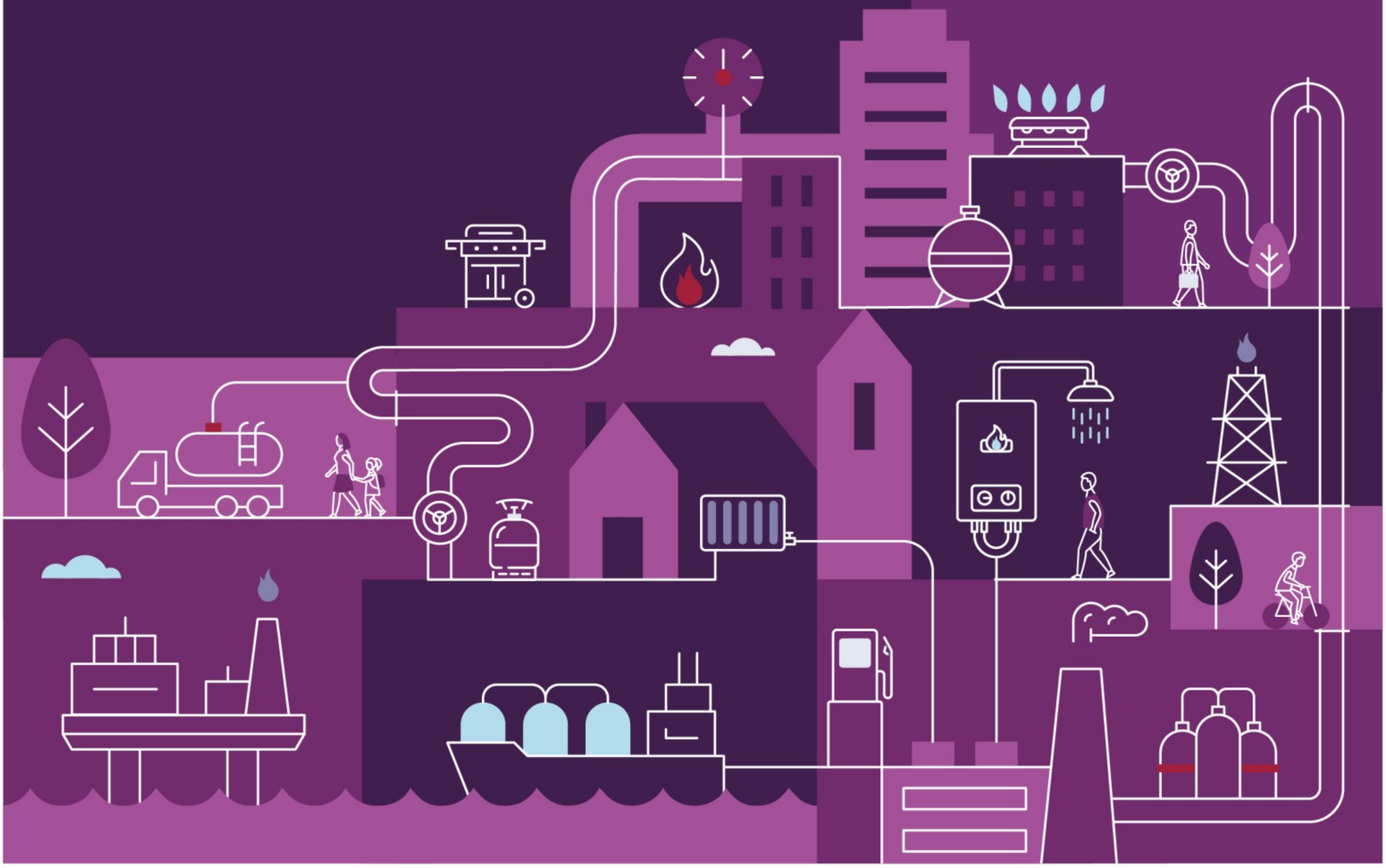
2025 Western Australia Gas Statement of Opportunities

December 2025

For Western Australia's Gas Market



We acknowledge the Traditional Custodians of the land, seas and waters across Australia. We honour the wisdom of Aboriginal and Torres Strait Islander Elders past and present and embrace future generations.

We acknowledge that, wherever we work, we do so on Aboriginal and Torres Strait Islander lands. We pay respect to the world's oldest continuing culture and First Nations peoples' deep and continuing connection to Country; and hope that our work can benefit both people and Country.

'Journey of unity: AEMO's Reconciliation Path' by Lani Balzan

AEMO is proud to have launched its first Reconciliation Action Plan in May 2024. 'Journey of unity: AEMO's Reconciliation Path' was created by Wiradjuri artist Lani Balzan to visually narrate our ongoing journey towards reconciliation – a collaborative endeavour that honours First Nations cultures, fosters mutual understanding, and paves the way for a brighter, more inclusive future.

Important notice

Purpose

The purpose of this publication is to provide information about the natural gas industry in Western Australia. AEMO publishes this Western Australia Gas Statement of Opportunities in accordance with rule 103 of the Gas Services Information Rules. This publication is generally based on information available to AEMO as of 30 November 2025 unless otherwise indicated.

Disclaimer

AEMO has made reasonable efforts to ensure the quality of the information in this publication but cannot guarantee that information, forecasts and assumptions are accurate, complete or appropriate for your circumstances.

Modelling work performed as part of preparing this publication inherently requires assumptions about future behaviours and market interactions, which may result in forecasts that deviate from future conditions. There will usually be differences between estimated and actual results, because events and circumstances frequently do not occur as expected, and those differences may be material.

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Executive summary

The 2025 Western Australia *Gas Statement of Opportunities* (WA GSOO) forecasts the adequacy of gas supply in Western Australia's domestic gas market, based on information from gas industry participants and publicly available sources. The information in this publication helps industry participants and stakeholders make informed decisions about investment in Western Australia's gas market**.**

Gas will continue to be used by Western Australian households, businesses, industry and to support the reliability and security of the electricity sector as part of the transition to net zero. For the first time, this WA GSOO extends the outlook period to 20 years (2026 to 2045). This responds to the government and industry stakeholder need for insights to support long-term investment decisions and understand future supply and consumption as Western Australia transitions towards net zero.

Key insights from the 2025 WA GSOO are:

- **The domestic gas market is forecast to remain broadly balanced in the near term, with widening supply gaps expected to emerge from 2030.**
  - The near-term balance is contingent on new domestic gas supply from the Scarborough Energy Project as anticipated in the second half of 2026, and on moderate industrial consumption. This balance remains sensitive to project timing and unplanned outages.
  - Annual supply gaps are forecast to grow from 11 terajoules per day (TJ/day) in 2030 to 82 TJ/day in 2035, and to 478 TJ/day in 2045, mainly driven by declining production from existing, committed and anticipated gas fields.
- **Gas usage by gas-powered generation (GPG) in the South West Interconnected System (SWIS) is forecast to become more variable and seasonal, placing pressure on gas infrastructure.**
  - By 2045, an additional 1.6 gigawatts (GW) of GPG capacity is forecast to help maintain power system reliability as the share of renewables and battery storage increases in the SWIS.
  - Annual gas consumption from GPG is expected to rise in 2029 and 2030 as coal-fired generation retires, before easing as more renewable generation and battery storage comes online. At the same time, peak day gas demand is expected to increase to support renewables and storage.
- **Flexible operational measures, policies or investments will likely be needed to address the risk of peak day gas shortfalls from 2029, as gas demand is projected to exceed pipeline limits under certain conditions.**
  - In the near term, pipeline infrastructure is expected to be adequate to manage peak day gas demand through operational measures and incremental investments in compressor re-wheeling.
  - From 2029, additional measures may be required to accommodate or offset increasing peak day gas demand and volatility associated with growth in renewables and retirement of coal-fired generation.
  - AEMO is working with the Department of Energy and Economic Diversification (DEED) to identify potential least cost mitigations and optimisation across electricity and gas systems in future Whole of System Plans.
- **A combination of solutions will likely be required to maintain supply adequacy in the long term, including investment in new sources of supply and gas infrastructure.** In addition, accelerating the transition of large gas users to lower-emissions electricity will further support gas adequacy over the outlook period to 2045.

Key changes since the 2024 WA GSOO

Implemented GSOO-related recommendations from the Domestic Gas Inquiry

Building on enhancements introduced in the 2024 WA GSOO, AEMO has implemented additional recommendations from the Western Australian Economics and Industry Standing Committee's Inquiry into the Western Australian Domestic Gas Policy (DomGas Inquiry) to improve transparency and long-term market insights.

- **Extended outlook period.** The outlook period has been extended from 10 to 20 years (2026-2045) to support longer-term investment planning and enhanced market visibility.
- **Inclusion of decarbonisation pathways.** AEMO has incorporated forecast decarbonisation pathways informed by industry input on fuel-switching, electrification and the use of carbon capture and storage (CCS). Scenarios are aligned with AEMO's *Inputs, Assumptions and Scenarios Report* (IASR) published in July 2025.
- **Aligned gas and electricity market modelling.** The 2025 WA GSOO continues to align scenarios with the Wholesale Electricity Market (WEM) *Electricity Statement of Opportunities* (ESOO) supply outlook to reflect interdependencies between the state's gas and electricity markets, including an enhanced gas infrastructure adequacy assessment to evaluate upstream constraints on gas supply, particularly given the forecast reliance on GPG to manage peak demand, volatility and extended periods of dark and still conditions.

Improved infrastructure adequacy assessment

- To assess potential infrastructure constraints on gas supply, particularly given the forecast reliance on GPG during evening peak demand, AEMO undertook modelling of Western Australia's gas pipeline network to assess infrastructure adequacy. This high-level assessment indicates risk of pipeline constraints materialising from 2029, or earlier under limited circumstances.
- This year, AEMO's assessment was supplemented by leveraging the modelling capabilities of the Australian Gas Infrastructure Group (AGIG), owner of the DBNGP. Without disclosing confidential participant information, AGIG's assessment analysed the adequacy of existing DBNGP infrastructure during peak demand and periods of low renewable output, identifying stress periods to inform the potential need for more flexible operational measures, policies or investments in new storage or infrastructure over the first 10 years of the outlook period.

Improved classification of supply projects

- The 2025 WA GSOO classifies gas production from existing, committed, anticipated and uncertain supply projects, accounting for available level of reserves and contingent resources. This risk-assessed production forecast provides better alignment with the commercial realities of delivering future supply.

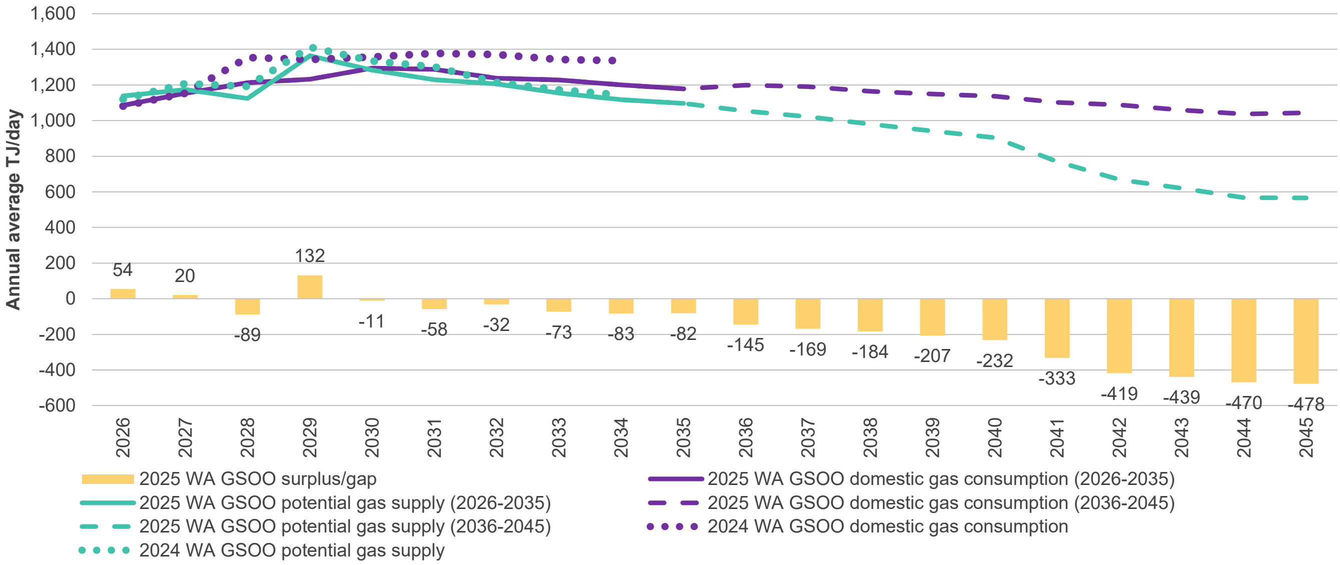
The Western Australian domestic gas market near-term outlook is balanced, with risks of widening supply gaps emerging from 2030

Forecasts indicate that supply and consumption in Western Australia's domestic gas market will remain in balance through 2026 and 2027, supported by existing and new production capacity. Unplanned production outages could still result in temporary shortfalls during this period. From 2028, a potential supply gap emerges with growth in consumption and decline in output from natural gas reserves, which is then mitigated in 2029 as new supply is anticipated to enter the market.

Figure 1 below shows the *Step Change* scenario forecast, with the Western Australian domestic gas market supply projected to remain broadly balanced in the near term before supply gaps widen from 2030[1].

A similar outlook was shown in the 2024 WA GSOO (the dashed lines), but with higher forecast consumption and supply.

Figure 1 Forecast WA domestic gas market balance, *Step Change* scenario, 2026 to 2045 (annual average TJ/day)



Note: Potential gas supply in the chart above includes supply from existing, committed and anticipated sources.

Forecast growth in consumption between 2027 and 2030 is expected to be partially fulfilled by new supply from the Scarborough Energy Project, which is expected to commence in the second half of 2026. However, the advised timing of new supply projects lags consumption growth, leading to a forecast supply gap in 2028. Addressing this gap will require increased supply from existing sources or earlier commencement of new domestic supply projects.

The consumption forecast in this 2025 report is lower than the forecast in last year's WA GSOO. This is primarily due to the suspension of nickel operations and the announced permanent closure of the Kwinana Alumina Refinery. Despite this, forecast consumption continues to grow from 2026 to 2030, driven by growth in mining, minerals processing and industrial activity. Additional demand is expected from the commencement of Perdaman's Karratha Urea Project and a greater reliance on GPG following the announced retirements and assumed unavailability of coal-fired power generation facilities[2].

SWIS GPG is expected to play an increasingly important role in firming renewable generation and maintaining reliable and secure electricity supply. The ability for substantial variable renewable energy (VRE) to connect before 2030 will depend on whether sufficient new transmission network capacity is available in time[3], supported by enabling external economic and

[1] Prior to 2030, a supply gap in the domestic gas market could materialise if supply projects are delayed or other demand side risks materialise. Supply side risks increase after 2030 as production from existing fields decline, requiring more supply to meet consumption under all three scenarios.

[2] Collie Power Station (317 MW) was modelled to retire on 1 October 2027 and Muja D Power Station (422 MW) was modelled to retire on 1 October 2029. Bluewaters Power Station (434 MW) was assumed to be unavailable from October 2028.

[3] The SWIS Transmission Plan outlines a set of committed and uncommitted network investments to support the future connection of generation and load. See https://www.wa.gov.au/organisation/energy-policy-wa/the-south-west-interconnected-system-transmission-plan-future-ready-transmission-network-was-main-electricity-system.

policy factors and the Federal Government's Capacity Investment Scheme[4]. Changes in the timing of coal retirements or new major gas-consuming projects could impact on domestic gas consumption.

Bluewaters Power Station

- Supply adequacy in the domestic gas market may be adversely impacted if coal supply is restricted or coal-fired power stations retire earlier than expected, leading to increased consumption of gas for SWIS GPG. Conversely, the gas market balance may be improved if coal-fired power stations continue operating later than expected, reducing gas consumption for SWIS GPG.
- Under the *Slower Growth*, *Step Change* and *Accelerated Transition* scenarios, AEMO modelled Bluewaters Power Station as unavailable from 1 October 2028. While Bluewaters Power Station has been assigned Capacity Credits for the 2027-28 Capacity Year, the certification process is primarily informed by a technical assessment of a facility's capability to service peak demand periods two years ahead. This two-year timeframe provides facility operators with a reasonable amount of time to resolve any potential commercial or operational issues.
- While AEMO understands Bluewaters Power Station is taking measures to resolve its fuel supply uncertainty beyond the 2027-28 capacity year, AEMO considers it prudent to take a conservative approach for the purposes of the gas supply adequacy assessment under this WA GSOO, using the best available information at the time of publication.
- Reflecting this uncertainty, sensitivity analysis was also modelled with Bluewaters Power Station remaining available until 1 October 2030. Extended availability of Bluewaters is forecast to have a minor impact on supply adequacy in 2028, reducing SWIS GPG gas consumption by 4 TJ/day in that year. In 2029 and 2030, SWIS GPG gas consumption is forecast to reduce by 38 TJ/day and 34 TJ/day, respectively.
- Further detail of this sensitivity analysis is in Section 2.

On the supply side, maintaining gas supply adequacy will depend on timely investment decisions and alignment of new supply with evolving demand patterns. All scenarios identify the need for new supply investments to maintain supply adequacy for projected gas consumption levels, even after accounting for the effects of reduced consumption from electrification. Without additional supply entering the market, AEMO forecasts annual supply gaps widening from 11 TJ/day in 2030 to 82 TJ/day in 2035, and to 478 TJ/day by 2045.

Total gas production is forecast to be lower compared to the 2024 WA GSOO, primarily due to these changes:

- Later anticipated entry of the West Erregulla project reduces the forecast supply in 2027 and 2028 by 52 TJ/day and 63 TJ/day respectively. Supply to the domestic market from 2029 is now projected to be 68.5 TJ/day compared to 78 TJ/day in the 2024 WA GSOO.
- Forecast production from Scarborough and Pluto is lower relative to the 2024 WA GSOO, reducing forecast supply by up to 24 TJ/day in 2030.
- Reserves for the Walyering and Beharra Springs fields have been downgraded, making expected supply 5 TJ/day lower in 2026, growing to 23 TJ/day lower in 2029, compared to the 2024 WA GSOO.

[4] See https://www.dcceew.gov.au/energy/renewable/capacity-investment-scheme.

- Updated forecasts for the Gorgon project include a lower utilisation rate and planned maintenance, reducing forecast supply on average by 16 TJ/day compared to the 2024 WA GSOO.
- The projected decline in reserves for Macedon and Varanus Island is faster, relative to the 2024 WA GSOO.

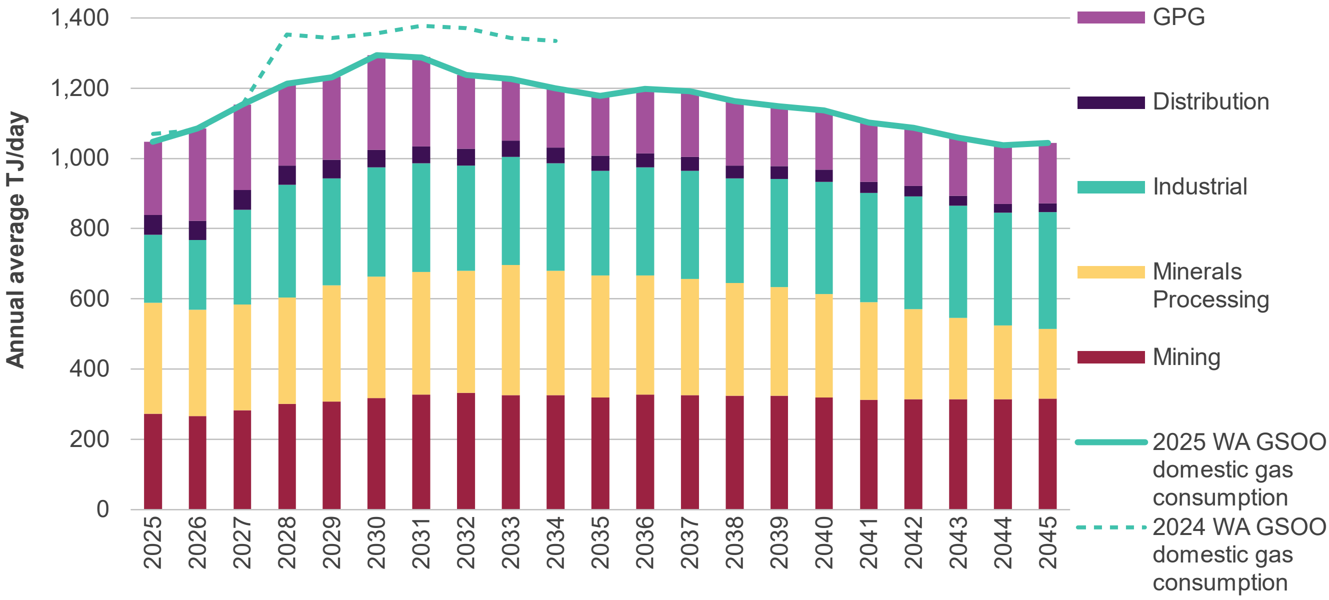
Annual domestic gas consumption is expected to peak in 2030

Near- to medium-term domestic gas consumption is forecast to increase from an annual average consumption of 1,085 TJ/day in 2026 to 1,295 TJ/day in 2030. Thereafter, annual average consumption is projected to steadily decrease to 1,178 TJ/day in 2035, and to 1,044 TJ/day by 2045, reflecting electrification across mining, minerals processing, industrial, small commercial and residential consumers. Annual GPG gas consumption is forecast to decline as annual electricity supply contributions increase from renewables supported by battery storage.

Gas consumption is projected to increase to 2030, largely driven by the commencement of Perdaman's Karratha Urea Project and other mining and industrial projects. From 2031, gas consumption is forecast to decline steadily, driven by the combined impacts of electrification and reduced SWIS GPG output as the electricity sector decarbonises. Growth in large-scale wind and solar generation, supported by battery storage, is projected to offset the retirement of coal-fired and gas-powered generation, and meet much of the increase in annual SWIS electricity consumption.

Figure 2 below shows the *Step Change* scenario domestic gas consumption forecast by segment to 2045, compared to the 2024 WA GSOO total forecast. The profile of consumption is lower than that forecast in 2024 WA GSOO, reflecting a deferral of operational re-starts, the permanent closure of Alcoa's Kwinana refinery, and a more subdued growth profile of iron ore mining.

Figure 2 Forecast annual domestic gas consumption by usage category, 2024 and 2025 WA GSOOs, *Step Change* scenario, 2025 to 2045 (annual average TJ/day)



Note: Actual consumption for 2025 is based on WA Gas Bulletin Board (GBB) data until 30 September 2025.

Although domestic gas consumption is projected to steadily decrease from 2030, it remains similar to 2025 levels in 2045. While electrification across residential and small commercial consumers reduces forecast gas consumption, Western

Australia's domestic gas market is dominated by industry (mining, minerals processing and industrial customers) and gas for electricity generation.

Industry surveys of large gas consumers conducted as part of this 2025 WA GSOO (and updated annually) indicate that multiple decarbonisation pathways are being pursued, including investments in electrification, energy efficiency and the adoption of renewables to replace gas-powered generation at remote sites. In many cases, industrial decarbonisation investments were subject to further evaluation of technology and subject to return on investment decisions. As such, industrial and mining gas consumption forecasts are largely sustained over the long term[5]. Advanced studies are also underway to investigate large-scale carbon sequestration utilising available underground reservoirs, which has the effect of capturing emissions without reducing forecast gas consumption.

Additional supply sources will be required to replace depleting fields

The 2025 WA GSOO forecasts lower supply in the first decade of the outlook period than the 2024 WA GSOO, driven by lower output, earlier retirement of production trains, and planned maintenance of certain production facilities, as shown in **Figure 3**.

New 'uncertain' gas supply projects – beyond those that are committed and anticipated – will be needed to meet forecast gas consumption until 2044. Based on current projections, unless new supply projects come onstream, gas supply is expected to decline after 2030 at an average rate of 5.3% annually as reserves in existing gas fields deplete.

The 2025 WA GSOO examines the following new supply sources:

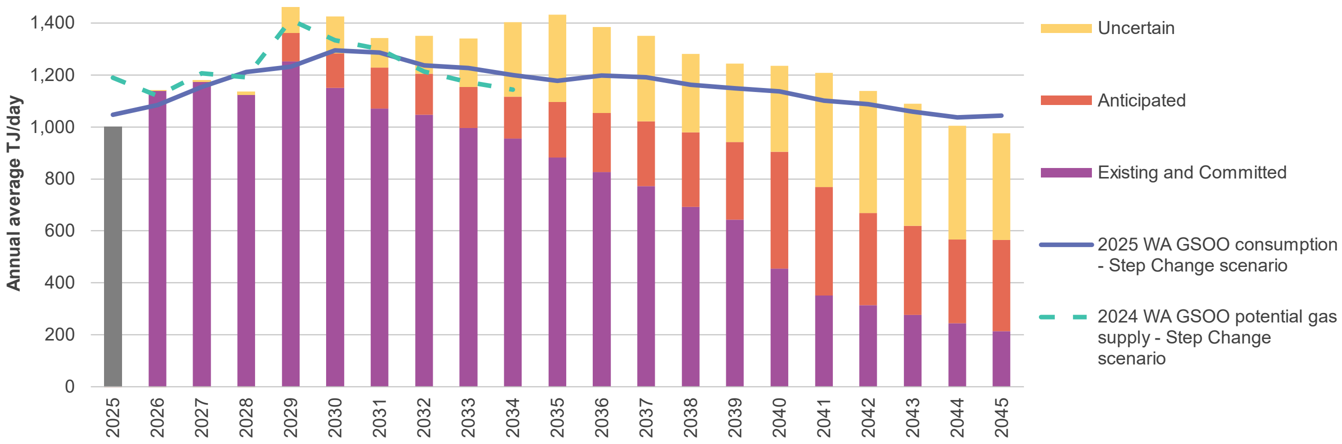
- The Scarborough Energy Project is expected to commence in the second half of 2026, reaching 160 TJ/day in 2027. The project is currently over 91% complete (excluding Pluto Train 1 modifications)[6].
- Waitsia Stage 2 will begin to deliver significant volumes into the domestic market, with approximately 200 TJ/day in 2029. This facility commenced its first gas production in December 2025 and is expected to export liquefied natural gas (LNG) until 2028[7].
- West Erregulla (50 TJ/day in 2029, ramping up to 69 TJ/day in 2031) and the Lockyer Project (60 TJ/day in 2029, ramping up to 90 TJ/day in 2031) both remain subject to final investment decisions (FID).
- Uncertain projects, such as Browse and Equus projects, could assist with reducing the supply gaps from around 2032, although supply remains subject to development milestones.

