Gas Bulletin Board

	Addresses shortfalls caused by:				Practicalities
	Physically unavailable	Contractually unavailable	Economic factors	Strategic choice	
Alone	✗	✗	?	✗	Lead time 0-2 years; Sovereign risk MINOR/NONE
With mandatory supply	✓	✓	?	?	Lead time 3-5 years; Sovereign risk MODERATE

5.51 As Table 5.6 summarises, improving the WA GBB on its own may not be enough, especially in the short term. Improved transparency cannot improve gas supply if the gas is physically not available, is already contractually committed, is unaffordable or is unavailable for strategic reasons.

5.52 In the longer term, as with the WA GSOO, better transparency about supply and demand may help producers complete their business case to invest in new developments.

5.53 But it is not necessary for the WA GBB, and especially an improved WA GBB, to achieve these things on its own. For example, if paired with other mechanisms that may compel producers to make gas available (discussed below), an expanded WA GBB could provide a mechanism to link sellers and buyers without going to a full trading market (discussed in next section). Thus, improvements to the WA GBB could well be one part of a broader suite of interventions.

Create a trading market or hub

5.54 A GBB provides a space for buyers and sellers to meet, after which they may choose to transact privately. A market takes this a step further by matching sellers and buyers to create gas trades for an offered price and quantity, on pre-determined terms.

5.55 A hub is a physical or notional location at which market (or private) trades can occur. It enables parties not only to trade in the gas *commodity* (i.e. the molecules) but also to secure pipeline *capacity* (i.e. arrange for the molecules to be delivered through a pipeline to where they are needed).

5.56 One common variant of a market is a short-term trading market (STTM), which enables buyers and sellers to trade gas on a very short-term basis, typically for a 24-hour period, one day ahead.

5.57 On the east coast, gas supply hubs to support the wholesale market are located at Wallumbilla (western Queensland) and Moomba (northern South Australia). A STTM to support the retail markets operates in Adelaide, Brisbane and Sydney (Melbourne has a different market structure).

5.58 WA does have two small private trading markets, operated by gasTrading and Energy Access Services.[183] Compared to the east coast markets, very limited quantities of gas are sold through these markets. AEMO has estimated that only one to two per cent of WA's total gas demand is served through these spot markets—considerably less than the approximately 10–20 per cent in the eastern markets.[184]

5.59 One of the recommendations made in the 2011 *Inquiry into Domestic Gas Prices* report by the then-Economics and Industry Standing Committee was that WA establish a STTM for gas.[185] For various reasons, in particular concerns about the cost-benefit ratio,[186] this has never occurred.

5.60 Several submissions to the Committee recommended the creation of a STTM and trading hub in WA, both to improve liquidity and to increase price transparency,[187] although not all stakeholders thought a market or hub was necessary. [188]

Table 5.7: At a glance: Create a trading market or hub

	Addresses shortfalls caused by:				Practicalities
	Physically unavailable	Contractually unavailable	Economic factors	Strategic choice	
Alone	✗	✗	?	✗	Lead time 0-2 years; Sovereign risk MINOR/NONE
With mandatory supply and price control	✓	✓	✓	?	Lead time 2-4 years; Sovereign risk UNCERTAIN

5.61 As the scorecard in Table 5.7 shows—and as is the case with changes to the WA GBB discussed in the previous section—creating a STTM or trading hub is unlikely on its own to have a material impact on gas supply in the short term. However it may be more helpful in the longer term. Greater transparency, even on price, and greater ease of contracting will not assist if the gas is not there to be sold or parties cannot reach agreement on price.

5.62 Rather, as with the WA GBB changes, a trading market and hub can be a tool to support other interventions. If a measure were introduced to compel producers to offer gas within

183 Submission 4A, South32, p. 2.
184 Australian Energy Market Operator, *2023 Western Australia Gas Statement of Opportunities*, December 2023, p. 92; Australian Energy Regulator, *State of the Energy Market 2023*, Australian Government, October 2023, p. 149.
185 Economics and Industry Standing Committee, *Inquiry into Domestic Gas Prices*, 2011, p. 123.
186 Jason Ridley, Domestic Gas Commercial Operations Trading Team, Chevron Australia, *Transcript of Evidence*, 20 September 2023, p. 4.
187 Submission 17, Woodside, p. 10; Submission 20, Mitsui E&P Australia, p. 1; Submission 21, Mineral Resources, p. 3; Submission 24, BP Developments Australia, p. 5; Submission 26, Beach Energy, p. 4; Submission 28, Yara Pilbara Fertilisers, p. 3; Submission 34, Strike Energy, p. 8.
188 Richard Harris, Chair and Spokesperson, DomGas Alliance, *Transcript of Evidence*, 13 September 2023, p. 1; Nicholas Eaton, Energy Director, Australia, Alcoa of Australia, *Transcript of Evidence*, 20 September 2023, p. 10; Nicholas Rea, Manager, Wholesale and Low Carbon Fuels, Wesfarmers Chemicals, Energy and Fertilisers, *Transcript of Evidence*, 13 October 2023, p. 7.

WA before selling it overseas (as discussed below), a gas trading market would be one way of implementing that measure, offering greater transparency and accountability than leaving the offers to be managed privately or through a GBB.

Measures to regulate prices and terms

Address the gap between domestic gas prices and LNG netback

5.63 In Western Australia, the weighted average wholesale gas price over the last decade has generally been between $4 and $7 per gigajoule (GJ).[189] For comparison, the 'LNG netback' price is likely in the order of at least $12 to $14 /GJ.[190] Therefore, one possible cause for the domestic supply shortfall is simply a divergence between the price buyers are prepared to pay and the price sellers are prepared to accept.

5.64 If so, the choice of any measure to address this divergence will involve an explicit or implicit policy decision about who should bear the cost of the gap between a desirable domestic price and the LNG netback price (the 'domestic price gap').

5.65 For example, one policy solution would be simply to allow the domestic gas price to float, as now. A classical economist might argue that the market should be left to find the highest-value use for the gas—if WA businesses want the gas, they should be prepared to pay producers an LNG netback price to incentivise them to sell it locally rather than export it. This approach would involve an implicit policy decision that the best person to bear the cost of the domestic price gap is the gas consumer.

5.66 Clearly, as the eastern states experience has demonstrated, allowing gas prices to rise towards LNG netback could have a range of serious adverse consequences for the WA economy and citizens, including expensive electricity and other goods, risk of loss of industry and increased cost of living for households.

5.67 Alternatively, a market intervention which removes producers' freedom of choice, and forces them to sell domestically at a price less than LNG netback (as is the case in the east coast (see below)), would involve an implicit policy decision that the cost of the domestic price gap should be absorbed by the producers.

5.68 These are not the only two options. It would be possible to move from an *implicit* policy decision to an *explicit* one, selecting a group to underwrite the domestic price gap. For example, a reserve capacity mechanism (discussed further below) could distribute this cost across gas buyers collectively, or some other group. In other contexts, governments have

189 Australian Energy Market Operator, *2023 Western Australia Gas Statement of Opportunities*, December 2023, p. 69, Figure 27.

190 An 'LNG netback' price is a measure of an export parity price for domestic gas. It is calculated by taking the price that an exporter could expect to receive for exported LNG landed in a foreign country, and subtracting or 'netting back' the costs which would be incurred by the supplier to convert the gas to LNG and ship it to the destination port. In theory, a producer should see no difference in return between exporting gas as LNG or selling it domestically at LNG netback. No LNG netback price is published in WA. For east coast markets, the Australian Competition and Consumer Commission publishes an LNG Netback Price Series on its website. The price series is volatile, but the Australian Competition and Consumer Commission presently forecasts the east coast LNG netback price to be just under $14/GJ for 2024, and almost $14.50/GJ for 2025.

been prepared to step in to underwrite a price gap,[191] in effect making the policy decision that society as a whole should bear the cost on the basis that making the relevant service affordable brings social benefits.

5.69 An exploration of these matters is beyond the scope of this report. The Committee's intention here is simply to offer an economic lens as one of the ways to evaluate some of the possible market interventions being discussed in this chapter.

Table 5.8: At a glance: Address the gap between domestic gas prices and LNG netback

Addresses shortfalls caused by:				Practicalities
Physically unavailable	Contractually unavailable	Economic factors	Strategic choice	Lead time 2-4 years; Sovereign risk UNCERTAIN
✗	✗	✓	?	

5.70 As the summary in Table 5.8 shows, mechanisms designed to address the domestic price gap cannot be expected to make gas available if it is unavailable physically or due to prior contractual commitments. Mechanisms aimed at gas prices are designed to address the misalignment between buyer and seller price expectations, and so to address economic barriers to gas supply. Such interventions will likely also impact producers' strategic choices, one way or the other, depending on the nature of the intervention.

5.71 In terms of lead time, price intervention measures would likely require legislation, but could probably start taking effect shortly after the new Act commenced.

5.72 It would be possible, and prudent, to structure any price-based intervention so that it had an expiry date in the early 2030s, after which the government of the day may decide to allow the domestic gas price could to float towards LNG netback. This would provide a boundary to the financial exposure of whoever is bearing the cost differential and would also give gas purchasers an additional incentive to decarbonise.

5.73 Clearly, direct or indirect regulation of gas pricing would raise legitimate questions about sovereign risk. Whether the risk was minor or major, and whether it was justified in the circumstances, would depend on the nature and duration of the intervention and what other mechanisms or mitigations might be included to accompany it, so the Committee has classified this as 'uncertain' for the purposes of this discussion.

191 Jacob Greber, Mark Ludlow and Samantha Hutchinson, 'Bowen dramatically expands green energy support', *Financial Review* (web-based), 22 November 2023, accessed 28 January 2024, <https://www.afr.com>.

Regulate the wholesale market (east coast approach)

5.74 In Australia's east coast gas markets, where domestic consumers also face competition from LNG export projects, the Australian Government has determined that indirect measures, or a reliance on market forces, will be insufficient to secure a reliable supply of gas at prices which produce desirable outcomes for industry, electricity prices and consumers generally.[192] It has instead intervened directly.

5.75 One aspect of the intervention is the Australian Domestic Gas Security Mechanism (ADGSM), a last-resort measure to block LNG exports if necessary. The ADGSM is considered later in this chapter.

5.76 Another, discussed in this section, is the Mandatory Gas Code of Conduct which specifies:

- 'Conduct provisions aimed at reducing bargaining power imbalances between producers and gas buyers and establishing minimum conduct and process standards for commercial negotiations'—these include an obligation on buyers and sellers to act in good faith, and prescribed standards for negotiating gas contracts.
- 'Transparency obligations to increase visibility of the amount of uncontracted gas to be produced, and when producers will bring that gas to the domestic market.'
- 'A price cap, initially set at $12/GJ, designed to anchor wholesale contract negotiations between gas producers and buyers.'[193]

5.77 The Code includes an exemptions framework 'to incentivise suppliers to commit more gas to the east coast gas market in the short term and facilitate new investment to meet ongoing demand in the medium term which supports the ability for east coast gas users to access gas at reasonable prices and on reasonable terms.'[194] Thus, as with the ADGSM, there is scope for industry-led solutions.

5.78 As noted earlier in this chapter, the Committee is of the view that direct government intervention in the domestic gas market should not be a first resort. However the eastern states mechanisms outlined here illustrate the sort of interventions which are available if the alternative is a serious gas supply shortfall or gas prices rising to unsustainable levels.

Table 5.9: At a glance: Regulate the wholesale market (east coast approach)

Addresses shortfalls caused by:				Practicalities
Physically unavailable	Contractually unavailable	Economic factors	Strategic choice	Lead time 2-4 years; Sovereign risk UNCERTAIN
✓	✓	✓	✗	

192 Energy Ministers, *Summary of Measures: Priority reforms for a more secure, resilient and flexible east coast gas market*, media release, August 2022.
193 Department of Climate Change, Energy, the Environment and Water (Cth), *Fact sheet: Design of the Gas Market Code*, Australian Government, July 2023, p. 1.
194 ibid.

5.79 As the summary in Table 5.9 indicates, direct regulation of this form can address most causes of the gas supply shortfall, other than where a producer is withholding field development for strategic reasons (as to which, see discussion below). Direct regulation would likely require legislation but could take effect immediately upon enactment. The degree of sovereign risk involved would depend upon the detail of the interventions.