[5] AEMO's consumption forecasts are informed by industry surveys under its Formal Information Request (FIR). AEMO continues to monitor the market and will update its forecasts as these decarbonisation investments mature. With the introduction of the 20-year outlook in this 2025 WA GSOO, where input was unavailable from market participants, assumptions have been aligned to AEMO's 2025 IASR and the 2024 CSIRO multi-sector modelling report.

[6] See https://www.woodside.com/docs/default-source/asx-announcements/2025/third-quarter-2025-report.pdf?sfvrsn=ed6d5864_5.

[7] Waitsia Stage 2 joint venture is approved to process LNG for export at North West Shelf LNG facilities until the end of 2028. See https://www.wa.gov.au/government/media-statements/McGowan%20Labor%20Government/WA-Government-reaches-agreement-on-job-creating-domestic-gas-project-20201224.

Figure 3 Forecast annual potential gas supply by project category, 2024 and 2025 WA GSOOs, 2026 to 2045 (annual average TJ/day)



Source: AEMO, GBB.
Note: Actual supply for 2025 is based on WA GBB data up to 31 October 2025. Adjustments have been made to GBB data to include domestic trucked LNG and exclude gas flows that did not contribute to the domestic gas market for 2025 due to Waitsia LNG exports.

Daily volatility and periods of sustained high gas demand from SWIS GPG are forecast to become more pronounced

While SWIS GPG output is generally forecast to decline as a proportion of the total annual SWIS power generation mix[8], gas will remain critical in maintaining the reliability and security of supply by:

- replacing generation from retiring or unavailable coal capacity (alongside new wind and solar capacity),
- supporting battery capacity to firm VRE generation,
- meeting electricity demand during extended periods of low renewable output when energy storage has been depleted and is unable to recharge, and
- providing inertia, voltage support and system strength as the coal fleet retires (alongside other solutions, such as synchronous condensers and grid-forming inverters)[9].

Under the *Step Change* scenario, annual gas consumption by SWIS GPG is projected to decrease over the long term from 227 TJ/day in 2026 to 136 TJ/day in 2035, and from 148 TJ/day in 2036 to 136 TJ/day in 2045. This is because annual contributions from large-scale wind and solar generation are forecast to increase from 4.2 terawatt hours (TWh) in 2026 to 33.4 TWh in 2045.

Despite the long-term decrease in annual gas consumption, annual peak day gas demand from SWIS GPG is projected to increase from 409 TJ/day in 2026 to 558 TJ/day in 2035, and to 780 TJ/day in 2045[10], with the winter season typically exhibiting the highest demand levels, as the residential heating load electrifies and greater reliance is placed on SWIS GPG due to shorter winter daylight hours, as shown in **Figure 4**. Furthermore, demand volatility[11] is also projected to increase.

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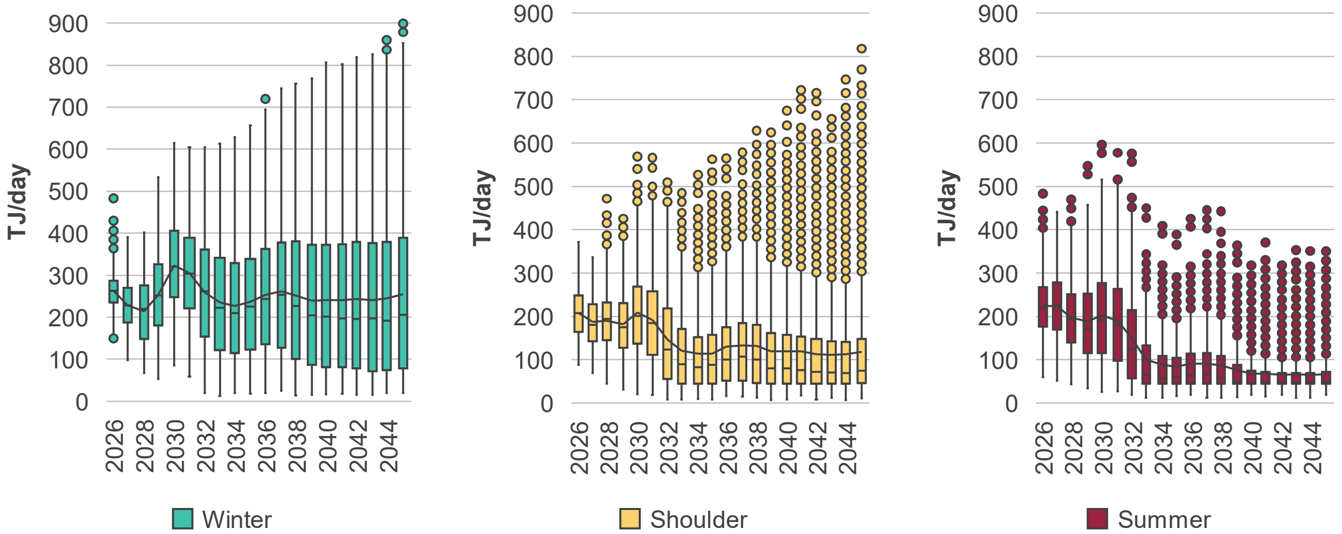
[8] The percentage contribution of GPG to total power generation mix for the SWIS is forecast to decline from 31% in 2026 to 24% in 2028, before increasing to 26% in 2029 and 27% in 2030 when coal capacity retires, after which it enters a continued decline (13% in 2035, 10% in 2040 and 9% in 2045).

[9] See Sections 6 and 7.3 of the 2025 WEM ESOO for details, at https://www.aemo.com.au/energy-systems/electricity/wholesale-electricity-market-wem/wem-forecasting-and-planning/wem-electricity-statement-of-opportunities-wem-esoo.

[10] Observed historical peak demand from SWIS GPG was 394 TJ/day in January 2025. Modelled peak demand for 2026 (409 TJ/day) and for other years of the outlook is calculated as the average of 50 annual peak demand values from individually modelled iterations for each year.

[11] Volatility is understood as the difference (spread) between minimum and maximum demand. The higher the spread, the greater the volatility.

Figure 4 Annual peak demand (TJ/day) and volatility of SWIS GPG daily gas demand in the winter, shoulder and summer seasons, *Step Change* scenario, 2026 to 2045



Source: EY

Notes: The box and whisker plots for each year represent daily SWIS GPG gas demand (TJ/day) values for each season in a calendar year, based on results of 50 modelled iterations for each calendar year (five weather reference years x 10 Monte Carlo iterations of forced outages). The upper and lower end of a whisker present the minimum and maximum value (excluding outliers). Dots present outliers, that is, values greater than the 3rd quartile + 1.5 x (3rd quartile – 1st quartile) and values lower than 1st quartile - 1.5 x (3rd quartile – 1st quartile). The bottom of a box presents the 1st quartile, and the top of a box presents the 3rd quartile. Lines dividing a box present the median, and lines connecting each box present the average.

Summer includes months from December to March (aligned with the Hot Season defined in the ESM Rules); winter includes months from June to August; shoulder includes the months of April, May and September to November.

In addition to supporting peak demand and volatility, SWIS GPG is forecast to provide firming support over extended periods of dark and still conditions[12]. In such periods, storage may have discharged and will not be able to recharge, and SWIS GPG will be required to generate at high output for multiple hours or days. Combined with increasing volatility, such high-demand, long-duration periods are likely to put additional stress on the gas supply infrastructure (discussed in detail in Section 4).

Flexible operational measures, policies or investments are likely required to address increasingly variable and seasonal GPG demand

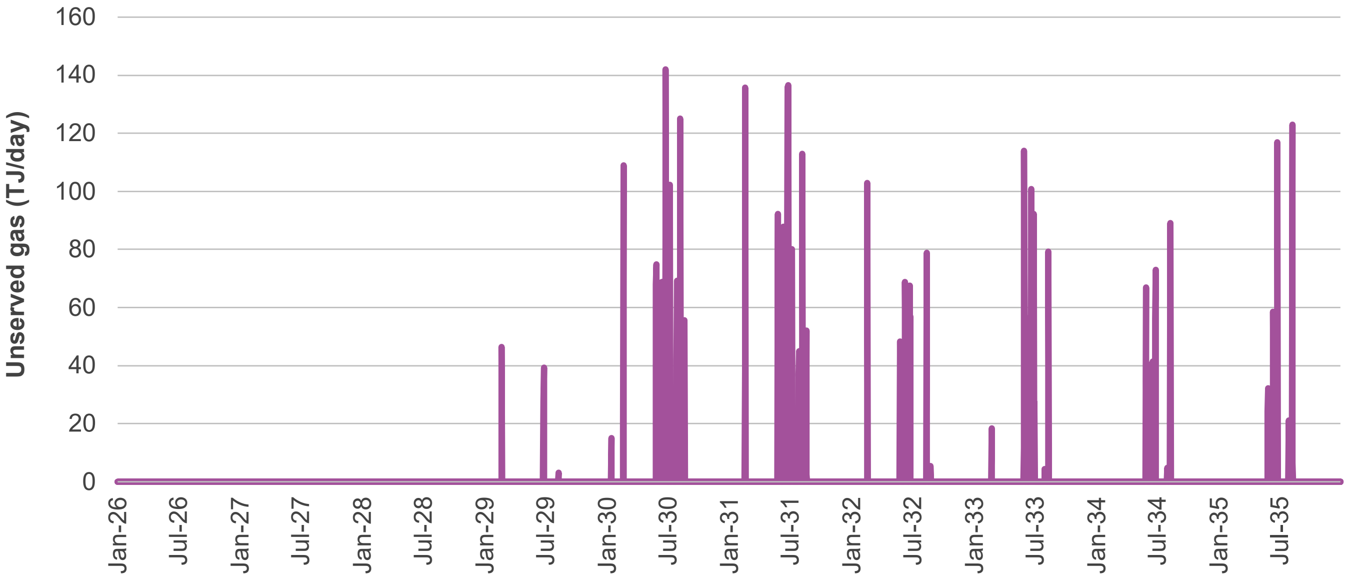
Unserved gas represents gas that cannot be supplied to consumers under certain circumstances. This can occur when there are supply interruptions such as instances of inadequate supply from gas producers, or when there is insufficient transportation capacity to deliver gas to consumers. Although the domestic gas market is broadly balanced in the near term, major unplanned production outages may lead to risk of unserved gas supply.

Imbalances in domestic gas market production and consumption are the primary drivers of forecast supply gaps. However, AEMO's modelling indicates that when production facilities are assumed to be unconstrained, then without appropriate mitigations the pipeline infrastructure is at risk of constraining gas delivery during periods of peak gas demand from 2029, resulting in unserved gas, as shown in **Figure 5**. These peak day shortfalls occur at times of high GPG gas demand or high non-GPG gas demand in the metro and south-west regions[13].

[12] Multiple contiguous hours or days of dark and still conditions that is, very low or zero renewable resource for power generation) have occurred historically in the SWIS, National Electricity Market (NEM) and other systems worldwide. If combined with high electricity demand, such events will drive high demand for GPG.

[13] Under the *Step Change* scenario, modelling indicates that pipeline congestion materialises from 2029 when all five reference years are averaged. Shorter periods of pipeline congestion in limited circumstances are observed in 2026 and 2027 under two reference years where maximum GPG demand is used.

Figure 5 Forecast unserved gas arising from infrastructure constraints, *Step Change* scenario, 2026 to 2035 (TJ/day)



Gas demand is forecast to be higher in the winter season, requiring flexible operational measures such as line pack in the near term and potential compressor upgrades in the medium term. From 2029, additional operational measures, policies or investments across the gas or electricity systems may be required to accommodate or offset increasing peak day gas demand and volatility.

AEMO is working with DEED to identify potential least cost mitigations and exploring the opportunity to optimise across electricity and gas systems in future Whole of System Plans.

Western Australian domestic gas market uncertainties

There is ongoing uncertainty across the Western Australian domestic gas market over the outlook period, driven by a range of factors that may influence future gas demand and available supply:

- **Supply flexibility**. Limited supply flexibility remains in the market, with gas production facilities operating at close to maximum capacity. If one of the larger gas plants went offline unexpectedly, there could be an immediate but short-term supply shortfall. Line packing in the 1,500 kilometre (km) DBNGP, combined with the Mondarra and Tubridgi storage facilities, and balancing provided by Karratha Gas Plant, may provide a short-term buffer to supply outage events.
- **Coal supply.** Earlier than expected coal-fired generation retirements or restricted coal supply could increase reliance on SWIS GPG. AEMO modelled Bluewaters Powers Station as unavailable from 1 October 2028 and continues to monitor the coal supply situation in Western Australia.
- **VRE development.** Demand for domestic gas could increase if new VRE projects and supporting electricity network infrastructure are delayed.
- **Changing pattern of gas usage and infrastructure adequacy.** The growing role of gas to firm VRE is shifting SWIS GPG usage patterns. AEMO aligns the WA GSOO and WEM ESOO to reflect these changing patterns, including short-term gas

demand peaks during periods of low renewable output and peak electricity demand events. Changing gas usage patterns are likely to increase operational impacts on gas infrastructure to meet shorter and sharper consumption needs, and the adequacy of the pipeline and storage infrastructure system to meet these changing patterns is uncertain. This is explored in AEMO's adequacy assessment of pipeline and storage infrastructure.

- **New gas supply projects.** Delays to anticipated gas supply projects could widen forecast supply gaps. Risks remain for Perth Basin projects, where the geology is proving complex. AEMO will continue to engage closely with the operators of anticipated and uncertain gas supply projects to keep information up to date.
- **New gas consumption projects.** Projects could start earlier than forecast, potentially widening supply gaps in the market. For example, AEMO expects Perdaman's Urea Project to commence in the second half of 2026 with full gas consumption by 2028. If the project ramps up to full production faster than projected in this 2025 WA GSOO, it will further tighten the market in 2027. The project has achieved several critical project milestones (including financial close in April 2023[14]) and is under construction. Perdaman's Urea Project is contracted to take 130 TJ/day[15] of gas primarily from the new Scarborough Energy Project, which is expected to commence supply from the second half of 2026.
- **Demand reduction or destruction.** Gas price-sensitive industries may reduce or cease operations if gas or alternatives are not available at competitive prices. Responses to AEMO's Formal Information Request (FIR) indicate this could occur from approximately $10.00/gigajoule (GJ)[16].

A combination of solutions is likely required to reduce or eliminate potential medium to long-term supply gaps and peak day shortfalls

In the medium term, the following actions may reduce or eliminate the risk of supply gaps or peak day shortfalls before 2030:

- Increased reservation of existing gas reserves for the domestic market to better match daily peaks and increasingly seasonal domestic gas consumption.
- Flexibility in the form of increased output from existing facilities (such as, the Karratha Gas Plant and Gorgon) and production from storage facilities. Increasing output from the Karratha Gas Plant may require securing uncontracted quantities of gas for the domestic market that would otherwise be exported as LNG or banked for future years with more commercially favourable conditions. Since increasing nameplate capacity to 300 TJ/day in 2022, Gorgon's domestic gas plant has had the flexibility to produce to its higher nameplate capacity during periods of high demand.
- Peak day shortfalls may be mitigated by a combination of solutions, including underground storage and pipeline operational measures such as line pack. From 2029, additional operational measures, policies or investments across the gas or electricity systems may be required to accommodate or offset increasing peak day gas demand and volatility.

Potential supply volumes remain uncertain as several supply projects in the Perth and Carnarvon basins are at early stages of appraisal. Over the longer term, new sources of gas supply may include:

[14] See https://perdaman.com/perdaman-closes-the-financing-for-its-significant-western-australian-urea-project/.

[15] See https://www.woodside.com/docs/default-source/media-releases/long-term-domestic-gas-sale-between-woodside-and-perdaman-becomes-unconditional.pdf.

[16] $10.00/GJ was the median gas price surveyed in the 2025 WA GSOO. This is a decrease from the median of $10.75/GJ in 2024 WA GSOO.

- backfill projects at existing facilities, such as Corvus being developed through Varanus Island, and domestic gas delivery from Equus and Browse being developed via the North West Shelf infrastructure and Karratha Gas Plant,
- debottlenecking and expansion of existing facilities, including the domestic gas plants attached to LNG projects,
- maturation of discoveries, such as Ocean Hill in the Perth Basin being developed as greenfield projects, and
- further successful exploration, for example, in the Perth and Canning basins, leading to new development opportunities.

Long-term demand-side responses could include acceleration of:

- build-out rates of VRE and energy storage, leading to lower gas demand from SWIS GPG in the longer term, and
- industrial decarbonisation, decreasing gas demand in the long term by large gas users transitioning more rapidly to lower emissions electricity sources. This would require commercial, regulatory and technological pathways to incentivise an accelerated transition.

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1 Introduction

1.1 Purpose

The WA GSOO forecasts the adequacy of gas supply sources in Western Australia's domestic gas market, based on information provided by gas industry participants and publicly available sources. The information in this publication helps industry participants and stakeholders make informed decisions about investment in the Western Australia's gas market.

This WA GSOO forecasts potential gas supply sources and domestic gas consumption and daily gas demand for a 20-year outlook period from 2026 to 2045. It also includes an assessment of Western Australian gas pipeline and storage infrastructure capacity to better assess Western Australia's domestic market supply adequacy to meet instantaneous or seasonal variability in daily demand from SWIS GPG, and other domestic demand and consumption.

In conducting this assessment, the WA GSOO examines the limitations for supply to meet demand considering physical capabilities, rather than contractual and other commercial influences that could affect supply compared to forecasts. If supply is not available as forecast by producers, the adequacy of the gas system may differ from the WA GSOO assessment.

Definitions

The following definitions apply throughout this document:

- **Domestic gas consumption** includes large gas users engaged in mining, minerals processing, industrial and commercial sectors, grid-connected GPG consumers in the SWIS and non-SWIS areas, and residential and small commercial users connected to Western Australia's gas distribution networks.
- **Maximum daily demand** is forecast with a probability of exceedance (POE), meaning the statistical likelihood of the forecast being met or exceeded. A 5% POE forecast is expected to be exceeded, on average, only once in 20 years, while a 50% POE forecast is expected, on average, to be exceeded every second year.
- **Potential gas supply** is defined as supply that could be made available to the domestic gas market, based on gas reserves and resources, subject to forecast prices, production costs, domestic market obligations (DMOs), and processing capacity.
- **Total gas consumption forecast** includes domestic gas consumption plus an estimate of the total quantity of gas required for Western Australia's liquefied natural gas (LNG) industry, reflecting an overall assessment of Western Australian gas consumption.
- A **peak day shortfall** is driven by insufficient available gas production or transport capacity to meet extreme peaks in demand on a single day.
- A **seasonal or annual supply gap** is driven by insufficient gas production or transport capacity to meet total seasonal or yearly demand.

Explaining terajoules per day (TJ/day)

- TJ/day is used in this WA GSOO to present the gas consumption and supply on a consistent basis. TJ/day is expressed in annual averages, unless otherwise specified.
- Domestic gas consumption considers gas used over a year, averaged to convert to the unit of TJ/day.
- Domestic gas demand considers gas used on a daily basis and is expressed in TJ/day.
- Gas supply considers potential supply over a year, averaged to convert to the unit of TJ/day.

1.1.1 Structure of this document

- **Section 1** provides a summary of the key changes implemented in this WA GSOO, including the scenario descriptions that align with AEMO's 2025 *Inputs, Assumptions and Scenarios Report* (IASR).
- **Section 2** presents Western Australian domestic gas consumption and demand projections. It provides an estimate of forecast total gas consumption, including domestic consumption and LNG for export.
- **Section 3** presents gas supply projections. It also covers Western Australia's gas reserves and resources, and performance of gas supply and storage facilities.
- **Section 4** presents domestic gas supply adequacy projections for Western Australia and summarises AEMO's assessment of potential uncertainties to the key drivers of supply and demand in this market. It also presents a range of possible solutions for the medium to long term.
- **Appendices** include Western Australia's historical gas consumption and supply, gas market characteristics and historical domestic prices, input assumptions and forecast methodologies, details covering SWIS GPG forecasts outcomes, classification of gas consumption projects, quarterly supply forecast for 2026, and gas pipeline and storage network modelling.

1.1.2 Supplementary information

Supporting key materials, including previous WA GSOO reports, supplementary forecasts and methodology documents, 2025 WA GSOO Data Register with figures and data, and 2025 WA GSOO portal (with interactive access to detailed forecasts of annual gas consumption and demand), are available on AEMO's website, and references are listed in **Table 1**. These materials provide the data foundations and supporting context for the analysis presented throughout this report.

Table 1 Other relevant reference materials

Information source	Website links
2025 WA GSOO Consumption Forecasting Portal	https://www.aemo.com.au/energy-systems/data-dashboards/electricity-and-gas-forecasting/
2025 WA GSOO Data Register	https://www.aemo.com.au/energy-systems/gas/gas-forecasting-and-planning/wa-gas-statement-of-opportunities-wa-gsoo
Australian Energy Market Operator (AEMO), 2025 *Inputs, Assumptions and Scenarios Report* (IASR)	https://www.aemo.com.au/consultations/current-and-closed-consultations/2025-iasr
AEMO, 2025 *Wholesale Electricity Market Electricity Statement of Opportunities*, 2025	https://www.aemo.com.au/-/media/files/electricity/wem/planning_and_forecasting/esoo/2025/2025-wem-electricity-statement-of-opportunities.pdf?la=en
Commodity Price & Production Forecasts (*thebigpicture* Economics), prepared for AEMO, 2025, and published with this WA GSOO	https://www.aemo.com.au/energy-systems/gas/gas-forecasting-and-planning/wa-gas-statement-of-opportunities-wa-gsoo.
Commonwealth Scientific and Industrial Research Organisation (CSIRO) and ClimateWorks Centre (CWC), *2024 Multisector energy modelling,* prepared for AEMO, 2025	https://www.aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2024/2025-iasr-scenarios/csiro-2024-multi-sectoral-modelling-report.pdf
Deloitte Access Economics, *Economic forecasts 2024-25*, prepared for AEMO, 2024	https://www.aemo.com.au/-/media/files/major-publications/isp/2025/deloitte-access-economics-2024-economic-forecast.pdf
Ernst & Young (EY), *2025 South West Interconnected System gas-powered generation forecast methodology report to 2045*, prepared for AEMO, 2025, and published with this WA GSOO	https://www.aemo.com.au/energy-systems/gas/gas-forecasting-and-planning/wa-gas-statement-of-opportunities-wa-gsoo
Western Australia Gas Bulletin Board (WA GBB) – Map and Reports	https://gbbwa.aemo.com.au/#home
Western Australia Gas Consultative Forum (WA GCF) – Meeting packs	https://www.aemo.com.au/consultations/industry-forums-and-working-groups/list-of-industry-forums-and-working-groups/wa-gas-consultative-forum-wagcf

1.1.3 Economics and Industry Standing Committee's inquiry into matters relating to the Western Australian Domestic Gas Policy

The final DomGas Inquiry report

The final report of the Parliamentary Inquiry into the Western Australian Domestic Gas Policy was published on 15 August 2024[17]. In response to the Parliamentary Inquiry, the Western Australian Government released its updated Western Australian Domestic Gas Policy in September 2024[18], which included several recommendations to improve the way market information and forecasting data is produced relevant to this WA GSOO.

Table 2 presents the key recommendations from the Inquiry that are relevant to the WA GSOO, the Western Australian Government response, and AEMO's course of action in responding to the recommendations.

The key changes to the 2025 WA GSOO are detailed in Section 1.2.

[17] Western Australia Parliament, *Inquiry into the WA Domestic Gas Policy: Final Report*, 15 August 2024, at https://www.parliament.wa.gov.au/Parliament/commit.nsf/(Report+Lookup+by+Com+ID)/27F837EAB987BD9548258B790020F885/$file/20240814%20-%20RPT%20-%20DOMGAS%20FINAL%20updated%20for%20web.pdf.

[18] Department of Jobs, Tourism, Science and Innovation, *Government response to the Economics and Industry Standing Committee's 'Inquiry into the WA Domestic Gas Policy'*, September 2024 at https://www.wa.gov.au/system/files/2024-09/0172_domgas_jtsi_submission_to_parliamentary_inquiry.pdf.