Measures to secure more volumes

Capture and clarify the domestic market obligation in legislative form

5.80 As noted in Chapter 3, it is difficult to fully assess compliance with the Policy as it is implemented through multiple (sometimes private) contracts and other documents.[195]

5.81 Some witnesses suggested that the Economic Regulation Authority (ERA) may be better tasked with monitoring and enforcing compliance than JTSI,[196] but the ERA observed that its monitoring and compliance role is generally restricted to statutory, rather than contractual, regimes.[197]

5.82 A minimum level of intervention here would be to create a regulatory framework which did nothing more than reproduce in a transparent manner the obligations precisely as they appear in each individual DMO agreement.[198] If so, the sovereign risk associated with the intervention would be modest, being limited to making public some details of obligations which were previously confidential.

5.83 A more substantial intervention would involve a degree of standardisdation or updating of the various DMOs, a measure that is discussed in greater detail later in this chapter.

Table 5.10: At a glance: Capture and clarify the domestic market obligation in legislative form

Addresses shortfalls caused by:				Practicalities
Physically unavailable	Contractually unavailable	Economic factors	Strategic choice	Lead time 2-4 years; Sovereign risk MODERATE
✗	✗	?	?	

5.84 As Table 5.10 shows, this mechanism would be directed to ensuring that existing DMO holders complied fully with their obligations. As such, it could not (without more) deal with a situation in which gas was either physically or contractually unavailable. It may however be

195 Submission 21, Mineral Resources, pp. 2–3.
196 Submission 22, DomGas Alliance, p. 14.
197 Steve Edwell, Chair, Economic Regulation Authority, *Transcript of Evidence*, 8 November 2023, p. 2.
198 This may not be a straightforward exercise. As a practical matter, negotiated contractual positions are not always expressed with the level of precision required for statutory restatement. For example, contractual obligations often depend on a web of nested definitions and are subject to qualifications expressed elsewhere in the contract. Any statutory restatement would likely require at least some degree of clarification or simplification, meaning that the boundary between this approach and the updating/standardising approach discussed below would become blurred.

able to address a circumstance in which a producer had gas available but was choosing not to make it available domestically for either economic or strategic reasons.

Change the domestic market obligation for future projects

5.85 If a government were to determine that 15 per cent is no longer the optimum reservation percentage, it could update the Policy so that it specified a higher reservation percentage for any future LNG export project.

Table 5.11: At a glance: Change the domestic market obligation for future projects

Addresses shortfalls caused by:				Practicalities
Physically unavailable	Contractually unavailable	Economic factors	Strategic choice	Lead time 5+ years; Sovereign risk MODERATE
✓	✓	✓	✗	

5.86 As Table 5.11 shows, this mechanism could be highly effective in securing more gas supplies if a future LNG export project were to occur, but it is definitely a long-term solution. It is unlikely that any new LNG exporting project would be producing gas in less than five years, and it could easily take considerably longer.

5.87 While changing the reservation percentage for a project which has already taken Final Investment Decision (FID) would be a very substantial sovereign intervention, changing it for a project which has yet to be sanctioned would be of a smaller order of magnitude.[199]

5.88 It is to be expected that the DMO as implemented for any future LNG export project would address the weaknesses which have already been identified in some of the early DMO agreements. Thus, it would be expected that any economic factors which may contribute to a lack of supply of the reserved gas (e.g. the domestic price gap) would be negated by the terms of the DMO, and that the DMO would include clear timing requirements to align domestic deliveries with exports.

5.89 However, this intervention depends entirely upon a producer deciding to take FID in respect of a new project. In a decarbonising world, that is not a certainty, and would be contrary to advice of the International Energy Agency (IEA) (see discussion in Chapter 2).

Require producers to offer spare gas before exporting

5.90 We are here discussing a situation in which producers have gas physically and contractually available but are choosing not to sell it domestically because it can be sold more profitably as LNG. As discussed above, some mechanisms would address that problem from the pricing end by dealing with the domestic price gap. Another way to address the same problem is to

199 The committee acknowledges that the impact would not be zero. Projects undertake a great deal of work before Final Investment Decision (FID), and changing the reservation policy in this fashion would as a minimum require some of that work to be redone, and at the margin could render the project unviable and hence all the pre-FID work wasted.

require the producers to sell the gas—or at least to offer it for sale—even though they will obtain a lower price than LNG netback.

5.91 A wide range of mechanisms could be implemented here. For example, a market could be created similar to the electricity wholesale market which operates in the SWIS, in which all generators who have received capacity payments are required to bid their surplus capacity into the wholesale market. A gas market mechanism like this need not, but could, include a price cap. Clearly, very different commercial outcomes would be achieved with and without a cap.

5.92 The degree to which such a regime amounted to sovereign intervention would depend upon whether the obligation to offer the gas was limited to spot and opportunistic export cargoes, or extended also to long term contracted cargoes which formed part of the base case for a project's FID.

5.93 The impact of the mechanism could be mitigated by allowing a producer to export as LNG any parcels of gas which had been offered for sale for a certain minimum interval but not contracted.

Table 5.12: At a glance: Require producers to offer spare gas before exporting

Addresses shortfalls caused by:				Practicalities
Physically unavailable	Contractually unavailable	Economic factors	Strategic choice	Lead time 2-4 years; Sovereign risk UNCERTAIN
✗	✗	✓	?	

5.94 As Table 5.12 shows, this mechanism (without more) will do little to secure gas when none is physically or contractually available. It is directed at a circumstance in which a producer could sell the gas domestically, but is instead selling it as LNG because it is more profitable to do so. It will also address a scenario in which a producer is withholding available gas from an existing field for strategic reasons. However, it will not (without more) address a circumstance in which a producer is holding back from developing a new field for strategic reasons, and in fact if a mechanism like this were to be introduced without suitable safeguards it would tend to be a factor weighing against FID for new fields.

5.95 For this mechanism, the lead time lies wholly in the time it takes to legislate and implement the necessary measures. Once the obligations are in place, they should be able to start work immediately to make extra gas available from existing fields. Finally, in terms of sovereign risk, whether this would amount to a large or smaller sovereign intervention will depend on the exact detail of the mechanism.

A reserve capacity mechanism for gas

5.96 Witnesses have observed that WA's gas market does not include any form of security mechanism, along the lines of the Reserve Capacity Mechanism (RCM) which applies for electricity in the SWIS.[200]

5.97 The RCM is designed to ensure that there is always enough installed generating capacity in the SWIS to meet forecast demand. That is, to prevent in electricity precisely the shortfall now being discussed for gas. The RCM consists of three elements:

- Capacity procurement: Every year, based on the ESOO, AEMO undertakes a process to ensure that sufficient generating capacity will be installed to meet forecast peak demand. The preferred mechanism for this is bilateral contracts between market participants, by which wholesale electricity customers such as retailers contract with generators to secure sufficient capacity. But if bilateral contracts do not secure enough capacity, AEMO will step in to contract directly with generators.
- Capacity payments: Generators who have contracted to provide this reserve capacity then get 'paid to exist.' They receive a substantial capacity payment designed to make their investment roughly economically viable even if they sell no electricity. This payment is either made under their bilateral contract with a wholesale customer, or by AEMO if the generator has contracted with AEMO. If AEMO makes any payments, there is a mechanism to socialise this cost across all wholesale electricity customers.
- Obligation to offer: All generators who have received reserve capacity payments (i.e. being paid to exist) must, in return, bid all of their spare generating capacity into the wholesale market in every trading interval. They may price it as they see fit, up to the wholesale price cap, but they will incur penalties if they do not always bid.

5.98 The process of reserving generation capacity in this fashion can be seen as a collective hedge by wholesale market customers against capacity shortfalls.

5.99 Implementing a similar mechanism for gas would be a substantial and novel reform. A gas RCM would likely be quite different to the electricity one, but would likely share certain features:

- AEMO would undertake forecasting through the WA GSOO to determine the amount of gas supply required.
- Producers would be required to contract with gas buyers or AEMO to reserve (say) both gas and domestic gas processing capacity up to the forecast requirement, and would likely receive some form of capacity payments for doing so.
- If there were insufficient bilateral contracts in place, so that AEMO was forced to step in to contract for domestic gas processing capacity, it would recover the cost of doing so from an identified group, such as (say) all gas market participants.

200 David Fyfe, Chief Executive Officer, Synergy, *Transcript of Evidence*, 20 October 2023, p. 3; Kate Ryan, Executive General Manager Western Australia and Strategy, Australian Energy Market Operator, *Transcript of Evidence*, 8 November 2023, p. 11.

- Producers who had reserved gas and domestic gas processing capacity could use it to supply consumers under long term contracts as now, but to the extent they did not fully utilise the reserved gas and capacity, they would be obliged to offer the balance of the gas for sale on the STTM.
- Because gas and electricity are different, in that gas not sold on a day remains available for sale on a later day, the regime would need rules to determine how a producer may deal with gas which has been offered for sale but not purchased—for example the producer could be permitted to export the gas, or may be required to reserve it for a future trading day.

5.100 Instead of requiring producers to build capacity as is the case in the electricity RCM, in the gas model producers could be permitted to instead demonstrate that they had reserved (or contracted to use) ullage in someone else's domestic gas facilities.

Table 5.13: At a glance: A reserve capacity mechanism for gas

Addresses shortfalls caused by:				Practicalities
Physically unavailable	Contractually unavailable	Economic factors	Strategic choice	Lead time 2-4 years; Sovereign risk MINOR/NONE
✓	✓	?	?	

5.101 As Table 5.13 shows, this would be targeted primarily at securing any physically-available and uncontracted gas. It would not (without more) address the domestic price gap, although the STTM could include a price cap for this purpose. It would likely require changes to an Act, but once implemented it may start bringing gas to market more quickly than it would take to develop new onshore or offshore fields.

5.102 On its own, this measure would pose little or no sovereign risk for producers. On the contrary, an RCM would explicitly be intended to help producers underwrite new developments which might otherwise be difficult to bring to market, in order to improve security of gas supply. Whether the accompanying obligation to offer gas and processing capacity into the trading market involved sovereign risk would depend on whether it was coupled with price interventions, as discussed earlier in this chapter,

A formal 'use it or lose it' regime

5.103 A number of submissions recommended tightening the 'use it or lose it' rules for gas discoveries.[201] WesCEF stated:

> Implementation of a formalised "use it or lose it" policy that will see production licences lost if economically viable gas is not extracted and sold from a permit area within a specified period. Gas producers should have stronger concern for the loss

201 Submission 12, Wesfarmers Chemicals, Energy and Fertilisers, p. 11; Submission 16, Chemistry Australia, p. 2; Submission 22, DomGas Alliance, p. 19; Submission 30, CITIC Pacific Mining, p. 4; Submission 33, Alcoa of Australia, p. 4.

of their licences back into the market in order to incentivise more expedient developments, causing faster responses to market signals and generating greater competition in the gas market. This includes enhancing the transparency of upstream gas exploration licence terms and the process for extension, suspension and variation of these licences.[202]

5.104 A use it or lose it policy could include a mechanism by which an independent regulator may extend the retention period during times of forecast oversupply.[203]

Table 5.14: At a glance: A formal 'use it or lose it'

Addresses shortfalls caused by:				Practicalities
Physically unavailable	Contractually unavailable	Economic factors	Strategic choice	Lead time 5+ years; Sovereign risk UNCERTAIN
✓	✓	?	✓	

5.105 As Table 5.14 shows, an enforceable 'use it or lose it' regime is one of the few potential interventions which can directly address a circumstance in which a producer is not developing a field for its own strategic reasons.

5.106 However, this measure would likely take some time to implement, and then would need to await new fields being sanctioned and developed. The level of sovereign risk involved would depend on the transitional measures adopted for existing permit-holders.

Adjust current domestic market obligation agreements

5.107 This chapter opened with the observation that continued implementation of the Policy in its current form will not prevent a material gas supply shortfall, with concomitant economic harm to the State.

5.108 Normally, if the implementation of a government policy is failing to achieve its objectives, the government can modify the legislation or other instruments through which that policy is implemented to fine-tune it. The complication here is that the Policy is not implemented through legislation, but rather through a series of contracts. However, the State can override those contracts by legislative intervention if it chooses.

5.109 This intervention need not be applied equally to all producers. It could be targeted at areas where a producer's implementation of the existing DMO does not seem to be meeting the State's objectives. For example, some of the earlier agreements do not appear to be as well-suited to meeting the State's objectives as later agreements.