Table 2 Western Australian Domestic Gas Inquiry Recommendations relevant to the WA GSOO

Inquiry recommendations relevant to the WA GSOO	Western Australian Government response	AEMO action for WA GSOOs
That the WA GSOO be expanded to cover a 20-year forecast period.	Supported in principle. The Western Australian Government will engage with AEMO to investigate opportunities for longer forecast periods.	Actioned in 2025 WA GSOO.
That the WA GSOO includes forecasts of the decarbonisation pathways for gas users.	Supported in principle. The Western Australian Government will engage with AEMO to investigate further opportunities to include decarbonisation forecasts.	Actioned in 2024 WA GSOO and expanded upon in the 2025 WA GSOO.
That there is a need to increase the integration of gas and electricity planning, forecasting and operation with the WA GSOO.	Supported. The Western Australian Government will investigate, where appropriate, integration and alignment of the State's gas and electricity markets to support better planning, forecasting and operations of the State's energy system.	Actioned in 2024 WA GSOO and expanded upon in the 2025 WA GSOO.
That the State Government enact measures to permit and require government agencies to share relevant information with AEMO.	Supported. The Western Australian Government is supportive of opportunities for better data sharing and will investigate mechanisms to enable increased transparency with AEMO to help inform more comprehensive and up-to-date market forecasts.	AEMO has aligned its supply forecast with the Domestic Gas Statement published by DEED. AEMO continues to engage with relevant government agencies as required.
For new LNG projects or gas fields, the reservation amount is set as necessary to mitigate any expected domestic gas shortfall, based on the WA GSOO forecasts.	Not supported. For new offshore LNG projects, the Western Australian Government will continue its policy of a 15 per cent reservation of domestic gas, to ensure market and investment certainty.	In the 2025 WA GSOO, supply forecasts are informed by production forecasts received under AEMO's Formal Information Request (FIR) and the updated Domestic Gas Statement published in October 2025.
That the State Government allow onshore gas projects to export LNG only if the domestic market is adequately supplied and is expected to be well supplied for a period of time.	Supported. To facilitate new project development and additional domestic gas supply, the Western Australian Government will implement an 80% domestic gas reservation policy for onshore gas producers until 31 December 2030. After this date, it will increase to a 100% domestic gas reservation policy for onshore producers.	In the 2025 WA GSOO, supply forecasts are informed by production forecasts received under AEMO's FIR and the updated Domestic Gas Statement published in October 2025.

1.2 Key changes in the 2025 WA GSOO

AEMO is continually seeking to improve the quality and accuracy of the gas services information it provides. AEMO therefore welcomes the feedback provided as part of the October 2023 five-yearly GSOO review[19], as well as subsequent recommendations for improvement in the DomGas Inquiry final report. A number of these recommendations were implemented under the 2024 WA GSOO. The key changes implemented in this year's WA GSOO are summarised below.

1.2.1 Extension of outlook period from 10 years to 20 years

In line with the DomGas Inquiry recommendations, AEMO has extended the outlook period from 10 years to 20 years for the 2025 WA GSOO. This covers the calendar years from 2026 to 2045 inclusive. Lengthening the outlook period helps market participants make long-term investment decisions and increases transparency of future supply and consumption.

[19] Rule 105 of the Gas Services Information (GSI) Rules requires that AEMO must, at least once in every five-year period, conduct a review of the GSOO, and that this review must be carried out in consultation with Gas Market Participants and gas industry groups.

1.2.2 Inclusion of forecast decarbonisation pathways for gas users

The DomGas Inquiry acknowledged that the 20-year outlook will cover the bulk of Western Australia's transition towards net zero. In light of this, it recommended that the WA GSOO include forecast decarbonisation pathways for gas users.

Consistent with the 2024 WA GSOO, the impact of decarbonisation was modelled in the gas consumption forecasting process and is particularly noticeable under the *Accelerated Transition* scenario in the 2025 WA GSOO. AEMO considered decarbonisation for components aside from SWIS GPG by modelling sectoral electrification and reduction in gas consumption by large users due to efficiency upgrades or on-site VRE. SWIS GPG components were aligned to the 2025 WEM ESOO scenarios and the emissions target applied to SWIS GPG consumption modelling.

To add further transparency this year, AEMO sought information from the market through the FIR process on decarbonisation initiatives including fuel-switching, electrification and the use of CCS. To aid analysis, AEMO also sought information on the development maturity of individual projects. Insights relating to these initiatives and their impact on future gas consumption are included in Section 2.

1.2.3 Integration of gas and electricity planning and forecasting

The DomGas Inquiry identified a need to increase the integration of gas and electricity planning, forecasting and operation with the WA GSOO and this recommendation was supported in the Western Australian Government's response.

In the 2024 WA GSOO, AEMO aligned scenarios with the 2024 WEM ESOO and used the WEM ESOO supply outlook to inform SWIS GPG consumption, providing for consistency and integration between gas and electricity planning and forecasting. Further enhancements included the introduction of a gas infrastructure adequacy assessment based upon AEMO's modelling of the Western Australian gas pipeline network.

This year, AEMO maintains alignment and consistency with the WEM ESOO, building on the gas infrastructure adequacy assessment by leveraging the dynamic modelling capabilities of AGIG, the owner and operator of the DBNGP, to inform AEMO's pipeline infrastructure adequacy assessment. This assessment is included in Section 4.

1.2.4 Inclusion of daily peak demand forecasts

Daily peak demand forecasts are included for the first time in a WA GSOO, providing better transparency on infrastructure adequacy to meet demand conditions during weather events that impact gas consumption. Seasonal peaks are represented by a POE range to enable improved decision-making regarding supply adequacy. This analysis is in Section 2.

1.2.5 Re-categorisations of supply projects to provide a more informed view over a longer outlook period

AEMO assessed existing and new gas supply projects that may impact its 2025 WA GSOO forecasts. Gas supply projects were classified into committed, anticipated and uncertain project categories based on available information at the time of forecasting, with production profiles informed by FIR responses. Gas supply project classification was based on the WA GSOO's modelling criteria[20] below:

[20] AEMO considered anticipated and uncertain projects to be "proposed" projects for the purposes of the GSI Rules 23 April 2025. See https://www.wa.gov.au/system/files/2025-04/gas_services_information_rules_23_april_2025.pdf.

- **Committed projects –** gas supply projects that are classified as 2P reserves[21] and under construction or have demonstrated sufficient development progress including FID.
- **Anticipated projects** – includes projects with:
  - 2P reserves and which have not achieved FID, or
  - 2C resources[22] that have a high degree of certainty in commercial viability, are likely to backfill an existing processing facility[23], already have significant commercial alignment (for example, downstream-upstream) and a relatively straightforward approvals pathway.
- **Uncertain projects** – includes projects with 2C resources that have a lower degree of certainty in progressing. These projects have potential to progress but are still at earlier stages of development, and may face challenges in achieving commercial alignment or economic thresholds (for example, due to development costs) and progressing approvals.

1.3 Scenarios

Considering the uncertainties in the speed and extent of gas sector transformation, AEMO uses scenarios and sensitivities to explore the needs of Western Australian gas consumers and the adequacy of gas infrastructure to meet those needs.

The 2025 WA GSOO forecasting scenarios are aligned with those presented in the 2025 WEM ESOO, with terminology updated to reflect the final 2025 IASR. The GPG modelling drew on the same set of input assumptions as used in the 2025 WEM ESOO modelling. This close alignment improves the integration of GPG planning, forecasting and operations in this WA GSOO. The three AEMO scenarios are defined as:

- ***Slower Growth*** **(Low case, previously** ***Progressive Change*****)** – explores the task of achieving Australia's Paris Agreement commitment of a 43% emissions reduction compared to 2005 levels by 2030 in a more challenging economic environment[24]. While ongoing energy sector investments are required by national and state policies, the *Slower Growth* scenario reflects reduced consumption for commodities. The slower pace of economic progress in this scenario is primarily due to higher technology costs and supply chain challenges compared to other scenarios. The slower technology advancement assumptions may support longer use of gas for power generation, prior to a transition to renewables.
- ***Step Change*** **(Expected case) –** is based on achieving a scale of energy transformation that supports Australia's contribution to limiting global temperature rise to below 2°C compared to pre-industrial levels. It features a high level of consumer participation and significant investments in distributed energy resources (DER) to drive the decarbonisation of Australia's economy.
- ***Accelerated Transition*** **(High case, previously** ***Green Energy Exports)*** **–** reflects very strong decarbonisation efforts both domestically and globally to limit temperature increase to 1.5°C. This leads to a rapid transformation of Australia's energy sectors and a strong emphasis on electrification. With increased domestic and international economic growth, there is a global demand for green energy. Enhanced settings for technological development, supply chain management,

[21] 2P reserves are the sum of proved and probable reserves, representing a higher estimate of commercially recoverable oil and gas than 1P reserves.

[22] 2C resources are a contingent discovered resources which have not yet met requirements such as commercial or approvals to be classified as a reserve.

[23] In certain circumstances, using an existing processing facility could make environmental approvals less arduous.

[24] In September 2025, Australia's 2035 emissions targets were announced at 62% to 70% reduction on 2005 levels. Although 2035 targets were not directly considered under the Final IASR published in July 2025, all scenarios are aligned to net zero by 2050. Furthermore, reductions in SWIS emissions from electricity generation in this WA GSOO were modelled as exceeding the announced 62% to 70% reduction on 2005 levels under all three scenarios. For further information on modelled SWIS emissions, refer to Appendix A4.2.1.

social license, and domestic and international cooperation enable substantial growth in green energy exports, including the export of green hydrogen through ammonia and energy-intensive manufacturing utilising hydrogen, such as green steel production. The strong decarbonisation assumptions drive less use of gas and more renewable sources to replace the loss of coal-fired electricity generation and meet increased energy consumption.

A complete description of the scenarios, including narratives and key parameters, is in AEMO's 2025 IASR[25]. AEMO's gas consumption-related modelling assumptions are further explored in Section 2.3 and gas supply-related modelling assumptions in Section 3.3. **Table 3** summarises key parameters for each scenario[26].

Table 3 Key parameters by scenario

Parameter	*Slower Growth*	*Step Change*	*Accelerated Transition*
National decarbonisation target	At least 43% emissions reduction by 2030, net zero by 2050.	At least 43% emissions reduction by 2030. Net zero by 2050.	At least 43% emissions reduction by 2030. Net zero by 2050.
Global economic growth and policy coordination	Slow economic growth, lesser coordination.	Moderate economic growth, stronger coordination.	High economic growth, stronger coordination.
Australian economic and demographic drivers	Lower growth featuring tough economic conditions	Moderate	Higher
Electrification	Meeting existing emissions reductions commitments	High	Higher
Energy efficiency across all energy forms	Moderate	High	Higher
Distributed energy resources (DER) uptake	Lower	High	Higher
Retirement or unavailability of coal fired power stations[A]	• BW1_BLUEWATERS_G2 and BW2_BLUEWATERS_G1 assumed to be unavailable from 1 October 2028. • MUJA_G6 retired 1 April 2025. • COLLIE_G1 retires 1 October 2027. • MUJA_G7 retires 1 October 2029. • MUJA_G8 retires 1 October 2029.		
Project consideration	• Existing and committed gas consuming projects. • Existing and committed gas supply sources.	• Existing and committed gas consuming projects. • Existing, committed and anticipated gas supply sources.	• Existing, committed, and anticipated[B] gas consuming projects. • Existing, committed, anticipated and uncertain gas supply sources.
Equivalent scenario in 2025 WEM ESOO	*Progressive Change*	*Step Change*	*Green Energy Exports*

A. AEMO explored additional sensitivities on the *Step Change* scenario with alternative coal retirement, detailed in Section 2 and Section 4.
B. Anticipated gas consumption projects are only included in the *Accelerated Transition* scenario and must meet set criteria (described in Appendix A4.2).

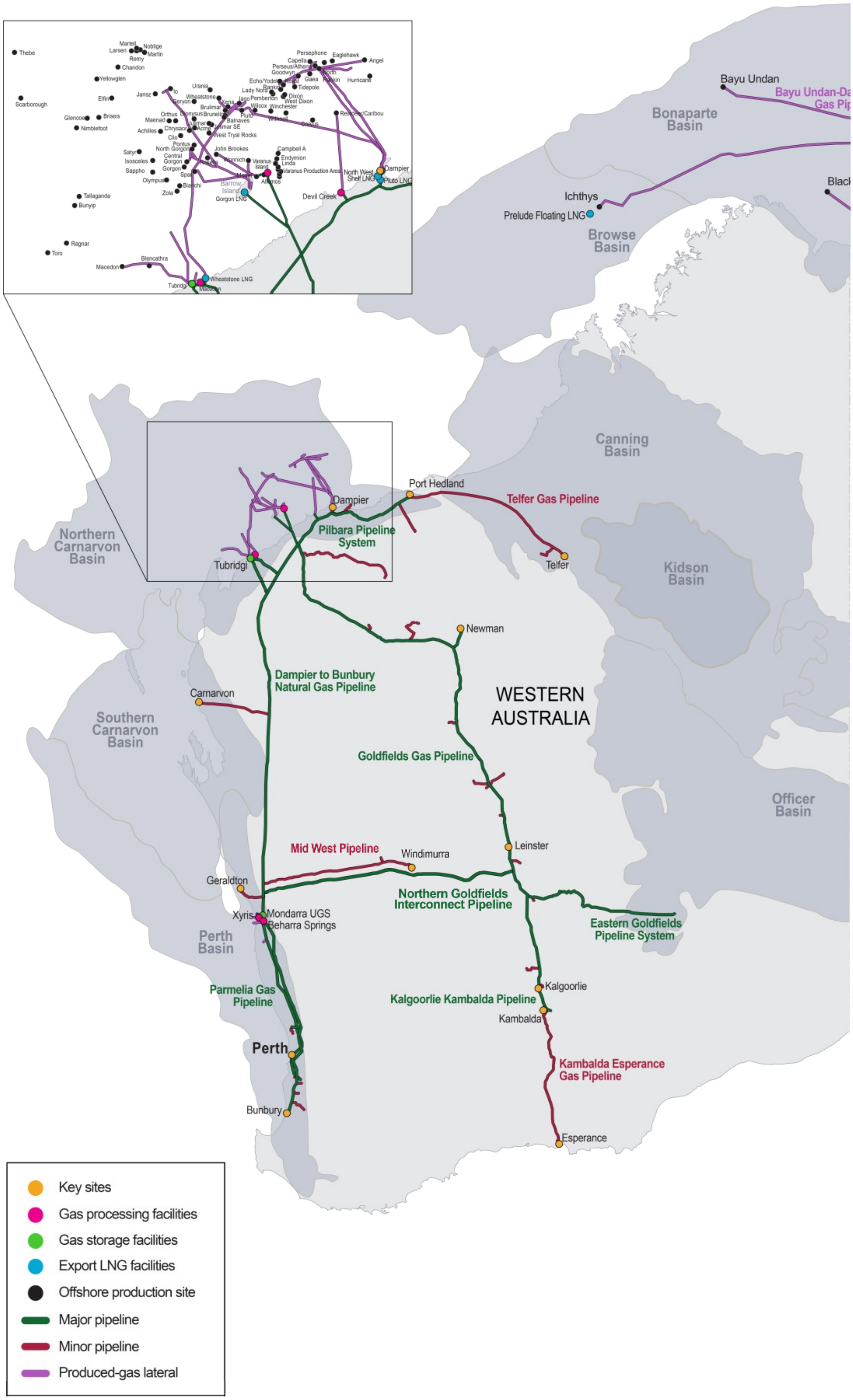
1.4 Other supplementary information

Figure 6 provides a map of basins, pipelines, and load centres in Western Australia.

[25] See https://www.aemo.com.au/consultations/current-and-closed-consultations/2025-iasr.

[26] See https://www.aemo.com.au/-/media/files/major-publications/isp/2025/draft-2025-iasr-scenarios-overview.pdf?la=en.

Figure 6 Map of basins, major pipelines, and load centres in Western Australia



Notes for 2025 WA GSOO

- All data in this report is presented in calendar years (1 January to 31 December) unless otherwise stated.
- All references to $ in this report refer to Australian dollars.
- The compound annual growth rate was used to calculate the average annual growth rate. AEMO used the first outlook year (year 1) minus one year (year 0) as the base year for the calculation of average annual growth rates. For the first 5-year, 10-year and 20-year average annual growth rates AEMO used 2025 as year 0.

2 Gas consumption and demand

This section outlines forecasts of annual domestic gas consumption and maximum daily gas demand for Western Australia's domestic gas market. Forecasts for the state's total gas consumption are also included, by adding LNG export feedstock, and gas used in LNG processing on top of the forecast domestic gas consumption. Forecasts are presented for the *Step Change* scenario unless otherwise specified. Detailed results are in the 2025 WA GSOO data register and the WA GSOO gas consumption and demand forecasting portal on AEMO's website.

Key insights

- Under the *Step Change* scenario, Western Australian domestic gas consumption is forecast to increase from its annual average of 1,048 TJ/day in 2025 to its highest annual average at 1,295 TJ/day in 2030, with an average annual growth rate (AAGR)[27] of 4.3% over this period. After 2030, the AAGR is expected to decline at -1.4% per year, reaching gas consumption close to 2025 levels in 2045.
- Forecast growth in consumption to 2030 is primarily driven by new gas consuming projects (such as Perdaman's Karratha Urea Project), fuel-switching from coal to gas in the alumina refining industry, and expansions in mining, minerals processing and industrial operations. In the SWIS, GPG gas consumption is projected to increase over this period to help replace retiring coal-fired generation and support system reliability.
- The forecast growth is offset over the longer-term by projected impacts from electrification and continued growth in renewable generation and battery storage. The projected retirement and unavailability of coal-fired generation is forecast to increase reliance on GPG to 2030, with GPG remaining critical thereafter to help maintain power system reliability during periods of high volatility or low levels of renewable output.
- The 2025 WA GSOO introduces analysis of maximum daily gas demand exclusively for non-GPG gas consumption, applying weather impacts to regional forecasts. Maximum daily demand is forecast to peak in winter, with space and water heating loads contributing to higher winter demand in the East and Metro/South-West regions. The greatest level and volatility of daily SWIS GPG gas demand are also observed during the winter season.

2.1 Background

Domestic gas consumption in Western Australia is dominated by large gas users that underpin the minerals processing, mining and industrial sectors. Production from these facilities located in the north, east and south-west of the state is influenced by international economic conditions and commodity prices for raw and processed materials. Site-specific factors including operating costs and resource availability also influence gas consumption patterns.

Many large gas users are actively pursuing a range of decarbonisation pathways. These pathways may individually translate to both higher gas use (switching from coal to gas, adopting trucked LNG[28] to replace diesel) and lower gas consumption (industrial electrification, improved energy efficiency, adoption of renewables at remote sites). The

[27] For the AAGR calculations, 2025 is considered as the base year (year 0) and 2030 as year 5 for the calculation of the first five-year AAGR. 2030 is used as the base year (year 0) to calculate AAGR between 2030 to 2045.

[28] Trucked LNG refers to the LNG transported by road tankers, which is used as a fuel for heavy-duty vehicles or to power remote energy generation facilities.

adoption of VRE technologies (solar, wind) and battery energy storage systems at remote sites has reduced the consumption of gas for GPG. The application of carbon sequestration utilising underground reservoirs is also being evaluated, with one large gas customer publicly noting that studies are well advanced[29].

AEMO presents Western Australian domestic and total gas consumption forecasts, defined as:

- **Domestic gas consumption** – includes large gas users engaged in mining, minerals processing, and industrial sectors, GPG consumption in the SWIS and non-SWIS areas, residential and small commercial gas users connected to Western Australia's gas distribution networks.
- **Total gas consumption** – includes domestic gas consumption plus an estimate of the total quantity of gas required for the LNG industry, reflecting an overall assessment of Western Australian gas consumption.

2.2 Developments in key consumption projects since 2024 WA GSOO

This section includes key Western Australian domestic gas-consuming projects that have been updated since the publication of 2024 WA GSOO, reflecting recent changes in consumption that has been incorporated in the 2025 WA GSOO domestic gas consumption forecast analysis. AEMO considers information received through the 2025 WA GSOO FIR process along with publicly available information for developing the 2025 WA GSOO modelling assumptions across all three scenarios. This section presents only publicly available information on key projects. Further detail on modelling assumptions is in Appendix A4.2 and project classification by sectors is in Appendix A6.

Numerous developments have occurred over the past 12 months in relation to key mining, industrial and minerals processing projects (including battery materials) that impact 2025 WA GSOO forecasts for domestic gas consumption across the *Slower Growth, Step Change* and *Accelerated Transition* scenarios. These developments include (but are not limited to) announcements:

- In January 2025, IGO and Tianqi Lithium Corporation elected to cease all work on expansion plans[30] to the Kwinana lithium hydroxide refinery.
- In January 2025, BHP received environmental approval to expand the Yarnima gas-fired power station in the Pilbara that supplies electricity to the company's mining hubs in that region, lifting generation capacity from 154 megawatts (MW) to 239 MW with additional gas reciprocating engines and associated infrastructure[31]. In August 2025, BHP reported a production increase for the past financial year, achieving record production in iron ore and copper[32].
- In February 2025, Wesfarmers reported that Australian Gold Reagents had made an FID to proceed with the expansion of its sodium cyanide production facility in Kwinana to support growing global demand for gold mining[33].
- South32 Worsley Alumina commenced mining of new bauxite areas under the Worsley Mine Development Project after receiving primary state and federal environmental approvals in December 2024 and February 2025

[29] See https://www.woodside.com/docs/default-source/media-releases/angel-ccs-jv-and-yara-collaborate-on-carbon-capture-and-storage.pdf?sfvrsn=6465c43b_17.

[30] See https://announcements.asx.com.au/asxpdf/20250430/pdf/06j65xdnv7h1ss.pdf.

[31] See https://www.epa.wa.gov.au/proposals/yarnima-power-station-stage-4-gas-reciprocating-engines and https://www.epa.wa.gov.au/sites/default/files/EPA_Report/EPA%20Report%201776%20Yarnima%20Power%20Station%20Stage%204.pdf.

[32] See https://announcements.asx.com.au/asxpdf/20250819/pdf/06n0rnq0dcy7ct.pdf.

[33] See https://wescef.com.au/2025/02/04/australian-gold-reagents-to-expand-sodium-cyanide-plant/#:~:text=04%20February%202025,safety%20benefits%20for%20our%20team.

respectively[34]. In May 2025, the company secured funding from the Australian Renewable Energy Agency (ARENA) to conduct studies to support the electrification of refining processes at Worsley Alumina with evaluation of options towards that pathway[35].

- In June 2025, Fortescue reported on a slower staged ramp up of the Iron Bridge magnetite project that is expected to achieve nameplate capacity in the 2028 financial year[36]. As magnetite processing is energy intensive, this delay saw a reduction in forecast gas consumption volumes over this period.
- In July 2025, Covalent Lithium commenced production of battery-grade lithium hydroxide at a newly constructed refinery in Kwinana, with ramp up to nameplate capacity expected in the first half of 2027[37].
- In September 2025, Alcoa announced that it would permanently close its Kwinana refinery after a previously announced suspension of production at the site in early 2024[38]. The company moved to secure an option for longer-term future gas requirements for alumina processing operations from the offshore Equus resource[39].
- In September 2025, Northern Star's Kalgoorlie Consolidated Gold Mines (KCGM) mill was reported to be completing a substantial expansion of milling capacity in Kalgoorlie, doubling per annum production by financial year 2029. A ramp up is expected over 2027 and 2028[40].
- In December 2025, progress continues at Perdaman's Karratha Urea Project, with the company reporting 64% progress at the end of November 2025 with 81% completion of yard fabrication and 35% completion of site construction[41].

2.3 Western Australia domestic gas consumption forecasts[42]

AEMO developed Western Australia domestic gas consumption forecasts for the 2025 WA GSOO outlook period for the *Slower Growth*, *Step Change* and *Accelerated Transition* scenarios[43] as detailed in Section 1.3. While gas consumption forecasts for all three scenarios include existing and committed projects, the *Accelerated Transition* scenario also includes anticipated projects that may impact consumption of gas over the outlook period.

[34] See https://announcements.asx.com.au/asxpdf/20250213/pdf/06fgl5jcvp5t5p.pdf.

[35] See https://announcements.asx.com.au/asxpdf/20250828/pdf/06ngnll2sx5wh7.pdf

[36] See https://announcements.asx.com.au/asxpdf/20250724/pdf/06m2rwk1d2zgzf.pdf.

[37] See https://www.covalentlithium.com/news/covalent-lithium-achieves-first-product-at-kwinana-lithium-hydroxide-refinery.

[38] See https://news.alcoa.com/press-releases/press-release-details/2025/Alcoa-Announces-Closure-of-Kwinana-Refinery-Also-Updates-Third-Quarter-2025-Outlook/default.aspx.

[39] See https://equusenergy.com.au/wp-content/uploads/2025/10/MEDIA-RELEASE-WGC-Alcoa-Fund-GSA-R0-250908-.pdf.

[40] See https://announcements.asx.com.au/asxpdf/20250915/pdf/06p7b7fvr21868.pdf.

[41] See https://perdamanchemicalsandfertilisers.com/project/ceres/.

[42] This section covers the gas consumption forecast results, in which the data presented for 2025 is estimated based on actual data up to 30 September 2025. For information on the gas consumption forecast methodology, refer to Appendix A4.

[43] The scenarios have been renamed; see the 2025 IASR, at https://www.aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2024/2025-iasr-scenarios/final-docs/2025-inputs-assumptions-and-scenarios-report.pdf.

2.3.1 Committed projects

Committed projects, which were included in forecasts for all three AEMO scenarios, are those that have either achieved FID or are in advanced stages progressing towards FID with demonstrated commitments towards a development pathway.

These projects included approved upcoming projects that will use natural gas as an input feedstock, for power generation, or renewable energy projects which will offset existing gas consumption. Substantial expansions of existing operations were also included.

Gas consumption for each project has been estimated using publicly available information sources including market releases and trade publications, augmented with direct engagement with the project developer. The timing of development and associated gas volumes may differ across AEMO scenarios.

Four[44] committed projects were included in this WA GSOO gas consumption forecasts. These projects are:

- Iluka Resources Rare Earth Refinery at Eneabba, expected to be operational in 2028 in all three scenarios,
- Capricorn Metal's Mt Gibson Gold project, expected to be operational in 2027 in all three scenarios,
- Northern Star Resources' Hemi gold, expected to be operational in 2028 in all three scenarios, and
- Perdaman's Karratha Urea Project, expected to be fully operational by 2029 under the *Slower Growth* scenario, and by 2028 in both *Step Change* and *Accelerated Transition* scenarios.

2.3.2 Anticipated developments

In the 2025 WA GSOO forecasts, AEMO considered projects which satisfy at least two of the three following criteria as anticipated projects:

- located within a reasonable distance from an existing gas transmission pipeline with spare capacity,
- state and federal environmental permitting documentation has been submitted, indicative that the project will be delivered within the timeframe applied in this forecast, and
- the project proponent has a commercial arrangement with a gas pipeline or gas storage company to expand and/or connect physical infrastructure to withdraw gas or receive LNG.

These anticipated projects – which were included only in *Accelerated Transition* scenario, with timing varying according to progress of projects – are included but not limited to:

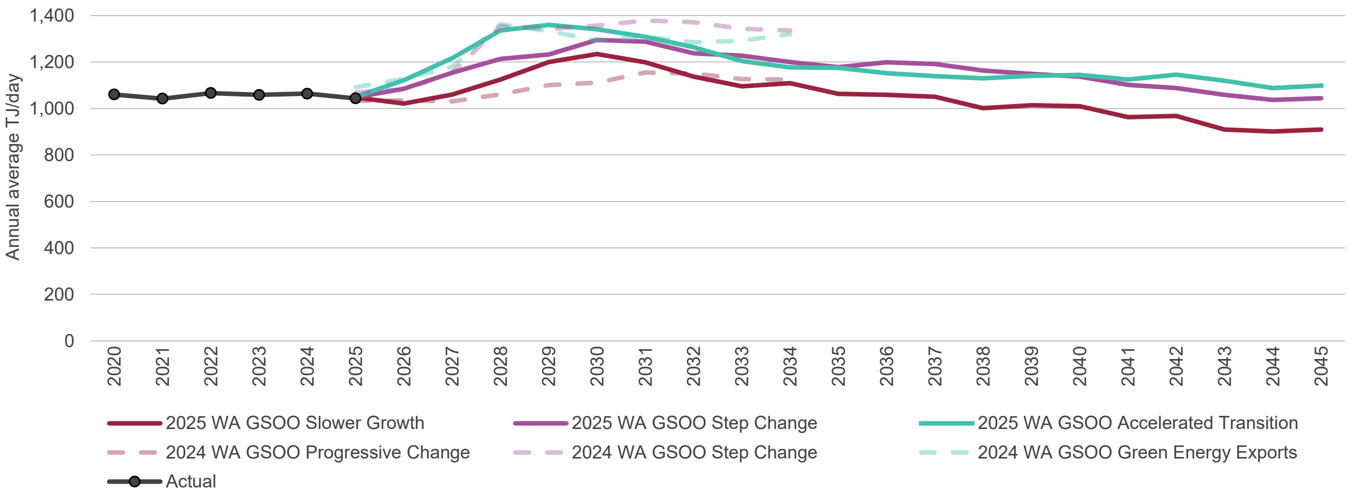
- base metal projects, including redevelopments of historical sites with gas connections and new projects. Base metals include copper, zinc and nickel prospects,
- development of light metals including high purity metals (aluminium, magnesium) and selected biproducts (including gallium), and
- new technology test sites (steel-making pilot plants and other facilities).

[44] The 2024 WA GSOO included nine committed projects. Projects that became operational since the 2024 WA GSOO and expansions of existing projects have been classified according to their categories in this GSOO.

2.3.3 Domestic gas consumption forecasts by scenario

Figure 7 presents the annual domestic gas consumption forecasts under the three scenarios from the 2024 and 2025 WA GSOOs, with actuals from 2020 to 2025.

Figure 7 Actual and forecast domestic gas consumption, all sectors, 2024 and 2025 WA GSOOs, all scenarios, 2020 to 2045 (annual average TJ/day)



Note: Actual consumption for 2025 is based on WA GBB data until 30 September 2025.

Table 4 below summarises the key findings on gas consumption in each of the modelled scenarios. Existing and new gas consumption projects were considered as shown in **Table 3** (in Section 1). The average annual growth rates (AAGRs) presented in this table include the impacts of electrification unless otherwise stated.

Table 4 Domestic gas consumption forecasts and assumptions, by scenario

	Slower Growth	*Step Change*	*Accelerated Transition*
5-year AAGR	3.3%	4.3%	5.0%
10-year AAGR	0.1%	1.2%	1.1%
20-year AAGR	-0.7%	0.0%	0.2%
Forecast	• Consumption increases until 2030, due to the commencement of new committed projects and ramp-up of existing operations. • The highest annual average consumption is 1,234 TJ/day in 2030 lower than other scenarios due to slow fuel-switching to gas and ramp-up in operations of new projects and slow expansion of existing projects. • Consumption eases off after 2030 due to decarbonisation resulting in reduced GPG consumption and electrification of industrial commercial, and residential consumers.	• Consumption increases until 2030, due to the commencement of new committed projects and ramp-up of existing operations. • The highest annual average consumption is 1,295 TJ/day in 2030 due to ramp-up in operations of new projects, moderate fuel-switching to gas and moderate expansion of existing projects. • Consumption eases off after 2030 due to decarbonisation resulting in reduced GPG consumption, and electrification of industrial commercial, and residential consumers.	• Consumption increases until 2030, due to the commencement of new committed projects and ramp-up of existing operations. • The highest annual average consumption is 1,359 TJ/day in 2029 due to restart of curtailed operations, commencement of new projects, accelerated fuel-switching to gas and fast expansion of existing projects. • Consumption eases off after 2029 due to growth in large gas users is offset by decarbonisation resulting in reduced GPG consumption, and electrification of industrial commercial, and residential consumers.

	Slower Growth	*Step Change*	*Accelerated Transition*
Assumptions	• Perdaman's Karratha Urea Project commences in 2027 and reaches full gas consumption by 2029. • Curtailed and suspended alumina and nickel operations do not restart. • Existing VRE and battery storage only[A]. • Generic VRE and storage capacity forecast to enter the system from October 2028 onwards[A].	• Perdaman's Karratha Urea Project commences in end of 2026 and reaches full gas consumption by 2028. • Reconfigured and curtailed nickel operations restart in 2032 and 2033. • Existing and committed VRE and battery storage. • Generic VRE and storage capacity forecast to enter the system from October 2028 onwards.	• Perdaman's Karratha Urea Project commences in end of 2026 and reaches full gas consumption by 2028. • Reconfigured and curtailed nickel operations restart in 2028. • Kwinana renewable fuel project starts from 2032[B]. • Existing, committed and anticipated[C] VRE and battery storage. • Generic VRE and storage capacity forecast to enter the system from October 2028 onwards. • Include new anticipated consumption-reduction projects[D].

Note: For the AAGR calculations, 2025 is the base year (year 0), 2030 is year 5 for the calculation of first five-year AAGR, 2035 is year 10 for the calculation of first 10-year AAGR, and 2045 is year 20 for the 20-year AAGR.
A. Refer to Appendix A4 for further detail on SWIS GPG modelling methodology and assumptions.
B. Project progressed as per EPA approvals; see https://www.epa.wa.gov.au/proposals/bp-kwinana-renewable-fuels-project.
C. Anticipated projects considered here is on par with new projects assessment for probable projects reported in the 2025 WEM ESOO.
D. Consumption reduction projects reduce the reliance on natural gas by implementing decarbonisation initiatives. All new consumption reduction projects are yet to be committed. These projects were only considered in the *Accelerated Transition* scenario and were omitted from the *Slower Growth* and *Step Change* scenario forecasts.

The 2025 WA GSOO forecasts a 20-year outlook period, compared to a 10-year outlook period in previous WA GSOOs, in line with the DomGas Inquiry recommendations. The 10-year AAGRs are similar to the 2024 WA GSOO for all three scenarios.

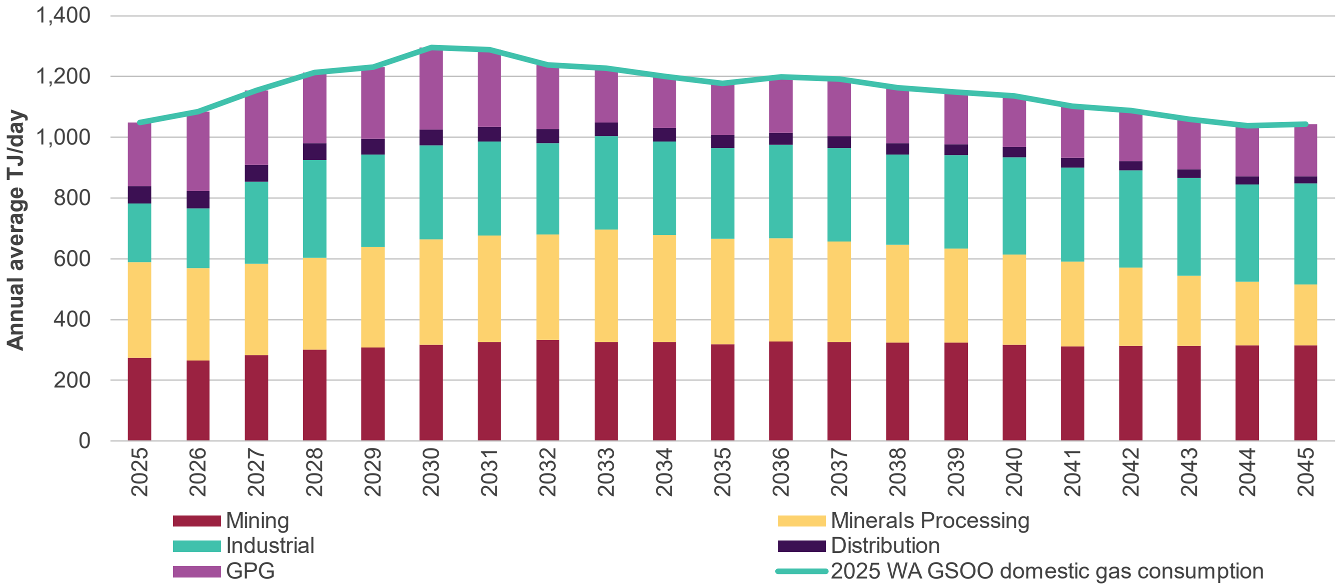
As shown in **Figure 7** above, in comparison with the 2024 WA GSOO forecasts:

- The *Slower Growth* scenario consumption forecast is higher in the 2025 WA GSOO, due to inclusion of projects that became operational along with updates to existing large industrials operating expectations, informed by FIR. Higher consumption is forecast for the remaining operating alumina refineries in response to access to higher quality ore and market opportunities following the closure of Kwinana. The forecasts are also higher due to the resolution of a significant permitting issue at a key mine and projected additional consumption from newly commissioned operations. Positive sentiment in the gold sector maintained the trend of incremental uplifts across a range of projects.
- The *Step Change* scenario forecasts lower consumption in the 2025 WA GSOO beyond 2027, with a noticeable impact of the permanent closure of the Kwinana alumina refinery and lower gas consumption across the mining, minerals processing, GPG sectors as well as major industrial users. The adoption of renewables and industrial electrification also drives lower forecast gas consumption volumes specifically after 2030.
- The *Accelerated Transition* scenario also forecasts lower gas consumption in this year's WA GSOO from 2028. Despite the impact of the permanent closure of the Kwinana alumina refinery, gas consumption is projected to reach similar levels to the 2024 WA GSOO by 2030, with growth in consumption from mineral processing, mining and industrial sectors. The adoption of renewables and industrial electrification drives lower forecast gas consumption volumes specifically after 2030.

2.3.4 Domestic gas consumption forecasts by usage category

Domestic gas consumption is divided into five usage categories[45]. **Figure 8** shows domestic gas consumption broken down by these categories for the *Step Change* scenario, accounting for the impacts of electrification in each sector while **Table 5** presents the AAGRs for each of these sectors.

Figure 8 Domestic gas consumption forecasts by usage category, *Step Change* scenario, 2025 to 2045 (annual average TJ/day)



Note: Figures for each usage category include consumption reduction due to electrification. Gas consumption for 2025 is estimated based on WA GBB data until 30 September 2025. The actual data has been adjusted to reflect better alignment with the gas consumption forecast categories (see Appendix A1 for the adjustments applied).

Drivers of trends in the *Step Change* scenario in the different sectors are summarised below:

- **Minerals processing –** gas consumption is forecast to increase up to 2033 after a slight decline in 2026 compared to 2025 levels. The permanent closure of the Kwinana Alumina Refinery and continued suspension of operations at the Kwinana Nickel Refinery translate to lower gas consumption in the early years of the forecast. Consumption is forecast to lift between 2029 and 2033 due to a potential restart of the nickel refinery and associated mines, combined with growth in gas use in alumina production primarily as a result of fuel-switching (coal to gas) and some recovery in operational performance following recent access to areas of higher quality bauxite ore. Operational restarts depend on market conditions for key commodities and the relative cost structures of individual operations. Consumption is then expected to taper as the electrification of key industrial processes translates to lower gas use.
- **Mining** – in aggregate, mining consumption is forecast to grow slightly before moving to a relatively stable profile over the outlook period. A modest decline at the start of the forecast reflects projected weaker iron ore production outcomes. The profile then builds modestly with contributions from the gold sector, including the delivery of significant new expansions and mines, while other new gas consumption is derived from new rare earth element processing facilities. The diversified nature of the Western Australian mining industry stabilises the consumption profile, as softness in some commodity groups may be compensated by more attractive conditions in other markets.

[45] The categorisation of Western Australian gas users in the 2025 WA GSOO modelling is detailed in Appendix A4.2.

- **Industrial** – gas consumption in this sector[46] is forecast to increase sharply as Perdaman's Karratha Urea Project is brought online. The project is one of the most significant gas-consuming developments of recent decades and, with existing fertiliser and ammonia facilities, underpins a relatively stable consumption profile.
- **GPG** – gas-powered generation of electricity for both SWIS and non-SWIS networks is forecast to decline across the outlook period after initial growth arising from the need for firming energy to replace sequentially retired coal generation facilities. As wind, solar and battery storage capacity grows, the requirements for GPG are forecast to decline, particularly in the later years of the outlook period. For more information on SWIS GPG forecasts, refer to Section 2.5.
- **Distribution** – consumption is forecast to decline sharply in the later years of the forecast, due to electrification across the residential, small commercial and industrial sectors. Some industrial loads that were previously classified under Distribution have been reallocated in the 2025 WA GSOO to their industry sectors (primarily industrial and minerals processing). This enables AEMO to leverage self-reported site level forecasts from FIR responses to improve forecasting accuracy and understand consumption trends. The reclassification aids analysis of relevant sectors.

Table 5 presents the AAGRs for each of the above sectors and is based on results including reduction due to electrification unless otherwise stated above.

Table 5 Forecast AAGRs for each of the domestic gas-consuming sectors, *Step Change* scenario

	Minerals processing	Mining	Industrial	GPG	Distribution
5-year AAGR	1.9%	3.1%	9.9%	5.2%	-2.0%
10-year AAGR	0.9%	1.6%	4.4%	-2.0%	-2.7%
20-year AAGR	-2.3%	0.7%	2.8%	-1.0%	-4.1%

2.3.5 Domestic gas consumption forecasts by region

Western Australian domestic gas consumption forecasts are split into three regions – North, East, and Metro/South West.

Figure 9 presents the domestic gas consumption forecasts by region for the *Step Change* scenario, and **Table 6** summarises the regional growth rates and observations.

[46] Comprises all large business users that are not covered under minerals processing, GPG, or mining sectors.

Figure 9 Domestic gas consumption forecasts by region, *Step Change* scenario, 2025 to 2045 (annual average TJ/day)

Note: Gas consumption for 2025 is estimated based on WA GBB data until 30 September 2025.

Table 6 Western Australia domestic gas consumption growth rates and observations by region

Region	AAGR		Observations
	First five years	6.9%	Growth is largely due to Perdaman's Karratha Urea Project.
	First 10 years	3.2%	
	20 years	2.0%	
	First five years	2.3%	Growth in gas consumption is driven by gold mining projects, offset to some extent by development of on-site renewables. Slight decrease in consumption in the later years of the outlook period due to the suspension of nickel mines offsetting the impact of the gold and other mining projects. Overall, consumption in this region expected to be largely flat, with a modest increase over the outlook period.
	First 10 years	0.9%	
	20 years	-0.1%	
	First five years	3.1%	General growth during the first years in the forecast period due to minerals and industrial sectors ramping up, coupled with an increase in GPG consumption as coal retirements take effect. Decline in the later years of the outlook period due to projects meeting decarbonisation target primarily through electrification and surge of renewables in the SWIS to meet emissions trajectory.
	First 10 years	-0.1%	
	20 years	-1.5%	

Source: AEMO, WA GBB.

2.3.6 Pathways to decarbonisation

Western Australian gas consumers are pursuing multiple pathways to reduce their emissions intensity. These pathways include activities which may lower gas consumption, such as investments in electrification, energy efficiency, and the adoption of renewables to replace gas generated power at remote sites. Advanced studies are also underway[47] to investigate large-scale carbon sequestration using available underground reservoirs[48].

Electrification is forecast to represent the largest decarbonisation-related activity of gas consumers, led by the efforts of large industrial users to transform operational processes and products. For some industrial consumers, the pathway to electrification may involve a transition from coal to natural gas before significant electrification.

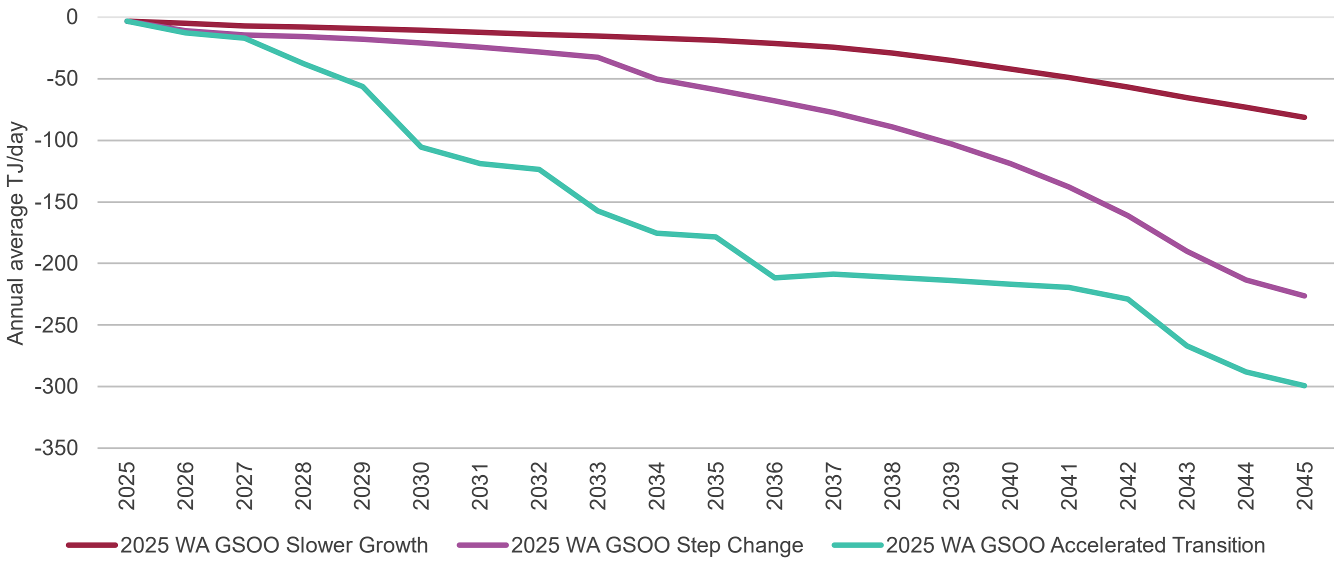
Electrification of residential gas consumers is also forecast, but is less significant to the domestic gas market in relative terms. Collectively, electrification is forecast to reduce gas consumption by 213 TJ/day in 2045 in the *Step Change* scenario.

Renewable generators connected behind the network connection point, particularly at remotely located sites, are expected to increase in number. Collectively, remote site renewables are expected to translate to a reduction in gas use of 13 TJ/day in 2045 in the *Step Change* scenario. In the *Accelerated Transition* scenario, this reduction grows to 69 TJ/day at the end of the forecast period.

Energy efficiency is more difficult to forecast, owing to the nature of site-specific contributing factors which include operating practices (including standby units and maintenance schedules) and other gains that may arise from mechanical upgrades. Collectively, energy efficiency is forecast to reduce gas consumption by less than 0.5 TJ/day in 2045 under the *Step Change* scenario.

The impact of decarbonisation pathways on forecast gas consumption under the *Slower Growth*, *Step Change* and *Accelerated Transition* scenarios is shown below in **Figure 10**.

Figure 10 Combined impact of electrification, energy efficiency and remote-site renewables, all scenarios, 2025 to 2045 (annual average TJ/day)



[47] See https://www.woodside.com/docs/default-source/media-releases/angel-ccs-jv-and-yara-collaborate-on-carbon-capture-and-storage.pdf?sfvrsn=6465c43b_17.

[48] Note that carbon sequestration will not reduce natural gas consumption but has the potential of storing carbon dioxide emitted from gas consumption.

Table 7 shows the forecast impact of each decarbonisation pathway under the *Step Change* scenario. Electrification of large commercial loads depends on the technical development and commercialisation of multiple industrial processes across many sites. Lower-temperature applications are suited to electrification owing to the relative availability of technologies to replace gas heating systems. For higher-temperature applications, the immediate opportunities for electrification are less clear. In these cases, many of which are very specific industrial processes, research and development is ongoing. Electrification can also be limited by the costs of implementation, including the investment and the cost of operational interruption during a process conversion.

Table 7 Reduced natural gas consumption from decarbonisation pathways, *Step Change* scenario, 2030 to 2045 (annual average TJ/day)

	2030	2035	2040	2045
Electrification	8	46	105	213
Energy efficiency	0.2	0.3	0.3	0.1
Renewables installed at remote industrial and mining sites	13	13	13	13
Total	21	59	119	226

Note: All figures have been rounded to the nearest TJ/day. Consequently, totals may have a 1 TJ/day difference due to rounding.

2.4 Maximum daily gas demand forecasts (excluding grid-connected GPG)

This 2025 WA GSOO includes analysis of maximum daily gas demand for the first time. This GSOO presents North, East, and Metro/South-West regional forecasts of maximum daily gas demand for all sectors excluding grid-connected GPG, in the *Step Change* scenario, across the summer (December to March) and winter (June to August) seasons[49]. These forecasts include unaccounted for gas (UAFG)[50] that is lost while being transported through the gas network.

Maximum daily demand is forecast with a probability of exceedance (POE), meaning the statistical likelihood of the forecast being met or exceeded. A 5% POE forecast is expected to be exceeded, on average, only once in 20 years, while a 50% POE forecast is expected, on average, to be exceeded every second year.

The maximum daily gas demand forecasts include demand from small-use residential and commercial customers connected to Western Australia's gas distribution networks and large gas users in mining, minerals processing and industrial sectors. The following section discusses the seasonality of peak demand, with maximum demand from residential, small commercial and large gas customers, with grid-connected GPG covered in Section 2.5.

2.4.1 Forecasts and trends in maximum daily gas demand, excluding grid-connected GPG

Table 8 and **Table 9** show recent actual observed maximum daily demand for each Western Australian region, as well as the seasonal forecasts of maximum daily gas demand for all sectors excluding grid-connected GPG in the *Step Change* scenario, across the summer and winter seasons. These forecasts include UAFG that is lost while being transported through the Western Australia gas network.

[49] Regional forecasts for all scenarios are on AEMO's Gas Forecasting portal.

[50] UAFG is the difference between metered injected gas supply and metered and allocated gas at delivery points, comprising gas losses, metering errors, timing, heating value error, allocation error, and other factors.

The maximum daily demand for each season and for each region presented here is the daily gas demand quantity on the peak day for the coincident total consumption across the North, East, and Metro/South-West regions. Daily demand for each individual region may be higher at other times when demand for only one individual region is considered.

Both 2025 and 2024 winters were mild in Western Australia, with mean temperatures above average and many sites across the regions in the state having their highest winter temperature on record[51]. A noticeable increase in gas usage compared to 2023 was observed for winter 2024, while winter maximum demand in 2025 was similar to 2023 levels. The 2024-25 summer experienced low to severe intensity heatwaves with mean temperatures in parts of the State exceeding temperature records, overriding previous records in the 2023-24 summer[52].