5.110 Clearly, overriding an existing DMO agreement would involve sovereign risk for the producer in question, but as noted above, not all sovereign interventions are equal. For example:

202 Submission 12, Wesfarmers Chemicals, Energy and Fertilisers, p. 11.
203 Submission 4, South32, p. 10.

- Although the Committee has to date been unable to ascertain how the 15 per cent level was arrived at, using legislation to override a DMO agreement in a way which changed the percentage reservation for a project would be a substantial manifestation of sovereign risk for those project proponents.
- At the other end of the spectrum, legislative interventions to clarify or supplement certain operational or administrative provisions of the DMO agreement would be an order of magnitude smaller. For example, this might include measures providing greater transparency, clarifying the operation of a 'commercial viability' test, or clarifying the use of offsets/swaps to meet obligations. Indeed, where legislation is simply filling a gap in one of the implementing agreements, it should not properly be described as a sovereign risk at all.[204]
- Somewhere between these two extremes would lie interventions which change the timing of the DMO without changing its scope – these would have some time-value-of-money impact, but that impact may be modest in terms of the LNG project's overall economics.

5.111 An alternative which may involve no sovereign risk at all would be to introduce refinements to the DMO as part of a negotiated update to a State Agreement or similar contract.

Table 5.15: At a glance: Adjust current domestic market obligation agreements

Addresses shortfalls caused by:				Practicalities
Physically unavailable	Contractually unavailable	Economic factors	Strategic choice	Lead time 2-4 years; Sovereign risk UNCERTAIN
✓	✓	?	✓	

5.112 As Table 5.15 shows, this intervention would be designed to unlock gas from existing fields. As such, a suitably-designed intervention could incentivise or require the DMO holder to overcome physical or contractual restrictions, and could even be effective where a producer is withholding gas for strategic reasons. Depending on the nature of the intervention, it may or may not address economic factors such as the domestic price gap.

5.113 In terms of lead time, unless emergency powers were used, this would likely require an Act in support, but once the mechanism was in place it could likely start accessing gas quite quickly. And as noted above, the level of sovereign risk involved would depend on the nature of the intervention.

204 Tina Soliman-Hunter, Professor of Energy and Natural Resources Law, Macquarie University, *Transcript of Evidence*, 30 August 2023, p. 5.

Activate the Australian Domestic Gas Security Mechanism

5.114 Under the ADGSM,[205] the Australian Resources Minister may declare a quarter to be a 'domestic shortfall quarter' if the Minister 'has reasonable grounds to believe that there will not be a sufficient supply of natural gas for Australian consumers during the relevant quarter.'[206]

5.115 The Minister may declare a domestic shortfall in respect of Western Australia, irrespective of whether there is a shortfall elsewhere in Australia.[207]

5.116 Implementing the ADGSM would rely on cooperation with the Australian Minister for Resources (which is why another alternative would be to create a State-based equivalent, see next section), but otherwise this measure has the ability to secure gas supplies for WA despite producers' export commitments.

5.117 During a domestic shortfall quarter, LNG exports are only permitted if the Australian Minister grants permission, and subject to any conditions on that permission.[208] The conditions will be directed to ensuring that there is a sufficient supply of natural gas to meet the forecast needs of gas consumers.[209]

5.118 When a domestic shortfall quarter has been declared, producers will be permitted to export LNG up to a specified volume, which will be calculated by deducting a contribution to alleviate the shortfall.[210] However, the quantity authorised for export under the ADGSM may be further constrained by State-based mechanisms.[211]

5.119 It may be necessary to supplement the ADGSM with other measures because all the ADGSM will do on its own is ensure that the necessary quantity of gas is not exported (i.e. remains in the reservoir).

5.120 The ADGSM emphasises industry-led solutions to avoid a Ministerial declaration.[212]

205 The ADGSM homepage gives an overview of the regime. See Department of Industry, Science and Resources (Cth), *Domestic Gas Supply*, n.d., accessed 8 December 2023, <https://www.industry.gov.au>.
206 *Customs (Prohibited Exports) Regulations 1958* (Cth), s. 13GE.
207 *Customs (Prohibited Exports) (Operation of the Australian Domestic Gas Security Mechanism) Guidelines 2023* (Cth), s. 8(18).
208 *Customs (Prohibited Exports) Regulations 1958* (Cth), s. 13GC(1) and (2).
209 *Customs (Prohibited Exports) (Operation of the Australian Domestic Gas Security Mechanism) Guidelines 2023* (Cth), s. 9(16) read with clause 6(1).
210 ibid., s. 9(9).
211 Ibid., s. 9(4).
212 ibid., s. 8(5), 8(6)(e) and 13(f).

Table 5.16: At a glance: Activate the Australian Domestic Gas Security Mechanism

Addresses shortfalls caused by:				Practicalities
Physically unavailable	Contractually unavailable	Economic factors	Strategic choice	Lead time 0-2 years; Sovereign risk SUBSTANTIAL
✓	✓	?	?	

5.121 As the summary in Table 5.16 shows, the ADGSM is directed at accessing existing gas reserves, and diverting them from export towards domestic consumption. It can thus overcome both physical and contractual limitations on gas availability. On its own, it will not address economic factors—for this it will need to be paired with some of the other measures discussed above. In terms of strategic choices, this measure may well unlock gas from an existing field which is being withheld for strategic reasons, but will not secure gas from a new field which a producer is choosing not to develop.

5.122 Clearly, as was well-canvassed when the Australian Government legislated this mechanism, imposing even a partial export ban on existing projects can have substantial sovereign risk implications.

5.123 On the other hand, the lead time for implementing this intervention would be short, and its effects could be felt almost immediately after activation.

Create a Western Australian Domestic Gas Security Mechanism

5.124 The ADGSM leverages the Australian Government's control over exports.

5.125 If the State Government felt that a State-based version of the national ADGSM might be better tailored to WA's specific requirements, it would need to either find or create a suitable legislative authority. That would take time, but would allow the State Government to create a bespoke Western Australian regime.

Table 5.17: At a glance: Create a Western Australian Domestic Gas Security Mechanism

Addresses shortfalls caused by:				Practicalities
Physically unavailable	Contractually unavailable	Economic factors	Strategic choice	Lead time 2-4 years; Sovereign risk SUBSTANTIAL
✓	✓	?	?	

5.126 As the summary in Table 5.17 shows, the Western Australian Domestic Gas Security Mechanism would have roughly the same impact and sovereign risk implications as activating the ADGSM.