Table 8 Total 50% POE and 5% POE forecast maximum daily demand by region, winter, *Step Change* scenario, all sectors excluding grid-connected GPG, including UAFG, 2025 to 2045 (TJ/day)

Region	2023	2024	POE	2025	2026	2030	2035	2040	2045
East	111	108	50%	95	101	111	111	106	108
			5%	102	109	119	120	114	116
Metro/ South-West	447	483	50%	520	512	569	563	504	388
			5%	526	518	575	568	507	389
North	289	284	50%	308	293	455	447	475	487
			5%	313	298	463	456	485	498
Total	846	875	50%	922	906	1,135	1,121	1,085	983
			5%	941	925	1,158	1,144	1,106	1,002

Table 9 Total 50% POE and 5% POE forecast maximum daily demand by region, summer, *Step Change* scenario, all sectors excluding grid-connected GPG, including UAFG, 2025 to 2045 (TJ/day)

Region	2023	2024	POE	2025	2026	2030	2035	2040	2045
East	107	107	50%	91	96	103	100	93	91
			5%	96	102	109	106	98	96
Metro/ South-West	419	425	50%	469	461	507	501	444	338
			5%	481	474	522	515	457	348
North	289	310	50%	320	306	471	465	493	503
			5%	323	309	476	471	499	510
Total	815	841	50%	880	864	1,081	1,066	1,030	932
			5%	901	885	1,107	1,092	1,054	954

Overall, maximum daily gas demand for Western Australia (excluding grid-connected GPG) is projected to grow during the first few years of the outlook period, reaching its maximum of 1,189 TJ/day in winter 2033 for 5% POE, then forecast to fall to 1,144 TJ/day in winter 2035 and from 1,154 TJ/day in winter 2036 to 1,002 TJ/day in winter 2045, close to its 2025 winter levels. Although the trend and volume of gas demand is similar in both winter and summer, the maximum daily demand for Western Australia is projected to continue to peak during winter.

[51] See https://www.bom.gov.au/climate/current/season/wa/archive/202408.summary.shtml and https://www.bom.gov.au/climate/current/season/wa/archive/202508.summary.shtml.

[52] See https://www.bom.gov.au/climate/current/season/wa/archive/202402.summary.shtml.

The trend in projected daily demand is driven by expansions in operations for the large gas users in industrial, mining and mineral processing sectors, along with heating loads of residential, commercial and industrial customers stemming from the impacts of seasonality and operational conditions. Below are the key drivers in the *Step Change* scenario:

- **Impact of season in regional forecasts** – maximum daily gas demand is higher during winter than summer in the East and Metro/South-West regions, on average by 63 TJ/day per annum for 5% POE, due to increases in space and water heating loads and more reliance on gas, with reduced energy supply from on-site renewable sources. The maximum daily gas demand is higher during summer in the North region, on average 14 TJ/day per annum for 5% POE, primarily due to increase in loads for large gas users during summer to support their operation cycle and increased gas usage due to thermal efficiency loss of gas turbines.
- **Impact of operations in mining, mineral processing, and industrial customers** – maximum daily gas demand is projected to decrease in 2026 compared to 2025, primarily due to curtailment in operations for nickel and gold mines and curtailment of Kwinana Alumina Refinery operations. Thereafter, maximum daily gas demand is forecast to increase between 2026 and 2031 driven by start and ramp-up of new projects, fuel-switching in the minerals sector, and expansion of operations for industrial, minerals and mining customers. Despite the forecast growth in these large user loads, maximum daily gas demand is then forecast to decline to the end of the outlook period. This trajectory is consistent with the declining trends affecting residential, commercial and industrial annual consumption.

2.5 Gas consumption for electricity generation (SWIS GPG)

This section provides an overview of forecast gas consumption by the SWIS GPG fleet[53] in the *Slower Growth*, *Step Change* and *Accelerated Transition* scenarios. In all modelled scenarios, the evolution of the SWIS generation mix is driven by a combination of SWIS electricity demand (MW) and consumption (TWh) growth, emissions reduction efforts[54], the expected retirements and unavailability of the SWIS coal-fired generation fleet[55], the need to meet WEM reliability requirements, and economic considerations.

As **Figure 11** shows, the SWIS annual sent-out generation mix is forecast to be increasingly based on output from wind and solar, with a declining proportion of coal and GPG[56].

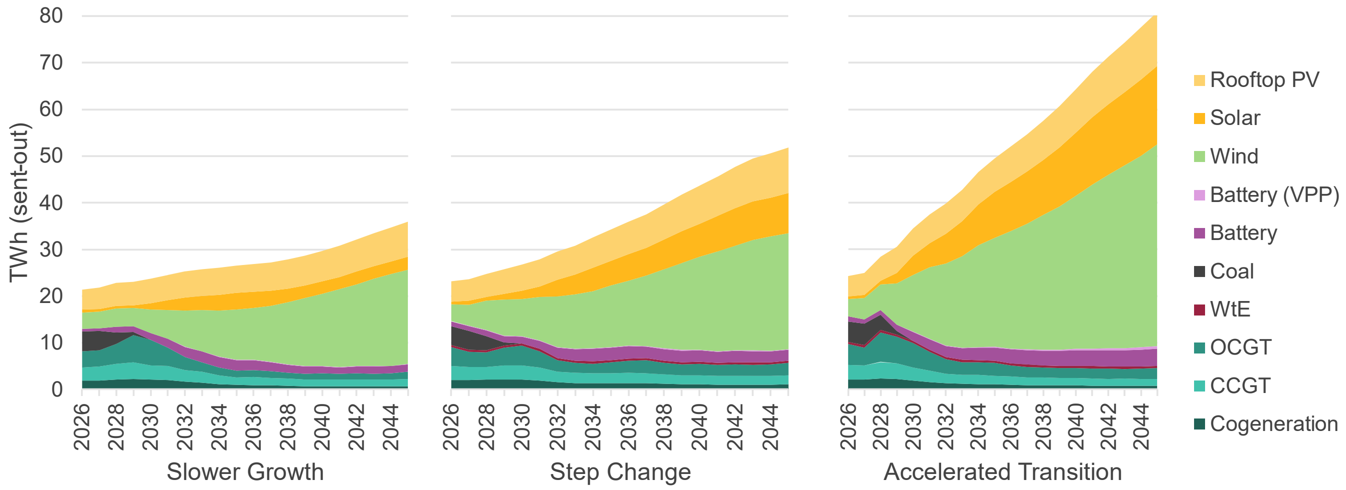
[53] Excludes consumption by Arrowsmith (not connected to the DBNGP), and Tiwest (included in Minerals Processing).

[54] SWIS modelling was guided by emission reduction trajectories sourced from CSIRO's Multi-sectoral modelling; see www.aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2024/2025-iasr-scenarios/csiro-2024-multi-sectoral-modelling-report.pdf.

[55] Collie (317 MW) is forecast to retire on 1 October 2027 and Muja D units (422 MW) are forecast to retire on 1 October 2029. Bluewaters units (434 MW) are assumed to be unavailable from October 2028. See www.wa.gov.au/government/media-statements/McGowan-Labor-Government/State-owned-coal-power-stations-to-be-retired-by-2030-20220614.

[56] The percentage contribution of GPG to total power generation mix for the SWIS is forecast to decline from 31% in 2026 to 24% in 2028, then increase to 26% in 2029 and 27% in 2030 when coal capacity retires, after which it enters a continued decline (13% in 2035, 10% in 2040 and 9% in 2045).

Figure 11 SWIS annual generation mix, all scenarios, 2026 to 2045 (TWh)



Source: EY
Note: sent-out means generation measured at each production unit's connection point, and represents units' net electrical power output (excluding auxiliary load, or the power generators use in their own operations).
VPP: virtual power plant, that is aggregated behind-the-meter batteries.
WtE: Waste to energy.
OCGT: Open Cycle Gas Turbines/Diesel.
CCGT: Combined Cycle Gas Turbines.

Despite the forecast long-term decrease in annual sent-out generation share, GPG capacity will continue to play a critical role in maintaining the reliability and security of supply in the SWIS by:

- replacing generation from retiring or unavailable coal capacity through to 2030 (alongside new wind, solar and storage capacity),
- along with storage capacity, helping to meet increased time-of-day volatility of electricity demand (resulting from increased contribution from weather-dependent, intermittent renewables),
- meeting electricity demand during dark and still conditions (multiple contiguous hours or days of low generation from wind and solar), in particular when energy storage has been depleted and is unable to recharge, and
- providing synchronous services such as inertia, voltage support and maintaining system strength[57] as the coal fleet retires in the SWIS.

Under the GPG modelling for the *Step Change* scenario, 1.6 GW of total new GPG capacity is forecast to be installed over the outlook period, with 0.7 GW of GPG capacity to be installed by 2035 and a further 0.9 GW forecast to be installed between 2036 to 2045[58]. This new GPG capacity is modelled to replace assumed GPG retirements (Pinjar Power Station)[59] and to help maintain the reliability of the SWIS during periods of high volatility or low levels of renewable output.

Figure 12 shows forecast SWIS GPG annual gas consumption to 2045, where:

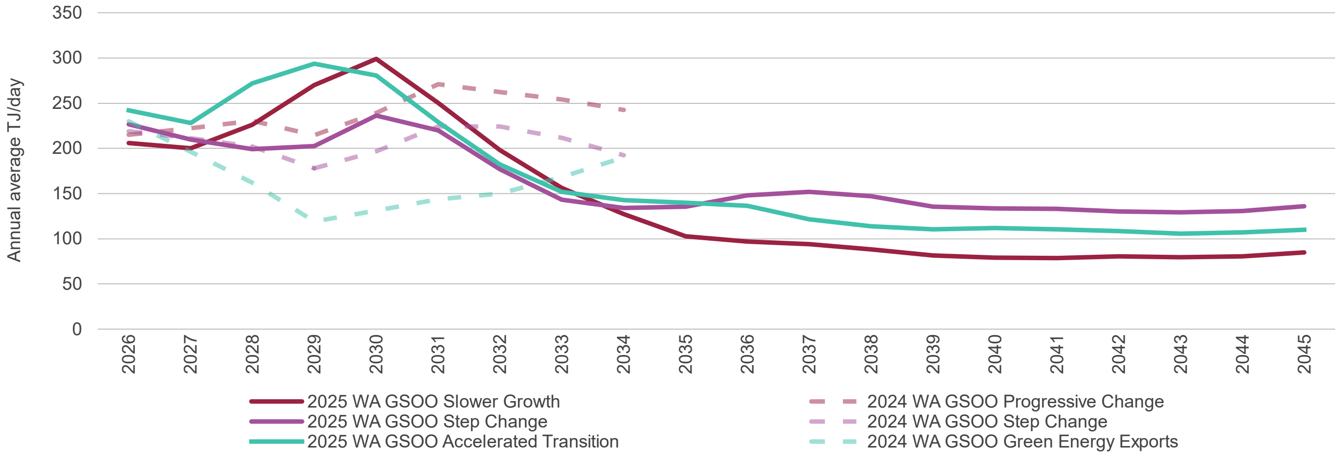
[57] See Sections 6 and 7.3 of the 2025 WEM ESOO for details, at https://www.aemo.com.au/energy-systems/electricity/wholesale-electricity-market-wem/wem-forecasting-and-planning/wem-electricity-statement-of-opportunities-wem-esoo.

[58] Committed GPG capacity includes the AGL Kwinana Swift power station (176 MW) and Arrowsmith power station (85 MW). The *Step Change* scenario forecasts growth in new GPG capacity beyond committed projects of 0.7 GW by 2035 and a further 0.9 GW by 2045.

[59] The assumed retirement of Pinjar gas turbines from 2029 to 2032 in the GPG modelling is aligned with the 2025 WEM ESOO and the Benchmark Reserve Capacity Price Reference Technology Review's maximum asset life assumptions. See https://www.aemo.com.au/-/media/files/electricity/wem/planning_and_forecasting/esoo/2025/2025-wem-electricity-statement-of-opportunities.pdf and https://www.wa.gov.au/system/files/2023-11/epwa-brcp_reference_technology_review-v2.1.pdf

- Up to 2030, projected GPG gas consumption growth is driven by the pipeline of committed projects and forecast new capacity investments from 1 October 2028. Combined with increasing SWIS electricity demand and consumption, as well as forecast retirement and unavailability of coal capacity, this is forecast to drive increased gas consumption by SWIS GPG to support renewables in replacing coal-fired generation.
- From 2030 onwards, GPG gas consumption is forecast to decrease as VRE and battery storage capacity grows, guided by an emissions reduction trajectory[60]. From the mid-2030s, annual gas consumption by SWIS GPG is projected to stabilise as GPG continues to play a role in maintaining a reliable and secure electricity supply.

Figure 12 SWIS GPG annual gas consumption, 2024 and 2025 WA GSOOs, all scenarios, 2026 to 2045 (annual average TJ/day)



Source: EY

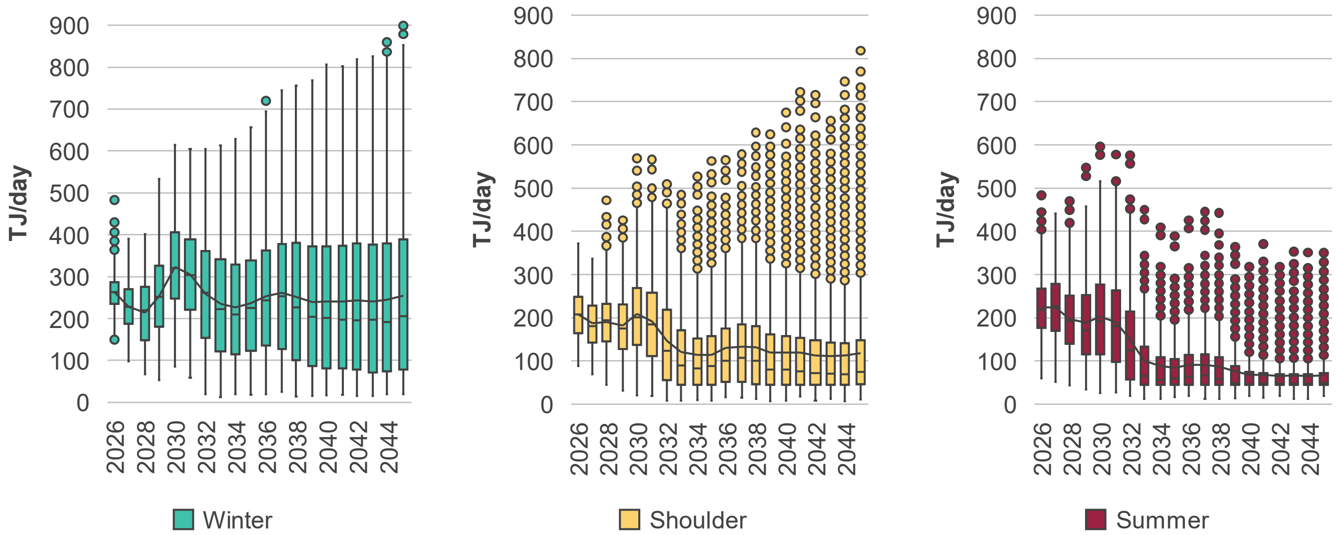
Forecast gas consumption for GPG in the SWIS in each scenario is summarised below:

- ***Slower Growth* scenario** – GPG gas usage is forecast to peak in 2030, at higher levels than in the *Step Change* scenario. This is driven by the assumption that no committed or anticipated capacity eventuates in the *Slower Growth* scenario with generic new capacity able to enter from 1 October 2028, leading to a slower uptake of renewable generation and higher GPG gas consumption.
- ***Step Change* scenario** – gradually retiring coal generation is forecast to be replaced by committed capacity and forecast new capacity investment from 1 October 2028, which includes VRE, battery storage and GPG. Increasing electricity demand is forecast to further drive the need for higher GPG gas consumption, which peaks in 2030.
- ***Accelerated Transition* scenario** – GPG gas usage is forecast to peak in 2029 and reach higher levels than in the *Step Change* scenario, driven by higher electricity demand growth than in *Step Change*, despite higher growth in VRE capacity.

Figure 13 shows that despite the long-term trend towards reduced annual SWIS GPG gas consumption, volatility in peak GPG gas demand is forecast to increase. This is driven by the forecast increase in SWIS power demand as well as increases in weather-dependent, intermittent generation.

[60] An emissions reduction trajectory was modelled consistent with the CSIRO's Multi-sectoral modelling report to guide the level of uptake in new large-scale wind, solar and battery projects.

Figure 13 Annual peak gas demand (TJ/day) and volatility of SWIS GPG daily gas demand in the winter, shoulder and summer seasons, *Step Change* scenario, 2026 to 2045



Source: EY

Notes: The box and whisker plots for each year represent daily SWIS GPG gas demand (TJ/day) values for each season in a calendar year, based on results of 50 modelled iterations for each calendar year (five weather reference years x 10 Monte Carlo iterations of forced outages). The upper and lower end of a whisker present the minimum and maximum value (excluding outliers). Dots present outliers, that is, values greater than the 3rd quartile + 1.5 x (3rd quartile – 1st quartile) and values lower than 1st quartile - 1.5 x (3rd quartile – 1st quartile). The bottom of a box presents the 1st quartile, and the top of a box presents the 3rd quartile. Lines dividing a box present the median, and lines connecting each box present the average.

Summer includes months from December to March (aligned with the Hot Season defined in the ESM Rules); winter includes months from June to August; shoulder includes the months of April, May and September to November.

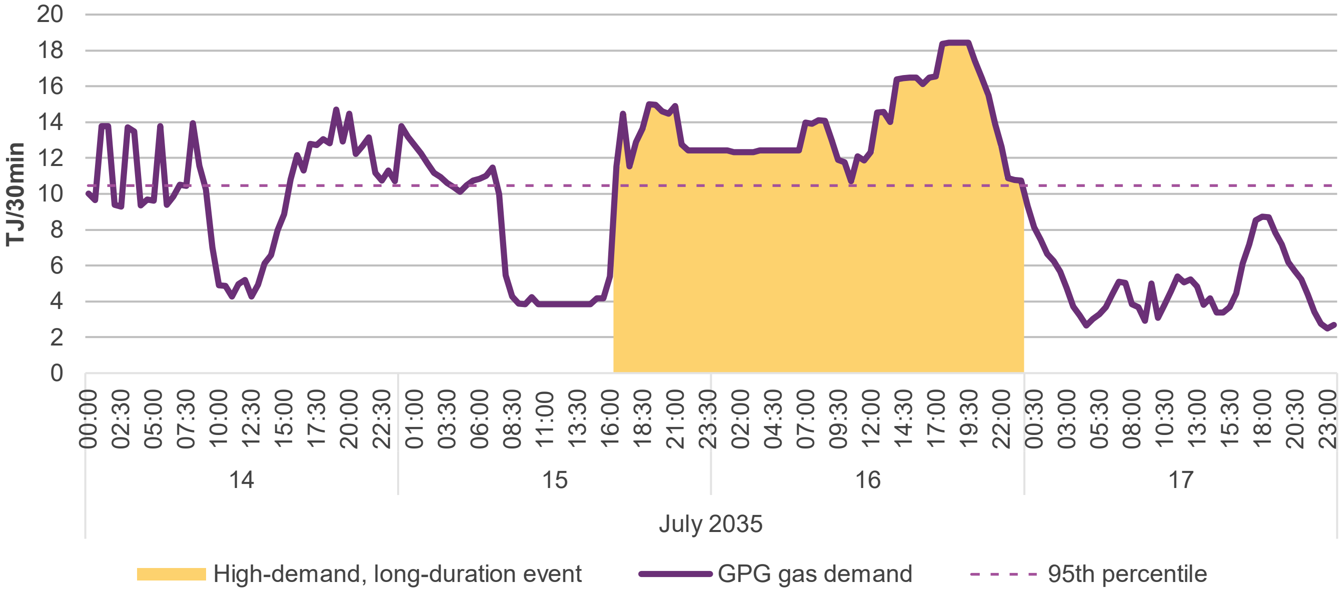
The greatest magnitudes and volatility of daily SWIS GPG gas demand are observed during the winter season, followed by the shoulder season. The shoulder season is also forecast to have more outliers (rare occurrences of very high daily gas demand) than the winter season and the summer season. Increasing volatility and magnitudes of GPG gas demand in winter and shoulder seasons are driven by shorter daylight hours (lower solar irradiance) and more frequent wind lulls than in the summer season.

In addition to supporting peak demand and volatility, SWIS GPG is forecast to provide firming support over extended periods of dark and still conditions[61]. In such periods, storage may become unavailable (that is, it will have discharged and will not be able to recharge), and GPG will be required to generate at high output for multiple hours or days, as **Figure 14** shows.

Combined with increasing volatility, such high-demand, long-duration periods are likely to put additional stress on the gas supply infrastructure (discussed in detail in Section 4).

[61] Multiple contiguous hours or days of dark and still conditions (that is, very low or zero renewable resource for power generation) have occurred historically in the SWIS, NEM and other systems worldwide. If combined with high electricity demand, such events will drive high demand for GPG.

Figure 14 Illustration of forecast high instantaneous SWIS GPG gas demand event persisting over multiple (63) contiguous half-hourly intervals in 2035, *Step Change* scenario (weather year 2021-22, Monte Carlo iteration 3) (TJ/30 minutes)



Source: EY
Note: The high-demand, long-duration event represents a set of contiguous intervals when GPG gas demand exceeded a specified threshold, derived as the 95th percentile. The 95th percentile threshold identifies a population of top 5% highest demand intervals, and was derived from all instantaneous demand data modelled for the presented calendar year (across five weather years and 10 Monte Carlo iterations).

2.6 Extended SWIS coal availability

Domestic gas consumption eases if coal-fired power stations are forecast to continue operating later than expected, reducing consumption of gas for SWIS GPG.

The *Step Change* scenario modelled the Bluewaters Power Station to be unavailable from 1 October 2028, which is one year later than in the 2025 WEM ESOO given that Bluewaters Power Station was subsequently assigned Capacity Credits for the 2027-28 Capacity Year. The certification process is primarily informed by a technical assessment of a facility's capability to service peak demand periods two years ahead. This two-year timeframe provides facility operators with a reasonable amount of time to resolve any potential commercial or operational issues. While AEMO understands Bluewaters Power Station is taking measures to resolve its fuel supply uncertainty, AEMO considers it prudent for this WA GSOO to capture potential supply adequacy risks. Reflecting this uncertainty, AEMO undertook sensitivity analysis in this WA GSOO to understand the impacts on domestic gas consumption if coal supplies to Bluewaters Power Station are secured to 1 October 2030.

2.6.1 Sensitivity analysis results

Figure 15 shows the sensitivity analysis results compared to the *Step Change* scenario. The extended availability of the Bluewaters units results in lower annual gas consumption by SWIS GPG between 2028 and 2030, driven by higher modelled volumes of coal generation. Compared to the volumes of gas used by SWIS GPG in the *Step Change* scenario, 4 TJ/day (2%) less gas is used by SWIS GPG in 2028, 38 TJ/day (19%) less in 2029 and 34 TJ/day (14%) less in 2030.

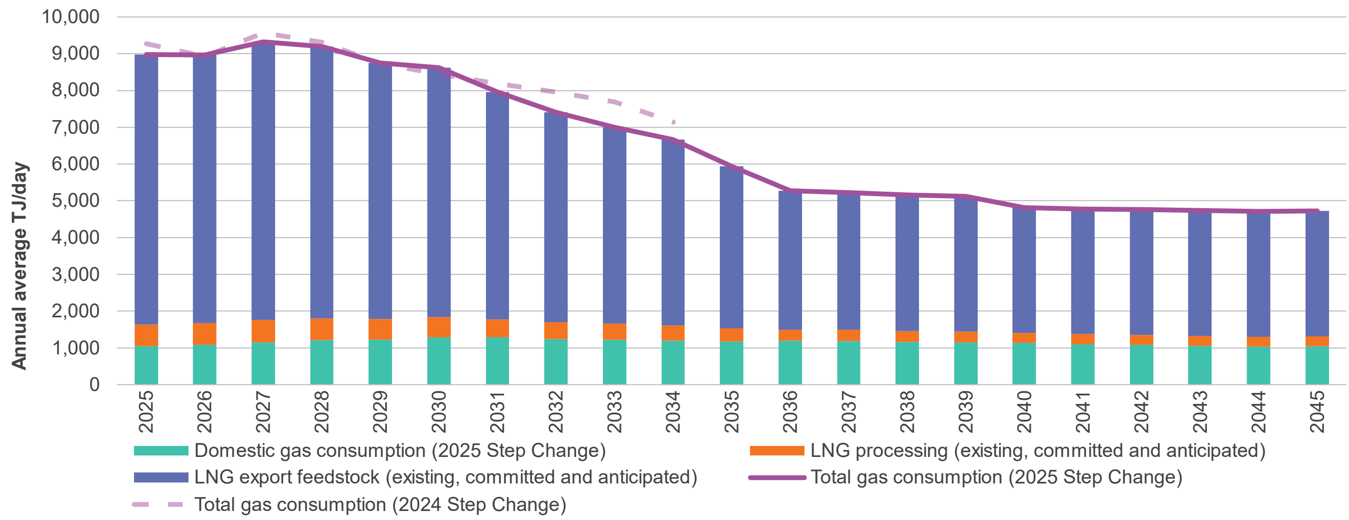
Figure 15 Forecast SWIS GPG annual gas consumption, *Step Change* scenario and sensitivity, 2026 to 2045 (annual average TJ/day)

Source: EY

2.7 Western Australia total gas consumption forecasts

Total gas consumption is the aggregate of forecasts for domestic gas consumption, LNG export feedstock, and gas used in LNG processing. **Figure 16** shows the total annual gas consumption forecasts for the *Step Change* scenario for the 2025 WA GSOO, with the *Step Change* scenario forecast from the 2024 WA GSOO.

Figure 16 Forecast total gas consumption, 2024 and 2025 WA GSOOs, *Step Change* scenario, 2025 to 2045 (annual average TJ/day)



Overall, the 2025 WA GSOO total gas consumption forecasts are lower than the 2024 WA GSOO forecasts. This is largely due to the lower forecasts for domestic gas consumption and LNG export feedstock, and to a smaller extent to gas used in LNG processing in this year's WA GSOO.

Table 10 summarises the key assumptions specific to expected, committed and anticipated gas feedstock for LNG and processing LNG. Further detail on these assumptions is in Appendix A4.2.3. Assumptions for domestic gas consumption are included in **Table 4** (in Section 2.3.3) with details by sector in Section 2.3.4, so are not repeated in this table.

Table 10 Total gas consumption forecasts and assumptions, *Step Change* scenario

	Step Change
5-year AAGR	-0.8%
10-year AAGR	-4.0%
20-year AAGR	-3.2%
Assumptions (based on 2P reserves and 2C resources for LNG projects as applicable)	• Scarborough Energy Project is brought onstream in second half of 2026 with 1.9 million tonnes per annum (Mtpa) LNG allocated to Pluto upon Scarborough's commencement. • No LNG exports forecast from West Erregulla and Lockyer Gas Projects. • North West Shelf (Karratha Gas Plant [KGP]) production is to decline from 2025 until depleted in 2035. • Waitsia Stage 2 backfills the KGP from end-2025 to end-2028. • Wheatstone LNG production is forecast to decline from 2030 until depleted in 2035 based on initial Wheatstone-Iago recoverable resource estimate. • Prelude floating LNG (FLNG) production is forecast to decline from 2035 until depleted in 2040 based on initial recoverable resource estimate. • Expects existing LNG plants achieve nameplate production rates, and that Pluto Train 2 achieves production of 5 Mtpa with commencement in the second half 2026. • Western Australian gas use for processing LNG is forecast to be 8%.

3 Gas supply

This section outlines forecasts of potential gas supply to the Western Australian domestic gas market, and the underlying reserves, resources and project developments that inform these forecasts.

Key insights

- The potential gas supply for existing, committed, and anticipated projects is expected to increase to 1,363 TJ/day on an annual average basis until 2029, before gradually declining at a rate of 5.3% throughout the rest of the 20-year outlook period (between 2030 and 2045).
- Decreases in potential gas supply are primarily due to natural reserve depletion from legacy projects such as Varanus Island, Macedon, Pluto, and Walyering which are expected to taper.
- Decreases are partially offset by new supply from the Scarborough Energy Project and development of Perth Basin gas fields.
- Continued investment in new supply sources will be required beyond 2030 to maintain system adequacy.

AEMO forecasts the potential availability of gas to supply to the Western Australian domestic market, or "potential gas supply". Potential gas supply is defined as supply that could be made available to the domestic gas market, based on gas reserves and resources, subject to forecast prices, production costs, DMOs, and processing capacity.

3.1 Developments in key supply projects since 2024 WA GSOO

The section provides a snapshot of key events and initiatives on Western Australian gas supply that have been announced or progressed since the 2024 WA GSOO:

- Hancock Prospecting completed its acquisition of Lockyer Gas Project from Mineral Resources in December 2024[62].
- Woodside and Chevron agreed in December 2024 to an asset swap under which Woodside would acquire Chevron's interest in the North West Shelf (NWS) Project, the NWS Oil Project and the Angel CCS Project, and transfer all of its interest in both the Wheatstone and Julimar-Brunello Projects to Chevron. The transaction is expected to be completed in 2026[63].
- In January 2025, Woodside Energy announced plans to incorporate a CCS system into the Browse project[64].
- In January 2025, Carnarvon Energy announced that operator Santos had decided not to enter front end engineering and design (FEED) so the initial phase of the Dorado development project was placed on hold[65].

[62] See https://clients3.weblink.com.au/pdf/MIN/02896078.pdf.

[63] See https://www.woodside.com/docs/default-source/asx-announcements/2024/woodside-simplifies-portfolio-and-unlocks-long-term-value.pdf?sfvrsn=5e249480_1.

[64] See https://www.woodside.com/docs/default-source/our-business---documents-and-files/burrup-hub---documents-and-files/browse---documents-and-files/browse-ccs-summary-information-sheet.pdf?sfvrsn=f59870dd_14.

[65] See https://carnarvon.com.au/wp-content/uploads/2025/01/2841731.pdf.

- In July 2025, reserves for Strike's Walyering gas field were downgraded as a result of the annual review of reserves and resources[66].
- In July 2025, reserves for Beharra Spring owned by Beach and Mitsui E & P Australia were downgraded following revealed depletion after evaluation of well data[67].
- Following its announcement in August 2024[68], Woodside permanently shut down Train 2 at the NWS LNG facility in July 2025 due to declining gas supply.
- In August 2025, independent certification was completed of contingent and prospective resource estimates within EP 495, 100% owned and operated by Strike, which contains Ocean Hill and the newly identified Ocean Hill South. Certified 2C contingent resources at Ocean Hill were estimated to be 180 PJ[69].
- In August 2025, the Federal Court confirmed the legality of the National Offshore Petroleum Safety and Environmental Management Authority's (NOPSEMA's) approval for Woodside's Scarborough Environment Plan. This was the final environmental approval required for Woodside to connect, commission and operate the Scarborough floating production unit[70].
- Western Australia's Environmental Protection Authority accepted amendments to Woodside's Browse Basin gas extraction proposal in August 2025[71].
- In August 2025, Waitsia Gas Project announced it had achieved mechanical completion of its Stage 2 gathering system and was well progressed in commissioning[72].
- In September 2025, the Federal Government granted environmental approval for the NWS Project Extension to allow operation until 2070[73].
- Western Gas and Alcoa signed agreements in September 2025 for Alcoa to fund Equus through to FID and Alcoa to receive an exclusive right to approximately 50 TJ/day of gas over 10 years[74].
- In September 2025, Copper Strike announced its acquisition of Western Gas Pty Ltd, owner of the Equus Gas Project, and the formation of a new company called Equus Energy to be listed following an initial public offering (IPO) on the Australian Stock Exchange[75].
- In October 2025, Chevron's proposal to tie seven Gorgon backfill fields into existing subsea infrastructure received approvals from NOPSEMA in October[76].

[66] See https://strikeenergy.com.au/announcements/7111177.

[67] See https://yourir.info/resources/0c5a441cf54ff229/announcements/bpt.asx/2A1610785/BPT_FY25_Fourth_Quarter_Activities_Report.pdf.

[68] See https://www.woodside.com/docs/default-source/asx-announcements/2024/third-quarter-2024-report.pdf?sfvrsn=ca416b56_1.

[69] See https://strikeenergy.com.au/announcements/7124250.

[70] See https://www.woodside.com/docs/default-source/media-releases/2025/scarborough-offshore-facility-and-trunkline-(operations)-environment-plan.pdf?sfvrsn=964c429c_1.

[71] See https://www.epa.wa.gov.au/proposals/proposed-browse-nws-development-change-proposal-under-s-43a.

[72] See https://beachenergy.com.au/wp-content/uploads/2025/10/BPT_FY26_First_Quarter_Activities_Report.pdf.

[73] See https://www.woodside.com/docs/default-source/media-releases/2025/woodside-welcomes-approval-of-north-west-shelf-project-extension.pdf?sfvrsn=e545d6f2_1.

[74] See https://equusenergy.com.au/wp-content/uploads/2025/10/MEDIA-RELEASE-WGC-Alcoa-Fund-GSA-R0-250908-.pdf.

[75] See https://www.copperstrike.com.au/wp-content/uploads/2025/09/2025-09-03-Letter-to-shareholders-Final.pdf and https://equusenergy.com.au/.

[76] See https://www.nopsema.gov.au/offshore-industry/environmental-management/assessment-process/public-comment.

- In October 2025, it was reported that Hancock Prospecting had started engineering and design work on the Belisama project east of Dongara, which will develop the Lockyer gas field with first gas targeted for the start of 2029[77].
- In December 2025, delivery of sales gas from Waitsia Gas Plant into the pipeline network commenced[78].
- In December 2025, Chevron Australia and Gorgon Joint Venture Participants reached FID on the Gorgon Stage 3 development[79].

3.2 Reserves, resources and supply

Gas supply depends on continued investment to identify, prove, and then commercialise gas reserves and resources.

Gas reserves and resources are classified based on level of commercial and technical certainty associated with extraction[80]. These terms are broadly defined below:

- **Reserves** are quantities of gas anticipated to be commercially recoverable from known accumulations from a given date forward. **Proven (1P) and probable (2P) reserves** are considered the best estimate[81] of commercially recoverable reserves.
- **Contingent resources** are quantities of discovered gas which are estimated to be potentially recoverable from known accumulations but are currently not yet considered to be commercially viable for development[82] and its best estimate is known as **contingent (2C) resources**.
- **Prospective resources** are estimated gas volumes from undiscovered accumulations that remain highly speculative, as they have not been confirmed through drilling and exploration activities. Its best estimate is known as **prospective (2U) resources**.

Figure 17 presents the Western Australian Government's estimates of Western Australian total conventional gas reserves and resources[83] from 2019 to 2025, showing the declining trend over the years. Over time, gas reserves and resources are developed, depleted, or reassessed (particularly against commercial benchmarks), resulting in change in the quantities of reserves and contingent resources. See Appendix A4.3.2 for details on the assessment criteria for reserves and resources.

Figure 18 shows a large majority of 2P reserves and 2C resources for 2025 are concentrated in the Carnarvon Basin, followed by Browse Basin, then Bonaparte basin, while the proportion contributed by Perth Basin is relatively small.

Gas supply to the Western Australia domestic market relies on ongoing development of gas discoveries, facilitated by gas exploration and development well drilling activities. See Appendix A2.1 for trends in the geographic distribution of drilled wells.

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[77] See https://www.hancockenergy.com.au/gina-rinehart-engineering-and-design-under-way-for-hancock-energys-up-to-1-billion-belisama-project/.

[78] See https://company-announcements.afr.com/asx/bpt/4ba5fcb3-d3b6-11f0-bc4d-0a9896ea7f7c.pdf.

[79] See https://australia.chevron.com/news/2025/gorgon-stage-3-to-support-long-term-western-australian-and-regional-energy-security.

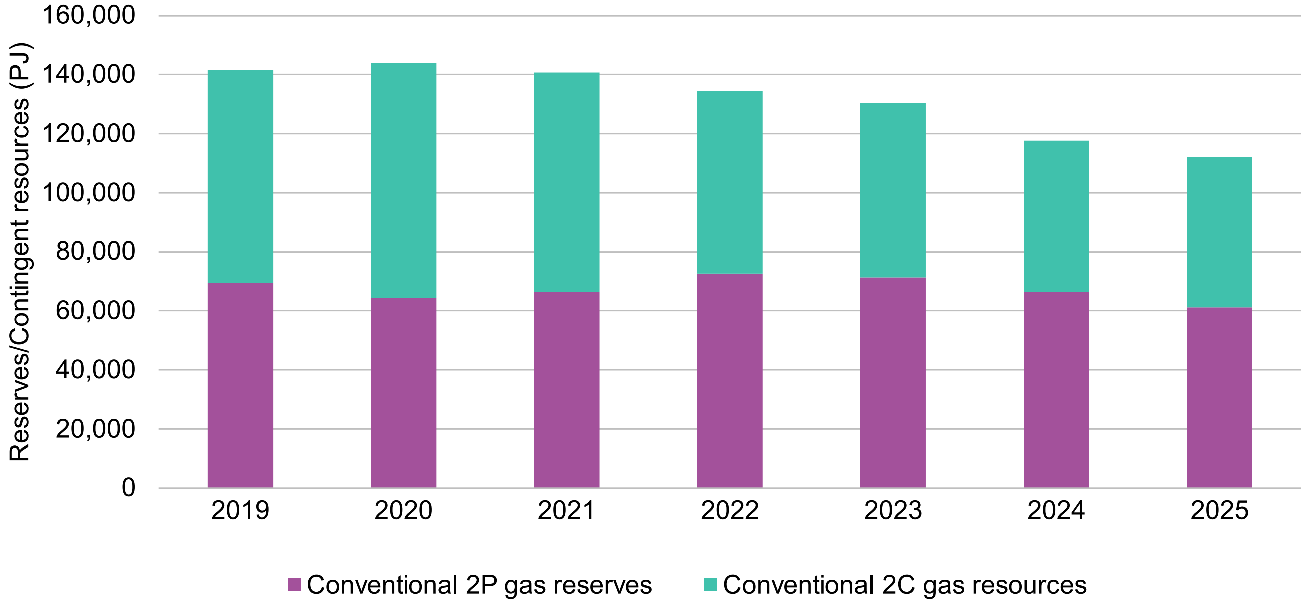
[80] Uncertainties could include securing finance, obtaining government approvals, negotiating contracts, or overcoming geological challenges.

[81] Best estimate, with respect to resources categorisation, means the estimate considered to be the closest to the quantity that will be recovered between the date of estimate and the time of abandonment. If probabilistic methods are used, this term is a measure of central tendency of the uncertainty distribution (i.e. most likely/mode, median or mean). See https://www.spe.org/media/filer_public/58/a2/58a24952-4f2c-4c2c-9eca-038299cb2ceb/petroleum_resources_classification_system_and_definitions.pdf.

[82] Further appraisal and investment will be required before contingent resources can be classed as reserves.

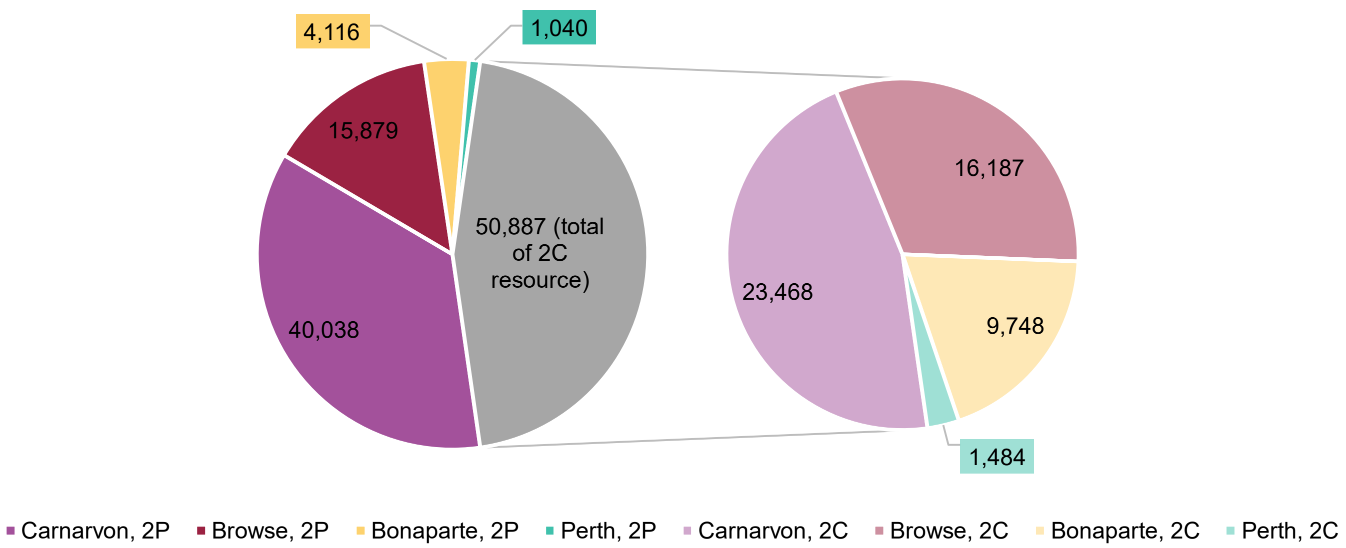
[83] 'Conventional' refers to formations that are relatively straightforward to extract, and 'unconventional' refers to formations that are much more difficult to extract, in some cases requiring specialised techniques. Both conventional and unconventional gas formations may contribute to reserves and resources, depending on the economic viability of extraction.

Figure 17 Western Australia's conventional gas reserves and resources from 2019 to 2025 (PJ)



Source: Government of Western Australia, 2025, at https://www.wa.gov.au/government/publications/western-australias-economy-and-international-trade.
Note: Estimate for 2025 is as of June 2025.

Figure 18 Split of Western Australia's conventional gas reserves and resources by basin for 2025 (PJ)



Source: Government of Western Australia, 2025, at https://www.wa.gov.au/government/publications/western-australias-economy-and-international-trade.
Note: Estimate for 2025 is as of June 2025.

3.3 Modelling methodology and assumptions

AEMO's supply forecast does not project how much gas *will* be produced, but rather how much *could* be produced. The section presents the modelling methodology, supply categorisation and assumptions for specific projects.

3.3.1 Modelling methodology

There are several updates in the modelling approach for 2025 WA GSOO:

- Supply forecasts were developed based primarily using production profiles of domestic supply provided by Gas Market Participants (GMPs) through the 2025 WA GSOO FIR[84]. Information requested in the WA GSOO FIR included forecasts of the capacity of gas processing plants over the outlook period to account for any upgrades or retirements, and volume estimates of 1P and 2P reserves, 2C contingent resources, and 2U prospective resources[85]. AEMO also made assumptions by sourcing information from DEED, Energy Quest, interviews with stakeholders, and information in the public domain to support forecast development, particularly in instances where production profiles from the GMPs were not available.
- AEMO has redefined forecast supply categorisation, which covers both project development progress and alignment with reserves and resources definitions. The new categories are **existing, committed**, **anticipated**, and **uncertain**[86]. For more details, see Section 3.3.2.
- Supply forecasts were based primarily on resource and project capacity and timing assumptions, rather than the application of IASR scenarios. While IASR scenarios frame the extent of decarbonisation and economic growth, they were considered to have limited impact on existing gas supply and gas supply development decisions, given projected shortfalls in gas supply.
- The impact of hydrogen projects in Western Australia's domestic gas market is expected to be limited over the outlook period, so was not considered in the 2025 WA GSOO potential supply forecast. A large number of projects announced in recent years have not progressed beyond the concept or approval stage, and have been stalled or shelved due to market uncertainty, lack of government support, and high costs. AEMO will continue to assess the possible impact of hydrogen on potential domestic gas supply and re-evaluate its inclusion in future WA GSOOs.

3.3.2 Forecast supply categorisation

For the 2025 WA GSOO, with the extension to a 20-year forecast outlook and given several existing projects with proven reserves are entering or are already in the decline phase of their respective project life cycles, the addition of contingent resources was considered necessary to provide a meaningful longer-term outlook. To reflect the degree of uncertainty associated with the development of these contingent resources, criteria were established to distinguish between contingent resources with a higher degree of certainty of proceeding and those that are more uncertain.

In this WA GSOO, the following definitions and criteria apply:

- **existing** – gas fields and production facilities that are already operating,
- **committed** – gas projects that are classified as 2P reserves and have demonstrated sufficient development progress including FID,
- **anticipated** – includes projects with:
  - 2P reserves and which have not achieved FID, or
  - 2C resources that have a high degree of certainty in commercial viability, are likely to backfill an existing processing facility[87], already have significant commercial alignment and a relatively straightforward approvals pathway, and

[84] Supply forecasts in prior WA GSOOs were developed using AEMO's supply model with the primary input being the volume of reserves (from FIR). For more details, see Appendix A4 in 2024 WA GSOO, at https://www.aemo.com.au/-/media/files/gas/national_planning_and_forecasting/wa_gsoo/2024/2024-wa-gas-statement-of-opportunities.pdf?rev=2f7185f499ee4a8395fb9d6acb1edc07&sc_lang=en.

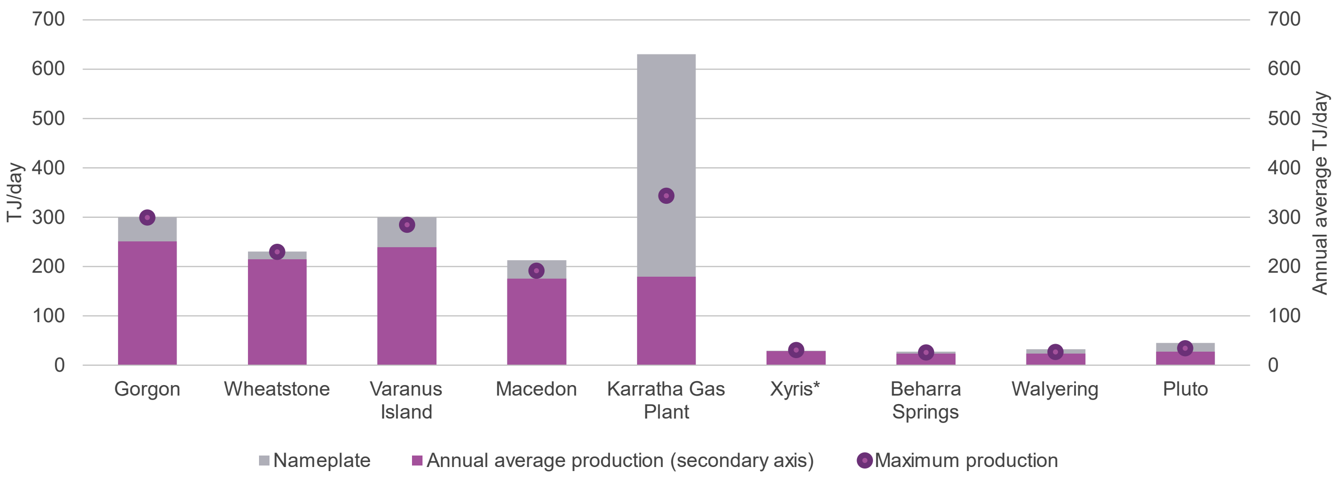
[87] Using an existing processing facility also makes the environmental approval less arduous.

- **uncertain** – includes projects with 2C resources that have a lower degree of certainty of progressing. These projects have potential to progress but are still at earlier stages of development, and may face challenges in achieving commercial alignment, achieving economic thresholds (for example, due to development costs) and progressing approvals.

3.3.3 Key modelling assumptions

There are currently nine gas production facilities that supply the Western Australian domestic gas market, with an annual average domestic supply of 1,159 TJ/day[88] and nameplate capacity of 1,809 TJ/day[89]. **Figure 19** presents the breakdown of the 2025 average and maximum domestic supply and nameplate capacity by processing facility.

Figure 19 Nameplate (TJ/day), maximum production (TJ/day) and annual average production (annual average TJ/day) by processing facility in 2025



Source: WA GBB, 2025 WA GSOO FIR.
Note: Annual average production is based on GBB data up to 31 October 2025. Adjustments have been made to GBB data to include domestic trucked LNG. No adjustments have been applied to gas flows accounting for Waitsia LNG exports in this figure. Devil Creek not included due to it ceasing operations in quarter(Q) 4 2024.
*Xyris includes production from Waitsia Stage 1 only.

The following key observations are made:

- Gorgon, Wheatstone, and Varanus Island are the key contributors to domestic supply in 2025, each with an annual average production of approximately 200-250 TJ/day and utilisation rate of at least 79%.
- The Karratha Gas Plant (KGP) facility has the highest nameplate of 630 TJ/day, but with the lowest capacity utilisation rate.

For more details on the historical trend of gas production and capacity utilisation, refer to Appendix A2.2.

Table 11 presents details of AEMO's assumptions and supply categorisation by projects.

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[86] The supply categories in the 2024 WA GSOO were **committed**, **probable**, and **proposed**, largely based on project development progress. For more details, see Section 1.3.2 and Section 3.2 in the 2024 WA GSOO.

[87] Using an existing processing facility also makes the environmental approval less arduous.

[88] Based on the 2025 annual average from 1 Jan 2025 to 31 October 2025.

[89] Nameplate capacity as of 31 October 2025. This excludes Dongara gas production facility, which has not been operated since Q3 2017, and Devil Creek, which ceased operation at the end of 2024.

Table 11 Potential gas supply modelling assumptions for existing and new potential projects

Project	Usage	Supply category			Assumption	
		Existing and committed	Anticipated	Uncertain	2025 assumption	Change compared to 2024 WA GSOO
Gorgon	LNG-linked with DMO	2P reserve	2C resource[A]		274 TJ/day throughout the outlook period with the exception of years with planned maintenance (reduced to 259 TJ/day)[B].	Slight reduction in utilisation rate reflecting recent historical data. Inclusion of reduction due to planned maintenance events every 10 years.
Wheatstone	LNG-linked with DMO	2P reserve	Aligned 2C resource[C]	Unaligned 2C resource[C]	217 TJ/day throughout the outlook period with the exception of years with planned maintenance (reduced to 194 TJ/day)[D] .	Slight increase in utilisation rate reflecting recent historical data. Inclusion of reduction due to planned maintenance events every five years.
Varanus Island (including Corvus)	Existing domestic gas only	2P reserve		2C resource (Corvus)	For 2P reserve, 210 TJ/day from 2026 with production limited by remaining reserves through the outlook period[E]. For 2C resource, Corvus starts in 2029 reaching a peak of ~100 TJ/day in 2030 followed by decline.	Notable reduction in 2027 due to reduction from three to two trains. Corvus is a new addition to 2025 WA GSOO.
Macedon	Existing domestic gas only	2P reserve			178 TJ/day from 2026, with production limited by remaining reserves through the outlook period.	Lower particularly for the later years to due to update in forecast.
Karratha Gas Plant	Existing LNG-linked with DMO	2P reserve	2C resource		120 TJ/day from 2026 reducing to 101 TJ/day by 2029. The production limited by remaining reserves through the outlook period[F].	Negligible change.
Xyris (Waitsia Stage 1 and 2)	Existing and new domestic gas only (from 2029)	2P reserve			Up to 30 TJ/day prior to 2029 then increase to ~200 TJ/day in 2029, followed by production limited by remaining reserves through the outlook period[G].	Negligible change.
Beharra Spring	Existing domestic gas only	2P reserve	2C resource		~26 TJ/day throughout the outlook period with production limited by remaining reserves after 2042.	Slight reduction throughout the outlook period.
Walyering	Existing domestic gas only	2P reserve		2C resource	~15 TJ/day in 2026 with production limited by remaining reserves throughout the outlook period.	Overall reduction due to reserves downgrade[H].
Pluto (include Scarborough[I])	Pluto is Existing LNG-linked with DMO Scarborough is new LNG-linked with DMO	Pluto 2P reserve Scarborough 2P reserve	Scarborough 2C resource		Pluto – up to 34 TJ/day in 2029 with production limited by remaining reserves throughout the outlook period. Scarborough – ramp-up begins in 2026 reaching full capacity of ¬180 TJ/day in 2031.	Pluto – overall reduction. Scarborough – negligible change except for increase for 2026 and 2027 due to higher ramp up rate and reduction in 2029 and 2030.