5.127 Developing a Western Australian version of the ADGSM would require considerable development effort and consultation, which may be unnecessary if other solutions present themselves.

Emergency interventions

5.128 At present, the gas supply shortfall exists as a forecast in the WA GSOO and elsewhere. Although the Committee has heard evidence that the shortfall is beginning to manifest itself in the forward contracting space, to the Committee's knowledge it has not yet emerged as a present gas supply crisis for either gas consumers or gas-powered generation (GPG). This may change.

5.129 The Committee observes that the State Government has existing legislative tools to deal with gas supply emergencies. These include a wide range of powers to intervene in the marketplace and take steps to secure gas supply for essential industries including electricity generation.[213]

5.130 If the current forecast shortfalls begin to manifest as an actual gas supply crisis, there will be pressure on the Government to exercise these emergency powers. For example, it was observed that during the short-term gas supply incident in January 2023, spot LNG cargoes were still shipped—the implication being that measures should be in place to prevent this occurring.[214]

5.131 If a government were to intervene using these powers, the impact might not be felt equally across the sector. For example, if a gas supply crisis precipitates a concurrent electricity supply crisis due to shortages in GPG, an intervening government may feel pressure to allocate gas first to electricity generation. This may have adverse consequences both for other gas consumers, and for consumers' and producers' existing contractual arrangements.

5.132 Obviously, it would be preferable for industry—and if necessary government—to manage the gas market in such a way that these emergency powers do not come into consideration.

Table 5.18: At a glance: Emergency interventions

Addresses shortfalls caused by:				Practicalities
Physically unavailable	Contractually unavailable	Economic factors	Strategic choice	Lead time 0-2 years; Sovereign risk SUBSTANTIAL
✓	✓	✓	?	

213 Schedule 3 to the *Energy Coordination Act 1994* (WA) deals with gas supply system emergencies affecting the Dampier Bunbury Natural Gas Pipeline and gas distribution systems. The *Fuel, Energy and Power Resources Act 1972* (WA) empowers the Governor to declare a state of emergency when satisfied that the community, or a substantial part of the community, may be deprived of essential supplies or services or an energy shortage may result. Having declared the state of emergency, the Governor may make a wide range of emergency regulations directing how, where and to whom energy is to be distributed and supplied.

214 Submission 22, DomGas Alliance, p. 6.

5.133 As would be expected, the summary in Table 5.18 shows that these emergency powers, if exercised, could be capable of addressing all causes of the supply shortfall, possibly even including a circumstance in which a producer was withholding production or field development for strategic reasons. And as would be expected with emergency powers, they can be implemented and take effect quickly. Naturally, such measures involve substantial sovereign risk for gas market participants.

Measures to reduce gas demand

5.134 This chapter has focussed on measures to address the supply side of the forecast shortfall, reflecting the dominant focus of submissions and evidence before the Committee. But there is also a demand side.

5.135 The Committee may consider this further in its final report, but makes some general comments below. The Committee recognises that demand-side measures all come with their own economic, operational and timing challenges.

5.136 As a general observation, reducing gas demand to better align it with available supply has obvious benefits. It aligns with Australian Government and State decarbonisation objectives, with the COP28 resolution to transition away from fossil fuels, and with the IEA's latest finding that on the pathway to achieve net zero emissions 'there is no need for the approval of any new long lead time upstream conventional oil and gas projects.'[215]

5.137 One clear demand side opportunity lies in the potential for green hydrogen development in the Pilbara, which could displace fossil gas consumption by major feedstock consumers such as Perdaman and Yara Pilbara.

5.138 Another smaller opportunity could lie in policies directed to limiting the expansion of fossil gas consumption by residential and small business consumers or displacing it with non-fossil gas such as biomethane or green hydrogen.

5.139 Encouraging and facilitating major gas users to switch to non-fossil gas alternatives as part of their own decarbonisation transition will also assist. If that conversion involves grid-powered electrification, there may be a transitional increase in the need for GPG,[216] but the Committee expects that in most instances, and over time, the net consumption of fossil gas would fall in WA.

5.140 The more quickly the SWIS can be converted to renewable energy backed by battery and other storage, the less need there will be for large continuous quantities of gas for GPG. Mrs Ryan from AEMO expressed the view that GPG will have a role in grid stabilisation for decades to come.[217] The Committee accepts this evidence, but understands that as renewable energy and battery storage in the SWIS increase, GPG's role will become

215 International Energy Agency, *Net Zero Roadmap: A Global Pathway to keep the 1.5 °C Goal in Reach, 2023 Update*, France, September 2023, p. 156.

216 See, for example, Australian Energy Market Operator, *2023 Western Australia Gas Statement of Opportunities*, December 2023, p. 41.

217 Kate Ryan, Executive General Manager Western Australia and Strategy, Australian Energy Market Operator, *Transcript of Evidence*, 8 November 2023, p. 11.

increasingly intermittent. This brings its own economic and operational challenges for both the gas producers who supply the GPG and the businesses who operate the GPG, but it means that although in coming decades GPG may continue on occasion to need large volumes of gas, this will likely occur for increasingly brief periods such that the aggregate annual volumes required are likely to decline steadily over coming decades.

Conclusion on possible market interventions

5.141 In this chapter the Committee has set out a range of possible interventions, ranging from modest to severe. It has done so to inform the ongoing debate and to invite comment, without at this stage making any recommendations.

5.142 The Committee therefore invites stakeholders to comment on the options set out in this chapter. Stakeholder feedback should be submitted in writing to the Committee at the earliest opportunity.

Hon P.C. Tinley, MLA
CHAIR

Appendix One

Committee's functions and powers

5.143 The functions of the Committee are to review and report to the Assembly on: -

a) the outcomes and administration of the departments within the committee's portfolio responsibilities;

b) annual reports of government departments laid on the Table of the House;

c) the adequacy of legislation and regulations within its jurisdiction; and

d) any matters referred to it by the Assembly including a bill, motion, petition, vote or expenditure, other financial matter, report or paper.

5.144 At the commencement of each Parliament and as often thereafter as the Speaker considers necessary, the Speaker will determine and table a schedule showing the portfolio responsibilities for each committee. Annual reports of government departments and authorities tabled in the Assembly will stand referred to the relevant committee for any inquiry the committee may make.