Project	Usage	Supply category			Assumption	
Lockyer Gas Project[J]	New LNG-linked with DMO		2P reserve		Production starts in 2029 and reaching a full capacity of 90 TJ/day in 2031 with production limited after 2041 by remaining reserves through the outlook period[K].	Higher production.
West Erregulla	New domestic gas only		2P reserve		50 TJ/day starting 2029 reaching 69 TJ/day in 2031 with production limited by remaining reserves in the later years.	Delay in start time and reduction in forecast due to advised diversion of gas to integrated power generation[L].
Browse	New LNG-linked with DMO			2C resource	Production starts in 2033 reaching production capacity of ¬210 TJ/day in 2035 before decline starting 2045[M].	New addition for 2025 WA GSOO.
Equus	New LNG-linked with DMO			2C resource	Production starts in 2032 and ends in 2041, ranging ¬50 TJ/day.	New addition for 2025 WA GSOO.
Ocean Hill	New domestic gas only			2C resource	Production starts 2029, maintaining same production of 40 TJ/day through the outlook period.	New addition for 2025 WA GSOO.

Notes: Compared to 2024 WA GSOO, Devil Creek was removed from forecast (as an existing project) due to cessation in operation in Q4 2024. See https://www.santos.com/wp-content/uploads/2025/07/Santos-WA-and-NA-Quarterly-Update-June-2025_Final.pdf. All production forecasts are derived from information in FIR submission, unless otherwise stated.
A. Gorgon 2C resource, both aligned and non-aligned, is categorised as anticipated. It was anticipated that the 2C resources will seamlessly backfill the 2C production profile and that the advised 2C non-aligned fields production rates for Jansz and Gorgon trunklines is adequate to fill the 2C aligned ullage profile. It should be noted that the assumption of seamless backfill of the 2C profile (both aligned and non-aligned) remains subject to timely renewal of retention leases and other regulatory approvals. The development of 2C non-aligned resources also remains subject to commercial agreements. In December 2025, Chevron announced FID on its Gorgon Stage 3 Project which corresponds to the Geryon and Eurytion gas fields included under 2C resource in this 2025 WA GSOO. See https://australia.chevron.com/news/2025/gorgon-stage-3-to-support-long-term-western-australian-and-regional-energy-security).
B. Capacity utilisation of 91% for a typical year and 86% for years with planned maintenance modelled based on historical flow analysis. See https://gbbwa.aemo.com.au/#reports/actualFlow.
C. The inclusion of Wheatstone 2C on-aligned contingent resources in supply forecasts requires timely renewal of retention leases and other regulatory approvals, and also remains subject to commercial agreements.
D. Capacity utilisation of 97% for a typical year and 86% for years with planned maintenance modelled based on historical flow analysis. See https://gbbwa.aemo.com.au/#reports/actualFlow.
E. 2P reserve forecast for Varanus Island includes John Brookes, Spar-Halyard and Spartan.
F. Production forecast for Karratha Gas Plant was sourced from DEED's 2025 Western Australia Domestic Gas Statement.
G. Xyris Production Facility has a nameplate of 30 TJ/day while Waitsia Gas Plant (for Stage 2) has a nameplate of 250 TJ/day with first production commenced in December 2025 and government approval to export LNG up until 2028 (through NWS) in line with the Waitsia Joint Venture Domestic Gas Commitment Agreement, supplying the domestic market from 2029 onwards. See https://www.mepau.com.au/waitsia-on-track/ and https://www.wa.gov.au/government/publications/waitsia-joint-venture-domestic-gas-commitment-agreement.
H. For reserves downgrade of Walyering gas field, see https://strikeenergy.com.au/announcements/7111177.
I. Scarborough is being developed as an LNG supply source to Pluto Train 2 and a domestic gas facility with a nameplate capacity of 225 TJ/day.
J. Lockyer Deep and North Erregulla Deep fields supply the Lockyer Gas Project. See https://clients3.weblink.com.au/pdf/MIN/02852782.pdf.
K. See https://www.hancockprospecting.com.au/gina-rinehart-engineering-and-design-under-way-for-hancock-energys-up-to-1-billion-belisama-project/.
L. As advised by Market Participant.
M. Production forecast for Browse based on 11.4 Mtpa LNG/LPG and domestic gas, with 15% LNG domestic gas obligation and 94% facility utilisation. See https://www.woodside.com/what-we-do/developments-and-exploration/browse.

Seven new projects have been included in the supply forecast for 2025 WA GSOO. While there is a large volume of undeveloped gas that could contribute to the supply of gas to the Western Australian domestic market during the outlook period, only resources that satisfied the criteria outlined in Section 3.3.2 were included. These resources were further categorised into those for which development within the outlook period carries a high degree of certainty (anticipated supply), and those that carry a lower degree of certainty (uncertain supply). AEMO will continue to monitor the progress of remaining new projects that were not included as either anticipated or uncertain sources of supply, for potential inclusion in future WA GSOOs.

Scarborough

Scarborough is located in the Carnarvon Basin, approximately 375 km off the coast of Western Australia, and is 74.9% owned and operated by Woodside[90]. The field is being developed through new offshore facilities connected by a 433 km pipeline to an upgrade of the LNG facility, which includes a second LNG train (Pluto Train 2), installation of additional domestic gas processing facilities and supporting infrastructure and modifications to the existing Pluto Train 1 to allow the processing of Scarborough gas.

Scarborough was 91% completed at the end of the third quarter of 2025, excluding Pluto Train 1 modifications, with commencement targeted for the second half of 2026. It was classified as **committed** for the 2025 WA GSOO[91].

Waitsia Stage 2

Waitsia Stage 2 consists of the new Waitsia Gas Plant, adjacent to the existing Xyris Production Facility, approximately 350 km north of Perth and 16 km east of Dongara. The project is a joint venture between Mitsui E&P Australia (50% and operator) and Beach Energy (50%). The Waitsia Gas Plant will have a production capacity of 250 TJ/day[92].

The Waitsia Joint Venture (JV) has been granted an exemption from Western Australia's onshore gas export ban[93], which allows export of 7.5 million tonnes (416 PJ) of LNG from its Stage 2 reserves via the NWS infrastructure until the end of 2028[94]. This export deal is the first time onshore gas has been exported as LNG, and while the gas will be supplied into the southern end of the DBNGP, the customer is located at the northern end.

The Waitsia Gas Plant achieved FID in 2020 and commenced delivery of sales gas into the pipeline network in December 2025[95]. Waitsia Stage 2 was classified as **committed** for 2025 WA GSOO.

[90] See https://www.woodside.com/docs/default-source/asx-announcements/2025/044-half-year-2025-report.pdf?sfvrsn=179aac84_3.

[91] See https://www.woodside.com/docs/default-source/asx-announcements/2025/third-quarter-2025-report.pdf?sfvrsn=ed6d5864_5.

[92] See https://www.mitsui.com/jp/en/release/2020/1240249_11223.html.

[93] The Western Australian Government in 2020 introduced a policy to ban the export of gas from the state's onshore pipeline network, but in 2024, lifted the ban to allow gas export from onshore gas projects of up to 20% of production until 31 December 2030. See https://www.wa.gov.au/government/media-statements/Cook%20Labor%20Government/Updated-domestic-gas-policy-to-secure-WA's-energy-future-20240919.

[94] See https://www.wa.gov.au/government/media-statements/McGowan%20Labor%20Government/WA-Government-reaches-agreement-on-job-creating-domestic-gas-project-20201224.

[95] See https://yourir.info/resources/0c5a441cf54ff229/announcements/bpt.asx/2A1611447/BPT_2025_Beach_Energy_Ltd_Annual_Report.pdf and https://company-announcements.afr.com/asx/bpt/4ba5fcb3-d3b6-11f0-bc4d-0a9896ea7f7c.pdf.

Lockyer Gas Project – Lockyer Deep and North Erregulla Deep

The Lockyer Gas Project is to be supplied by both Lockyer Deep and North Erregulla Deep gas pools, with a combined 2C reserve estimate of 435 PJ[96]. The fields are now owned 100% by Hancock Prospecting following acquisition from Mineral Resources in December 2024.

The Lockyer Deep discovery was made in September 2021[97], with the Lockyer Deep-1 (net pay 32m, porosity 15%) exploration well. The field lies 10 km north of the West Erregulla project and 15 km east of the Waitsia project. The Lockyer Deep 2 appraisal well, drilled in March 2023, came in dry[98]. Two further appraisal wells were drilled – Lockyer Deep 3 in July 2023 and Lockyer-5 in early 2024 – both seeing high flows[99].

North Erregulla Deep-was discovered in June 2023[100] with the North Erregulla Deep-1 exploration well. The well is situated 8.3 km south-east of the Lockyer Deep-1 well. Drilling began on NED-1 (net pay 33m, 16% porosity) in April 2023[101] and a well test occurred in August 2023.

The front-end engineering and design for the Belisama project, which will develop the Lockyer gas field, has started[102]. The Lockyer Gas Project has achieved EPA approval for development of a project up to 250 TJ/d[103]. It was classified as **anticipated** for the 2025 WA GSOO.

West Erregulla

The West Erregulla field was discovered in 2019 and is onshore in the Perth Basin, approximately 350 km north of Perth[104]. The field is owned by Strike Energy (50%, operator) and Warrego Energy (50%, owned by Hancock Energy)[105]. The 2P reserve estimate is 422 PJ[106] and the operator has received primary environmental approvals to develop the West Erregulla gas field[107]. Erregulla Deep -1 well drilling occurred in 2024 and saw strong flow rates and pressure under flow[108].

The development of the West Erregulla Project has been advancing with long-lead items being procured and workovers of the associated gas fields making progress, with a view to completing these activities prior to FID[109]. The West Erregulla project is in the pre-FEED stage and has achieved key environmental approvals for the development to progress. It was classified as **anticipated** for the 2025 WA GSOO.

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96 See https://clients3.weblink.com.au/pdf/MIN/02852782.pdf.

97 See https://clients3.weblink.com.au/pdf/MIN/02419018.pdf.

98 See https://announcements.asx.com.au/asxpdf/20230412/pdf/45nkwgpsgcrj68.pdf.

99 See https://clients3.weblink.com.au/pdf/MIN/02868774.pdf and https://clients3.weblink.com.au/pdf/MIN/02788656.pdf.

100 See https://www.mineralresources.com.au/our-business/energy/exploration/.

101 See https://clients3.weblink.com.au/pdf/MIN/02676930.pdf.

102 See https://www.hancockenergy.com.au/gina-rinehart-engineering-and-design-under-way-for-hancock-energys-up-to-1-billion-belisama-project/.

103 See https://www.epa.wa.gov.au/proposals/lockyer-conventional-gas-project.

104 See https://strikeenergy.com.au/west-erregulla-gas.

105 See https://app.sharelinktechnologies.com/announcement/asx/c133b54227a195cb83d8276049426106.

106 See https://www.listcorp.com/asx/stx/strike-energy-limited/news/2025-strike-energy-annual-report-3250289.html.

107 See https://www.epa.wa.gov.au/proposals/west-erregulla-processing-plant-and-pipeline and https://app.sharelinktechnologies.com/announcement/asx/8258b04fbae187bbb18c79545757d577.

108 See https://app.sharelinktechnologies.com/announcement/asx/7df56b2d24fc1db0e59fb0f8a40664a0 and https://app.sharelinktechnologies.com/announcement/asx/57c3febea6bed77539e66d8901bd7a03.

109 Targeting FID in second quarter of 2026 as per Strike's 2025 annual report, at https://www.listcorp.com/asx/stx/strike-energy-limited/news/2025-strike-energy-annual-report-3250289.html.

Browse

The proposed Browse development comprises the Calliance, Brecknock and Torosa gas and condensate fields approximately 425 km north of Broome, with a 2C resources estimate of 14.6 trillion cubic feet (Tcf) of gas and 412 million barrels (MMbbl) condensate[110].

Woodside is the operator, holding a 30.6% participating interest. The proposed development concept includes two floating production storage and offloading (FPSO) facilities and an approximately 900 km gas transport pipeline tying the facilities to the NWS Project[111]. Woodside applied to amend both the state and federal Browse to NWS Project environmental proposals during the first half of 2025[112] and received federal approval for its NWS project extension in September 2025[113].

The Browse project is in the concept definition phase and is working towards entry into FEED, which includes optimising the development concept to improve cost and schedule certainty, as well as securing relevant regulatory and environmental approvals and commercial agreements. The Browse project was classified as **uncertain** for the 2025 WA GSOO.

Equus

The Equus Project consist of several gas fields located approximately 300 km west of Karratha with 2C resources of 1.7 Tcf of gas and 38 MMbbl of condensate, and is 100% owned by Equus Energy[114]. Several development concepts for the Equus Project development are under consideration, including multiple opportunities to backfill existing gas processing capacity, including the Woodside-operated Karratha Gas Plant and Pluto LNG processing facilities and Santos' Varanus Island and Devil Creek processing facilities.

The project is in an early concept development stage, with challenges including establishing access to existing infrastructure and access to suitable funding to develop and commercialise the project. Progress towards accessing funding includes establishing binding conditional funding and Domestic Gas Sales agreements between Western Gas and Alcoa to support Pre-FEED and FEED studies, and a proposed Public Offer to raise funds to be used to support pre-FEED studies[115]. Given this progress, the Equus project was classified as **uncertain** for the 2025 WA GSOO.

Ocean Hill

Ocean Hill, situated approximately 350 km north of Perth near the town of Eneabba in the Mid-West, 40 km south of the Southern Erregulla field and 60 km north of Walyering, is 100% owned by Strike Energy[116]. Strike Energy completed processing, mapping, and interpretation of the Ocean Hill 3D seismic survey in FY25, identifying multiple attractive

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[110] See https://company-announcements.afr.com/asx/wds/93fd6252-70f4-11ed-a7d4-365a42ebe906.pdf.

[111] See https://www.woodside.com/docs/default-source/our-business---documents-and-files/burrup-hub---documents-and-files/browse---documents-and-files/browse-information-sheet-incl-enviro---2025-04.pdf?sfvrsn=f0c21a19_1.

[112] The original proposals were submitted in 2018. See https://www.woodside.com/docs/default-source/asx-announcements/2025/044-half-year-2025-report.pdf?sfvrsn=179aac84_3.

[113] See https://www.woodside.com/docs/default-source/media-releases/2025/woodside-welcomes-approval-of-north-west-shelf-project-extension.pdf?sfvrsn=e545d6f2_1.

[114] See https://equusenergy.com.au/.

[115] See https://equusenergy.com.au/wp-content/uploads/2025/10/MEDIA-RELEASE-WGC-Alcoa-Fund-GSA-R0-250908-.pdf and https://equusenergy.com.au/.

[116] See https://www.listcorp.com/asx/stx/strike-energy-limited/news/2025-strike-energy-annual-report-3250289.html.

exploration and appraisal well locations, with an estimate 180 PJ of 2C contingent resources and 190 PJ of 2U prospective resources.

Ocean Hill is in close proximity to the DBNGP, including a nearby compressor station and favourable gas composition comparable to Walyering presenting potential for development. Ocean Hill is classified as a 2C resource which is still in the exploration/appraisal phase of development and thus was classified as **uncertain** for 2025 WA GSOO.

Corvus

The Corvus gas field[117] is located offshore in the Carnarvon Basin, approximately 90 km northwest of Dampier in Commonwealth waters, 62 km from Varanus Island Plant. The field is 100% owned and operated by Santos. An assessment by Gaffney Cline and Associates of estimated ultimate recovery (EUR) for Corvus published in October 2021[118] supported a gas recovery factor of 29% due to low reservoir permeability. The key uncertainty in long-term field deliverability is associated with the facies distribution, and development costs required for a low field volume represent a key challenge to the commercialisation of the resource. Corvus is currently at the post-appraisal phase, modelled as backfill to Varanus Island, and was classified in the **uncertain** category for the 2025 WA GSOO.

3.4 Potential gas supply forecasts

AEMO's potential gas supply forecast by project category from 2026 to 2045 is shown in **Figure 20**. The overall downtrend is due to natural reserve depletion, while the notable increase in 2029 is largely from Waitsia Stage 2's increase in contribution to domestic gas supply and the commencement of anticipated projects West Erregulla and the Lockyer Project. A similar trend is observed for the forecast that also includes uncertain projects, except the increase in supply extends until the early 2030s before natural reserve depletion takes effect after 2035.

The overall increase in potential supply in the first few years[119] of the forecast is predominantly due to Scarborough being brought onstream from the second half of 2026 and new domestic supplies from the committed Waitsia Stage 2 Project (2029) and the anticipated West Erregulla (2029) and Lockyer Gas Project (2029). Uncertain projects, if developed, may further increase potential supply, subject to further uncertainties being resolved:

- Corvus modelled with start from 2029, with development costs considered to be a key project enabler,
- Ocean Hill with modelled start from 2029, subject to an announced appraisal campaign to commence at the second half of 2026[120], and
- Equus with modelled start from 2032, requiring a cost-effective development, leveraging existing infrastructure with suitable available production capacity[121].

The increase in potential supply between 2026 and 2029 is offset by Macedon, Pluto, Varanus Island and Walyering natural reserve depletion.

[117] See https://www.santos.com/wp-content/uploads/2020/02/190416-b-successful-corvus-2-appraisal-well-discovers-significant-offshore-resource.pdf.

[118] See https://www.santos.com/wp-content/uploads/2021/11/211111-Oil-Search-and-Santos-merger-update-Court-approves-distribution-of-Scheme-Booklet-and-convening-of-Scheme-Meeting.pdf.

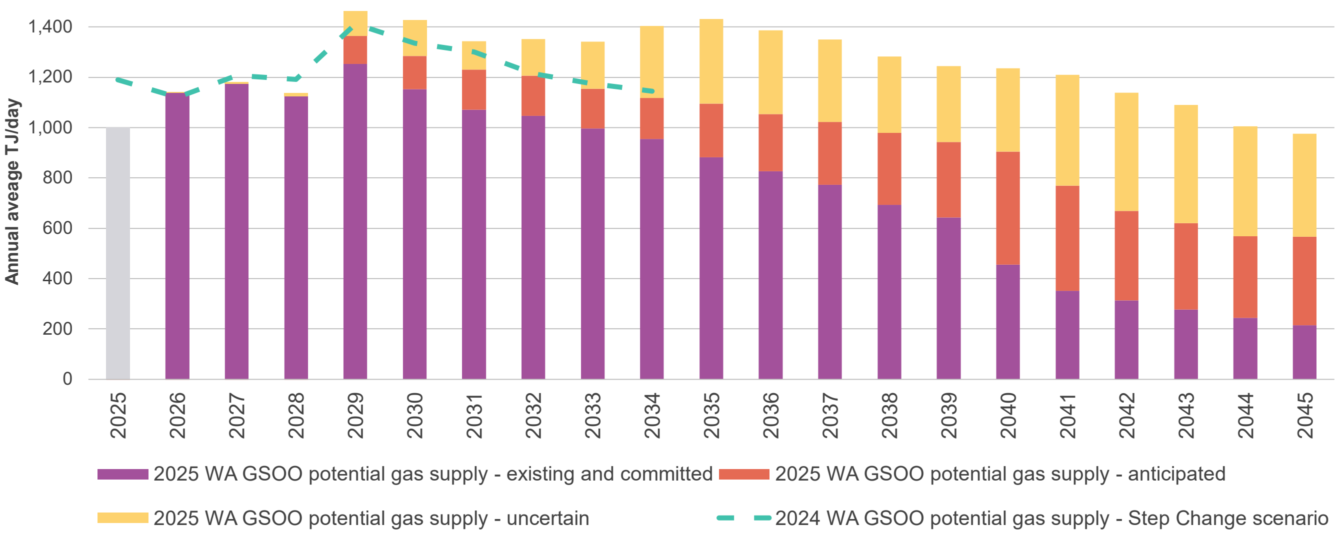
[119] Comparison from 2026 to 2029.

[120] See https://strikeenergy.com.au/announcements/7149540.

[121] See https://equusenergy.com.au/.

The decline in supply forecast after 2030 to the end of the outlook period is largely due to the depletion of a number of gas fields including Varanus Island (including Corvus), Macedon, Pluto, Waitsia, Lockyer Gas Project, West Erregulla, and Equus. This decline is projected to be partially offset by the introduction of the Browse development, which is modelled to come online in 2033. **Table 12** summarises key observations for forecast potential gas supply in each supply category group.

Figure 20 Forecast annual potential gas supply by project category for 2025 WA GSOO against potential gas supply from 2024 WA GSOO, 2026 to 2045, and actual for 2025 (annual average TJ/day)



Source: AEMO, GBB.

Note: Actual supply for 2025 is based on WA GBB data up to 31 October 2025. Adjustments have been made to GBB data to include domestic trucked LNG and exclude gas flows that did not contribute to the domestic gas market for 2025 due to Waitsia LNG exports (estimated using information from Beach Energy's FY24 Second Quarter Activities Report; see https://yourir.info/resources/0c5a441cf54ff229/announcements/bpt.asx/2A1501183/BPT_FY24_Second_Quarter_Activities_Report.pdf).

Table 12 Key observations for forecast potential gas supply between 2025 and 2045, by project category group

Supply scenario	Existing and committed projects only	Existing, committed, and anticipated projects only	Existing, committed, anticipated, and uncertain projects
First 5-year AAGR	2.8%	5.1%	7.3%
First 10-year AAGR	-1.3%	0.9%	3.6%
20-year AAGR	-7.4%	-2.8%	-0.1%
Year of peak supply	2029	2029	2029
Key supply assumptions	• LNG-linked supplies from Gorgon and Wheatstone at 91% and 97% of their capacity, respectively • LNG-linked supplied from KGP • Sustained supply with Scarborough coming online from 2026 • Introduction of Waitsia domestic gas supply in 2029, which corresponds to the peak production of the project • Declining supply post 2030 due to natural field decline from Macedon, Varanus Island, Pluto and Waitsia	• Same as Existing and Committed projects only plus the following: • Gorgon 2C aligned and non-aligned resources • Wheatstone 2C aligned resources • KGP 2C resources • New projects in Perth Basin: Lockyer Gas Project anticipated to start from 2029 West Erregulla anticipated to start from 2029	• Same as Existing, Committed, and Anticipated projects only plus the following: • Wheatstone 2C non-aligned resources • New projects including: Browse modelled to start from 2033 Equus modelled to start from 2032 Ocean Hill modelled to start from 2029

Note: For the AAGR calculations, 2025 is the base year (year 0), 2030 (year 5) for the calculation of first five-year AAGR, 2035 (year 10) for the calculation of first 10-year AAGR, and 2045 (year 20) for the 20-year AAGR.

Compared to the 2024 WA GSOO supply forecast for the *Step Change* scenario shown above as the dotted line in **Figure 20**, this year's supply forecast for existing, committed, and anticipated projects is largely lower, primarily driven by:

- a later anticipated start from 2027 to 2029 and expected diversion of gas to integrated power generation for West Erregulla,
- lower forecast production from Scarborough and Pluto,
- reserves downgrade for Walyering and Beharra Spring fields,
- updated assumptions for Gorgon project including a lower utilisation rate and planned maintenance, and
- a faster projected decline for Macedon and Varanus Island.

3.5 Waitsia Stage 2 – LNG exports and domestic gas

AEMO excluded the Waitsia LNG export volumes from the 2025 WA GSOO domestic supply forecast until 2029, as it is not considered to be available for domestic consumption in that time. The MLVL7 Delivery point (CDBP-MLVL7) has been added to the WA GBB to account for domestic gas being diverted to the Karratha Gas Plant. CDBP-MLVL7 can be viewed in aggregation under the Dampier zone on the WA GBB[122]. To account for the historical quantity of supply that contributed to the Waitsia LNG export, AEMO applied adjustments estimated using publicly available information for presentation of annual actuals in this 2025 WA GSOO[123]. Subsequently, on 3 December 2025, GMPs were notified that an upload of backdated data for the MLVL7 Delivery Point was completed on the WA GBB.

The First Term of the Waitsia JV Domestic Gas Commitment Agreement[124] (DCA) associated with the production of LNG quantities from the Waitsia Stage 2 Project expires on the earlier of:

- 31 December 2028; and
- the date on which all the approved LNG quantities have been produced.

With the delayed commissioning and start-up of the Waitsia Stage 2 facility, the project JV has sourced surplus domestic gas quantities from the domestic gas market through direct purchases or through swap arrangements[125], in addition to its own volumes, to commence LNG exports. With plant operations now commencing, these swap volumes are forecast to be returned to the domestic gas market and are included in the supply forecast for the 2025 WA GSOO.

With only limited production from Waitsia Stage 2 to date[126], the possibility of a reserve downgrade remains and presents a risk to the supply forecasts in this 2025 WA GSOO. Under the DCA, the project's domestic market obligation is linked to its export approval (15% of its 7.5 million tonnes [Mt] LNG quantity). In the event of a reserve downgrade, the JV may

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[122] See https://gbbwa.aemo.com.au/#topology. The MLVL7 Delivery point is not exclusive to gas flows from the Waitsia project.