5.145 Whenever a committee receives or determines for itself fresh or amended terms of reference, the committee will forward them to each standing and select committee of the Assembly and Joint Committee of the Assembly and Council. The Speaker will announce them to the Assembly at the next opportunity and arrange for them to be placed on the notice boards of the Assembly.

Appendix Two

Inquiry process

In May 2023, the Minister for State Development, Jobs and Trade, Hon Roger Cook MLA, wrote to the Economics and Industry Standing Committee asking it to consider conducting an inquiry into 'the effective administration of the WA Domestic Gas Policy and any constraints or barriers to additional gas supplied into the WA market.' The Minister noted that the price increases being experienced in the east coast gas and electricity markets and the tightening of WA's domestic gas market had resulted in growing public interest in the Policy. He suggested that any inquiry could review the findings and recommendations made by the Economics and Industry Standing Committee of the 38th Parliament in its report *Inquiry into Domestic Gas Prices* (2011).[218]

The Committee resolved to hold a briefing with Richard Harris, Chair of the DomGas Alliance, to develop a greater understanding of the domestic gas market and inform its decision about whether to undertake an inquiry into the Policy. The briefing took place on 14 June 2023.

In accordance with its functions and powers (see Appendix One), the Committee subsequently resolved to conduct an inquiry into the WA Domestic Gas Policy on 23 June 2023. The Committee notified the Speaker of the Legislative Assembly of its decision on 26 June 2023.

The Committee called for submissions using social media platforms and one newspaper, with posts or advertisements appearing:

- on the Legislative Assembly's Twitter page on 26 June 2023
- on the Parliament of Western Australia's Facebook page on 27 June 2023
- in *The West Australian* on 1 July 2023.

In addition, the Committee wrote to key stakeholders inviting them to make a submission addressing matters relevant to the activities of their organisation.

Following a busy evidence-gathering period during the second half of 2023, the Committee resolved to publish an interim report to keep stakeholders abreast of the key issues identified during its investigations.

To date, 41 submissions and 18 supplementary submissions have been received from gas producers and gas users, network operators, regulators, Members of Parliament, labour unions, and environmental groups. Ten of these submissions were accepted as closed (see list at Appendix Three). The Committee has conducted some closed hearings and 18 public hearings involving 39 witnesses (see Appendix Four).

218 Hon Roger Cook MLA, Minister for State Development, Jobs and Trade, Letter, 26 May 2023, p. 1.

Appendix Three

Submissions received

No.	Name	Position	Organisation
1	The Hon. Dr Steve Thomas MLC	Member for the South West Region; Leader of the Opposition in the Legislative Council; Shadow Treasurer; Shadow Minister for Energy, Shadow Minister for Industrial Relations	N/A
2	Fraser Maywood	Chair	Sustainable Energy Now
3	Fraser Maywood et al.	Member	Town of East Fremantle Climate Action Reference Group (CARG)
4	Michael Brooks	Manager Energy and Carbon	South32
4A	Michael Brooks	Manager Energy and Carbon	South32
5	Richard Sellers	Director General	Department of Mines, Industry Regulation and Safety
5A	Jai Thomas	Coordinator of Energy	Energy Policy WA, Department of Energy, Mines, Industry Regulation and Safety
6	Alistair Jones	Acting Director General	Department of Jobs, Tourism, Science and Innovation (JTSI)
6A	Alistair Jones	Acting Director General	Department of Jobs, Tourism, Science and Innovation (JTSI)
6B	Closed submission		
6C	Closed submission		
6D	Closed submission		
6E	Closed submission		
6F	Closed submission		
7	Colby Hauser	Managing Director and Chief Executive Officer	Talon Energy
8	John Ivulich	Country Chair and Chief Executive Officer	ATCO Australia
9	Shingo Matsuo	General Manager, Commercial	PE Wheatstone
10	Kate Ryan	Executive General Manager — Western Australia and Strategy	Australian Energy Market Operator (AEMO)
10A	Closed submission		
11	Takahiro Seki	Director	Kyushu Electric Wheatstone
12	Ian Hansen	Managing Director	Wesfarmers Chemicals, Energy and Fertilisers (WesCEF)
12A	Closed submission		
13	Mark Hatfield	Managing Director	Chevron Australia
13A	Closed submission		
14	Vikas Rambal	Chairman and Managing Director	Perdaman Industries (Chemicals and Fertilisers)
15	Chris Rodwell	Chief Executive Officer	Chamber of Commerce and Industry WA
16	Peter Bury	Director - Strategy, Energy and Research	Chemistry Australia

No.	Name	Position	Organisation
17	Liz Westcott	Executive Vice President Australian Operations	Woodside Energy
17A	Closed submission		
18	Hon Dr Brad Pettitt	Member for South Metropolitan	N/A
19	N/A	N/A	Australian Competition and Consumer Commission (ACCC)
20	Ken Yamamura	Chief Executive Officer	Mitsui E&P Australia
21	Tim Picton	EGM Corporate Affairs	Mineral Resources
22	Richard Harris	Chair	DomGas Alliance
22A	Richard Harris	Chair	DomGas Alliance
22B	Richard Harris	Chair	DomGas Alliance
22C	Richard Harris	Chair	DomGas Alliance
22 D	Richard Harris	Chair	DomGas Alliance
23	Geoffrey Bice	Senior WA Campaign and Network Lead	Greenpeace Australia Pacific
24	Pam Starkey	Senior Finance and Planning Manager – Australia Gas and Low Carbon Energy	BP Developments Australia
25	Virang Gadoya	Vice President Commercial	Shell Australia
26	Richard Stella	Commercial Manager WA	Beach Energy
27	Aaron Walker	Manager and Senior Economist, Industry Competitiveness and Economics	Chamber of Minerals and Energy of Western Australia
27A	Aaron Walker	Manager and Senior Economist, Industry Competitiveness and Economics	Chamber of Minerals and Energy of Western Australia
28	Laurent Trost	General Manager	Yara Pilbara Fertilisers
29	Shahana McKenzie	Chief Executive Officer	Bioenergy Australia
30	Dominic Rodwell	Manager Gas	CITIC Pacific Mining Management
30A	Closed submission		
31	David Fyfe	Chief Executive Officer	Synergy
32	Brett Woods	Executive Vice President - Western Australia, Northern Australia and Timor-Leste	Santos
33	Nick Eaton	Energy Director, Australia	Alcoa of Australia
34	Stuart Nicholls	Chief Executive Officer and Managing Director	Strike Energy
35	Caroline Cherry	Director WA	Australian Petroleum Production and Exploration Association
36	Richard Baker	Executive Director	Western Gas
37	Dr Simon Molyneux	Managing Director	Molyneux Advisors
38	Steve McCartney	State Secretary	Australian Manufacturing Workers' Union WA Branch (AMWU)
39	Owen Whittle	Secretary	UnionsWA
40	David Berman	Commercial Director	ExxonMobil Australia
41	Steve Edwell	Chair	Economic Regulation Authority (ERA)

Appendix Four

Public hearings

Date	Name	Position	Organisation
16 August 2023	Alistair Jones	A/Director General	Department of Jobs, Tourism, Science and Innovation (JTSI)
	Dr Phillip Gorey	Deputy Director General, Resources and Project Facilitation	
	Stephen Dawson	Executive Director, Project Facilitation	
	Jai Thomas	Coordinator of Energy	Department of Mines, Industry Regulation and Safety
30 August 2023	Professor Tina Soliman Hunter	Director	Centre for Energy and Natural Resources Innovation and Transformation (CENRIT), Macquarie University
	Dr Madeline Taylor	Deputy Director	
13 September 2023	Richard Harris	Chair	DomGas Alliance
	Bree Liddell	Secretariat and Administration	
	Nicholas Rea	Manager Wholesale and Low Carbon Fuels	Wesfarmers Chemicals, Energy and Fertilisers (WesCEF) (DomGas Alliance Member)
	Jai Coppen	Senior Energy Sourcing Manager	Yara Pilbara Fertilisers (DomGas Alliance Member)
	Stuart Nicholls	Chief Executive Officer and Managing Director	Strike Energy
	Emma Alexander	Investor Relations and Corporate Manager	
20 September 2023	John Dagostino	Director Government Affairs	Alcoa of Australia
	Nicholas Eaton	Energy Director - Australia	
	Patrick Beashel	General Manager Gas Supply and Trading	Chevron Australia
	Jason Ridley	Domestic Gas Commercial Operations Team Lead	
11 October 2023	Virang Gadoya	Vice President Commercial	Shell Australia
	Paul Arias	General Manager - Physical Trading and Origination West	Shell Energy Australia

Date	Name	Position	Organisation
13 October 2023	Tanya Rybarczyk	General Manager	Kleenheat
	Ian Hansen	Managing Director	Wesfarmers Chemicals, Energy and Fertilisers (WesCEF)
	Nicholas Rea	Manager Wholesale and Low Carbon Fuels	
18 October 2023	Laurent Trost	General Manager	Yara Pilbara
	Jai Coppen	Senior Energy Sourcing Manager	Yara Pilbara Fertilisers
20 October 2023	Rachael Risucci	Vice President Australian - Gas and Low Carbon Energy	BP Developments Australia
	Pam Starkey	Senior Finance and Planning Manager	
	David Fyfe	Chief Executive Officer	Synergy
	Mark Chambers	General Manager, Wholesale	
	Michael Price	Vice President Pluto/Scarborough	Woodside Energy
	Mark Abbotsford	Executive Vice President Marketing and Trading	
3 November 2023	Russell Godsall	Executive General Manager Gas Operations	ATCO Gas Division, Australia
	Sean Pitt	Vice President Marketing, Trading and Shipping	Santos
	Marcia Evans	Acting Vice President Upstream Offshore	
	Kayleen Ewin	General Manager Government and Community Affairs (WA, NA, and TL)	
8 November 2023	Kate Ryan	Executive General Manager WA and Strategy	Australian Energy Market Operator (AEMO)
	Christopher Meredith	Energy Analyst	
	Steve Edwell	Chair	Economic Regulation Authority (ERA)
	Jenness Gardner	Chief Executive Officer	
	Rajat Sarawat	Executive Director Energy Markets	
	Sara O'Connor	Executive Director Regulation and Inquiries	
15 November 2023	Rebecca Tomkinson	Chief Executive Officer	Chamber of Minerals and Energy of Western Australia
	Adrienne Labombard	Director - Policy and Advocacy	

Briefings

Date	Name	Position	Organisation
14 June 2023 *Briefing conducted prior to announcement of inquiry terms of reference*	Richard Harris	Chair	DomGas Alliance
10 August 2023	The Hon. Bill Johnston	Minister for Energy	Government of Western Australia

Appendix Five

Acronyms

$	Australian dollar
ACCC	Australian Competition and Consumer Commission – responsible for monitoring and reporting on the east coast gas market through the ongoing Gas Inquiry 2017 and enforcing compliance with competition and consumer legislation.
ADGSM	Australian Domestic Gas Security Mechanism
AEMO	Australian Energy Market Operator – responsible for producing the Western Australia Gas Statement of Opportunities (WA GSOO) and operating the Western Australia Gas Bulletin Board (WA GBB)
CEO	Chief Executive Officer
CO_2	Carbon dioxide
Cth	Commonwealth
DMO	Domestic Market Obligation
ERA	Economic Regulation Authority
ESOO	Electricity Statement of Opportunities – the electricity market equivalent of the WA GSOO, prepared by AEMO
FID	Final Investment Decision
GHG	Greenhouse gas
GJ	Gigajoule
GPG	Gas-powered generation
GSI regime	Gas Services Information regime
IEA	International Energy Agency
JTSI	Department of Jobs, Tourism, Science and Innovation
KGP	Karratha Gas Plant
LNG	Liquefied Natural Gas
LPG	Liquefied Petroleum Gas
MW	Megawatt
PJ	Petajoule (1 PJ = 31.6 million m^3 of natural gas)
RCM	Reserve Capacity Mechanism
STTM	Short-Term Trading Market
SWIS	South West Interconnected System
SWIS DA	South West Interconnected System Demand Assessment
TJ	Terajoule (1 TJ = 26,300m^3 of natural gas = 17.63 tonnes of LNG)
TJ/day	Terajoule per day
WA GBB	Western Australia Gas Bulletin Board – public website operated by AEMO
WA GSOO	Western Australia Gas Statement of Opportunities – annual report prepared by AEMO
WesCEF	Wesfarmers Chemicals, Energy and Fertilisers

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