[123] AEMO's estimation of backdated gas flows was based on export volumes reported from 2023 to end Q1 FY26 being 1.38 million tonnes (76.5 PJ) of LNG. Export volumes were only available for respective Project Joint Venturer Beach Energy (50%) and sourced from Beach Energy Quarterly Activities Reports between Q1FY24 and Q1FY26. Total volumes assumed Mitsui E&P Australia lifted the same quantity reported by Beach Energy. See Beach Energy Quarterly Activities Report 1QFY26, at https://beachenergy.com.au/wpcontent/uploads/2025/10/BPT_FY26_First_Quarter_Activities_Report.pdf.

[124] See https://www.wa.gov.au/system/files/2021-12/Waitsia%20Joint%20Venture%20Domestic%20Gas%20Commitment%20Agreement.pdf.

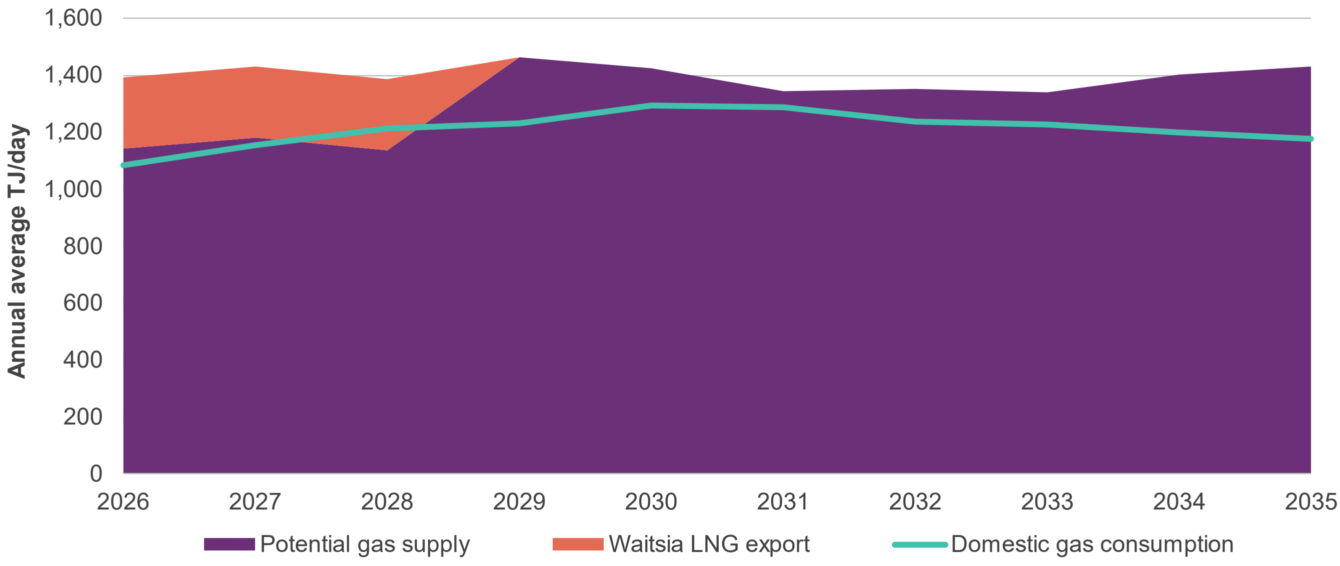
[125] See https://beachenergy.com.au/wp-content/uploads/2025/10/BPT_FY26_First_Quarter_Activities_Report.pdf.

[126] See https://yourir.info/resources/0c5a441cf54ff229/announcements/bpt.asx/2A1634707/BPT_Waitsia_Gas_Plant_Ready_For_Start_Up.pdf.

request a reduction to its approved LNG quantity, which would reduce the associated domestic gas commitment, subject to various conditions being met, including Ministerial consent.

Forecast Waitsia LNG export is shown in orange shading in **Figure 21**, which is excluded from potential gas supply to the domestic market until 2029.

Figure 21 Domestic gas consumption and potential gas supply plus Waitsia LNG exports, 2026 to 2035 (annual average TJ/day)



3.6 Sensitivity analysis

The potential gas supply forecasts presented in this WA GSOO are based on 2P reserves and 2C resource estimates. Sensitivities to potential gas supply for corresponding 1P reserve and 1C resource estimates are presented below for the Perth Basin.

It should be noted that for the presented sensitivity outcomes to occur, there would need to be a high correlation between key geological and reservoir uncertainties across the Perth Basin that result in low-side outcomes for each project. Given the mix of systemic and specific location-dependent uncertainties, the likelihood of realising these aggregated outcomes is low.

Offshore geological and reservoir uncertainties also present risks and opportunities as illustrated by the recent retirement of Santos's Reindeer project due to earlier than expected water influx[127], and better than expected reservoir performance associated with the Varanus Island / Halyard-2 well[128]. AEMO continues to work with stakeholders to accurately represent risk in its supply forecasts, including a methodology for an aggregated offshore resource sensitivity.

[127] See https://info.nopsema.gov.au/activities/554/show_public#:~:text=An%20open%20ocean%20well%20(Reindeer,been%20shut%2Din%20and%20depressurised.&text=%2D%20Bird%20deterrence%20on%20the%20WHP,58%20m%20to%2038%20m.&text=schedule%20requirements%2C%20vessel%20availability%20and,also%20be%20conducted%20via%20vessels.

[128] See https://www.santos.com/news/2025-third-quarter-report/.

3.6.1 Perth Basin resource sensitivity

Recent reserves downgrades at Walyering[129] and Beharra Springs[130] illustrate the risks associated with Perth Basin's complex geology. Reserve downgrade risks still remain, given limited operating history from projects that are only just now starting to produce (Waitsia Stage 2) or still under development (West Erregulla and Lockyer).

As such, AEMO performed a resource sensitivity presented in **Figure 22** illustrating an outcome where Perth Basin geological and reservoir risks result in significant reserves reductions across existing, committed and anticipated projects.

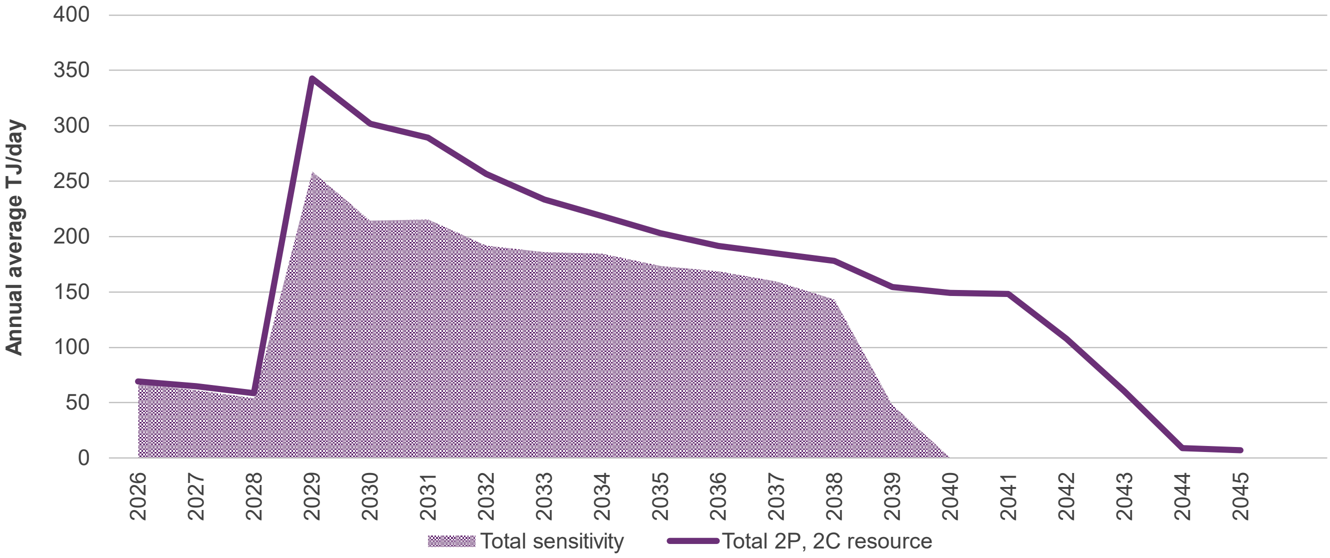
Projects included in the sensitivity were:

- **existing and committed** – Beharra Springs, Waitsia Stage 2, Walyering and Xyris, and
- **anticipated** – West Erregulla and Lockyer.

The resource sensitivity in **Figure 22** models a resource reduction of approximately 30%[131], resulting in significantly lower total supply from the Perth Basin from 2029 (84 TJ/day) due to more rapid production decline in existing and committed projects and a shortened plateau length (5 years) for anticipated projects.

It is important to note that this sensitivity represents an outcome in which all projects are subject to a resource reduction of similar proportion.

Figure 22 Perth Basin resource sensitivity, 2026 to 2045 (annual average TJ/day)



[129] Production performance indicating connected gas to be closer to the 1P interpretation; see https://strikeenergy.com.au/announcements/7111177.

[130] To recent well data showing partial depletion in the northern compartment of the field; see https://yourir.info/resources/0c5a441cf54ff229/announcements/bpt.asx/2A1611447/BPT_2025_Beach_Energy_Ltd_Annual_Report.pdf.

[131] The difference between 1P and 2P reserves in the 2025 FIR submissions averaged approximately 30% of 2P.

4 Western Australian domestic gas supply adequacy

This section assesses the adequacy of Western Australia's domestic gas supply over the 20-year outlook period. The analysis combines forecasts of domestic gas consumption and potential supply to identify when supply gaps may emerge and assesses the capability of existing pipeline and storage infrastructure to meet future demand.

Key insights

- The 2025 WA GSOO forecasts the domestic gas market to remain broadly balanced in the near-term, with widening supply gaps expected to emerge from 2030 as natural gas reserves deplete faster than gas consumption declines.
- The near-term balance is contingent on new gas supply from the Scarborough Energy Project and moderate industrial demand, and remains sensitive to project timing and unplanned outages.
- Peak day shortfalls may materialise from 2029, with increased volatility from, and reliance on, GPG gas demand exceeding maximum flow limits on the DBNGP. Events where pipeline pressure breaches operating limits may occur earlier than 2029 if production does not meet demand, or from a combination of events such as those that occurred on 25 August 2025, illustrating the interdependency of electricity and gas systems.
- Longer-term adequacy could improve with the development of uncertain offshore resources (such as Browse and Equus), enhanced storage flexibility, and accelerated electrification with renewable energy that reduces gas consumption.

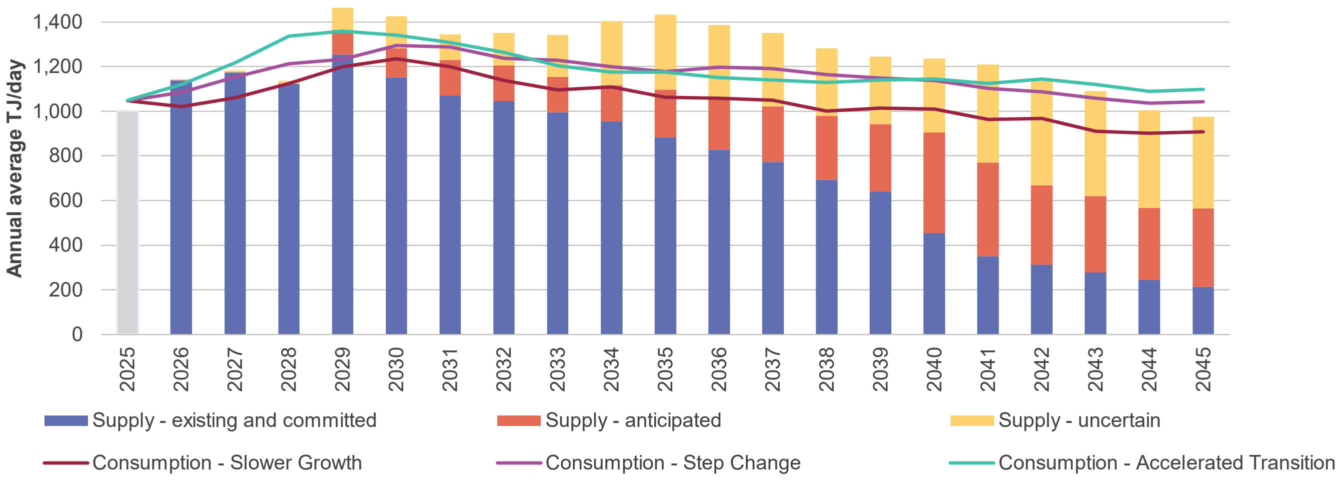
4.1 Domestic gas market balance

Based on forecasts of annual consumption and potential gas supply discussed in previous sections, **Figure 23** shows that:

- The Western Australian domestic gas market is balanced through to 2027, and is at risk of a supply gap in 2028 and widening supply gaps from 2030 under the *Step Change* and *Slower Growth* scenarios. Under the *Accelerated Transition* scenario, supply gaps emerge from 2027 and remain for the rest of the outlook period.
- Potential domestic supply is forecast to exceed consumption by 54 TJ/day and 20 TJ/day in 2026 and 2027, respectively, under the *Step Change* scenario. The market is broadly in balance during this period, supported by the commencement of supply from the Scarbrough Energy Project in late 2026 and sustained curtailment of nickel, alumina and lithium processing operations. The domestic market balance remains tight through this period and unplanned production outages could lead to risk of unserved gas demand.
- In 2028, the risk of a supply gap is forecast due to new gas-consuming projects increasing consumption one year before the development of new gas supply sources. In 2029, with the inclusion of new committed and anticipated supply projects, this forecast supply gap is temporarily mitigated. However, from 2030 onwards, supply gaps are forecast to grow from 11 TJ/day (1% of consumption) in 2030 to 82 TJ/day (7% of consumption) in 2035, and to 478 TJ/day (46% of consumption) in 2045.

- Under all three scenarios from 2030, new sources of both anticipated and uncertain supply will be required to mitigate forecast supply gaps.

Figure 23 Forecast Western Australian domestic gas supply adequacy, *Step Change* scenario, 2026 to 2045 (annual average TJ/day)



Source: AEMO, WA GBB.
Note: Actual supply for 2025 is based on WA GBB data up to 31 October 2025. Adjustments have been made to GBB data to include domestic trucked LNG and exclude gas flows that did not contribute to the domestic gas market in 2025 due to Waitsia LNG exports (estimated using information from Beach Energy's FY24 Second Quarter Activities Report; see https://yourir.info/resources/0c5a441cf54ff229/announcements/bpt.asx/2A1501183/BPT_FY24_Second_Quarter_Activities_Report.pdf).

In the *Step Change* scenario, domestic consumption is forecast to increase from 2026 and reaches its maximum in 2030. Higher consumption from existing projects in the mining, minerals processing and industrials sectors contributes to significant growth during this period. This, in addition to the commencement of Perdaman's Karratha Urea Project, pushes forecast consumption approximately 1,300 TJ/day in 2030.

This growth in consumption between 2026 and 2030 is partially met by supply from the Scarborough Energy Project (expected to commence in 2026), Waitsia Stage 2 (from 2029), and new anticipated projects West Erregulla and the Lockyer Gas Project (both forecast to commence in 2029). However, the currently advised timing of new supply projects creates a lag in the growth in consumption, leading to a forecast supply gap risk in 2028. Addressing this gap will require an increase in supply from existing sources or earlier domestic supply from new supply sources.

From 2030, under all scenarios, current modelling indicates new gas supply is required.

4.2 Western Australian gas pipeline and storage adequacy

4.2.1 Historical events

The events of 25 August 2025 illustrate the need to ensure secure and reliable gas supply (including transportation) for electrical power generation in the SWIS[132]. On that day, weather conditions caused rapid fluctuations in renewable energy supply requiring daytime dispatch from battery energy storage systems (BESS), contributing to an inadequate

[132] For further information on the events of 25 August 2025, refer to AEMO's Real-Time Market Insights Forum on 29 October 2025, at https://www.aemo.com.au/-/media/files/stakeholder_consultation/working_groups/wa_meetings/real-time-market-insights-forum/2025-10-29-rtm-industry-insights-forum.pdf?rev=de7d713dfabb4438b722cca317365d85&sc_lang=en.

state of charge in advance of the evening peak. Supporting GPG was dispatched at short notice for several hours causing gas demand to materially exceed reserved capacity and intra-day nominations, surpassing gas transportation capabilities if these conditions had prevailed over a longer period.

Such events highlight the interdependencies between the gas and electricity systems in Western Australia, which AEMO has examined more closely in its infrastructure adequacy assessment in the following sections.

4.2.2 AEMO evaluation of infrastructure adequacy

AEMO's infrastructure adequacy modelling indicates that while the Western Australian gas pipeline and storage network has adequate capacity in the near term to 2028, when production facilities are assumed to be unconstrained then pipeline infrastructure is at risk of constraining gas delivery from 2029. This occurs at times of high GPG gas demand or high non-GPG gas demand in the metro and south-west regions.

Interruptions to gas supply can occur when there is inadequate supply from gas producers, or when there is insufficient gas transportation capacity to deliver gas to consumers. GMPs must manage access to both gas supply and pipeline capacity.

AEMO identified a need for a focused assessment of the DBNGP capability to deliver gas to the south-west of Western Australia. AEMO conducted an internal evaluation of the capability of Western Australia's gas pipeline and storage network from 1 January 2026 to 31 December 2035 using a time-sequential energy supply model (Appendix A8 provides more details on this methodology).

The model was designed to identify any potential congestion in the pipeline network or shortfalls in gas storage capacity based on the *Step Change* scenario. For this WA GSOO, the modelled network topology was upgraded to enhance modelling resolution.

Table 13 and **Figure 24** summarise the modelling cases and outcomes for the 2025 WA GSOO *Step Change* scenario.

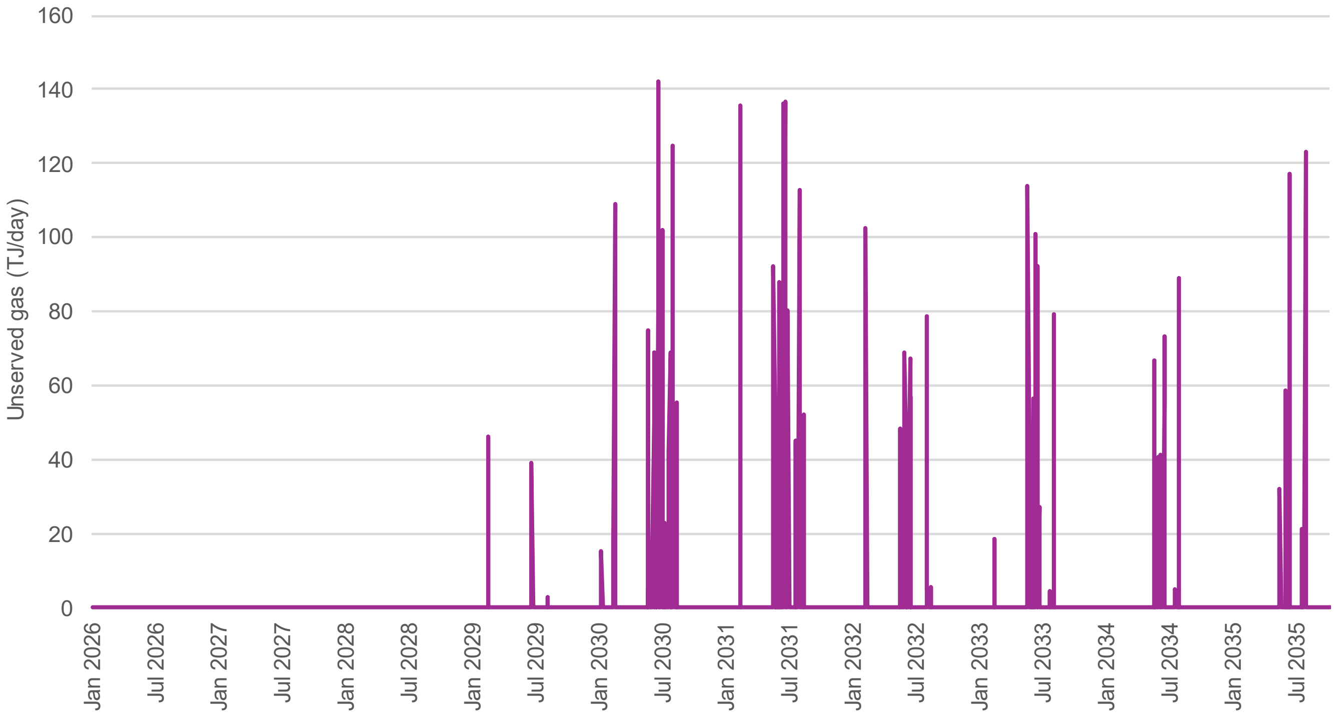
The primary modelling case assumed unconstrained production, to better isolate the adequacy of pipeline and storage infrastructure in serving gas demand. On a constrained basis, unserved gas is dominated by imbalances in domestic gas market production and consumption (rather than pipeline and storage capacity, which is the focus of this assessment).

Table 13 AEMO infrastructure adequacy assessment

Modelling case	Outcomes
Unconstrained production from 1 January 2026 to 31 December 2035. **This case investigated the forecast adequacy of the gas pipeline and storage network under the assumption that there is sufficient gas supply available (that is, limitations on gas production or production outages were not considered). A gas demand scenario was selected from a range of forecasts in which maximum daily GPG gas demand was projected[A].**	• Simulations indicate the Western Australian gas pipeline and storage network has adequate capacity in the near term to 2028 for the forecast gas demand in the *Step Change* scenario. • DBNGP constraints were observed on the pipeline section from the Perth Basin to metro areas from 2029 onwards in this unconstrained gas supply case. • Pipeline congestion was modelled to occur from 2029 where SWIS GPG gas demand is high, and during events of high non-GPG gas demand across the Metro and South-West regions.

A. Gas demand is based on the *Step Change* scenario. This is comprised of non-GPG demand expressed as annual daily average TJ/day and GPG demand expressed as daily demand, which is then informed by five weather reference years (based on calendar years 2020, 2021, 2022, 2023 and 2024). The maximum daily GPG demand scenario was that with the highest daily GPG demand observed across the whole data set.

Figure 24 Forecast unserved gas arising from infrastructure constraints, *Step Change* scenario, 2026 to 2035 (TJ/day)



4.2.3 Supplementary infrastructure adequacy assessment

To supplement its evaluation, AEMO engaged with AGIG, owner and operator of the DBNGP, to conduct an infrastructure adequacy assessment, covering the outlook period from 1 January 2026 to 31 December 2035, using its in-house modelling capability. GPG modelling commissioned by AEMO for this 2025 WA GSOO was used as input to this infrastructure adequacy assessment and reflects the announced retirement and assumed unavailability of existing SWIS coal-powered generation, the introduction of further significant wind, solar and battery storage capacity, and establishment of new GPG. Further details on the GPG modelling are in Section 2.

As the supplementary assessment is focused on gas transport capability, for this purpose, AEMO assumed unconstrained and uninterrupted gas supply from producers and unconstrained contractual limits from a gas transportation perspective. Projections for gas consumption are comprised of new and existing GPG consumers, with growing requirement for flexible gas supply, and non-GPG consumers, such as large industrial and distribution-connected commercial and residential users.

Gas consumption forecasts used in the supplementary assessment were sourced from:

- **GPG gas consumption** – AEMO's 2025 WA GSOO GPG gas consumption forecasts prepared by EY, based on the *Step Change* scenario[133], and
- **non-GPG gas consumption –** AGIG internal assumptions for large gas consumers[134]. For residential and commercial distribution network customers, a flat growth rate was applied to historical gas flows.

[133] GPG forecasts were prepared as half-hourly time-sequential gas generation and gas demand, supporting WEM reliability standards under the ESM Rules and consistent with the electricity demand forecast under the 2025 WEM ESOO *Step Change* scenario.

[134] To preserve the confidentiality of information provided under AEMO'S FIR, AGIG was instructed to adopt its own assumptions for forecast gas consumption of large gas users.

Gas transportation constraints were identified by performance testing modelling of existing DBNGP infrastructure under peak and high gas demand conditions for each year across the first 10 years of the outlook period. For each year of the first 10 years of the outlook period, one period of five weeks was selected with the following parameters:

- annual highest instantaneous 30-minute draw (TJ/30 minutes),
- annual highest GPG daily demand (TJ/day),
- highest GPG gas demand for a week (TJ/week), and
- highest sustained GPG gas demand for several weeks (TJ/30 minutes threshold).

With constraints identified, AGIG advised of possible mitigations ranging from changes to operational measures, through to debottlenecking investments, such as pipeline looping and compressor upgrades, and local upgrades that may be associated with new power stations, such as construction of DBNGP laterals and meter stations.

The results from the assessment, identified constraints and possible mitigations are summarised in **Table 14** below.

Table 14 Supplementary infrastructure adequacy assessment

Period	Outcomes and risks
2026 to 2027	• Simulations based on the *Step Change* scenario indicated possible minor shortfalls in a limited number of cases for short periods of time.
2028 to 2029	• More frequent unserved gas is observed in 2028 and then more consistently from 2029 in periods of sustained high gas demand where pipeline pressure exceed design limits. • Peak flow rates required by consumers causes potential for compressor surging. • Gas supply priorities preference residential, foundation customers and firm capacity services.
2030 to 2035	• The system experiences increased observed gas demand and variability from existing and new GPG capacity as coal generation has exited and a higher proportion of electricity is supplied by intermittent, weather-dependent renewable energy. • Instances of unserved gas increase in frequency, with insufficient capacity leading to pressure drops and risk of damage to pipeline or its equipment.

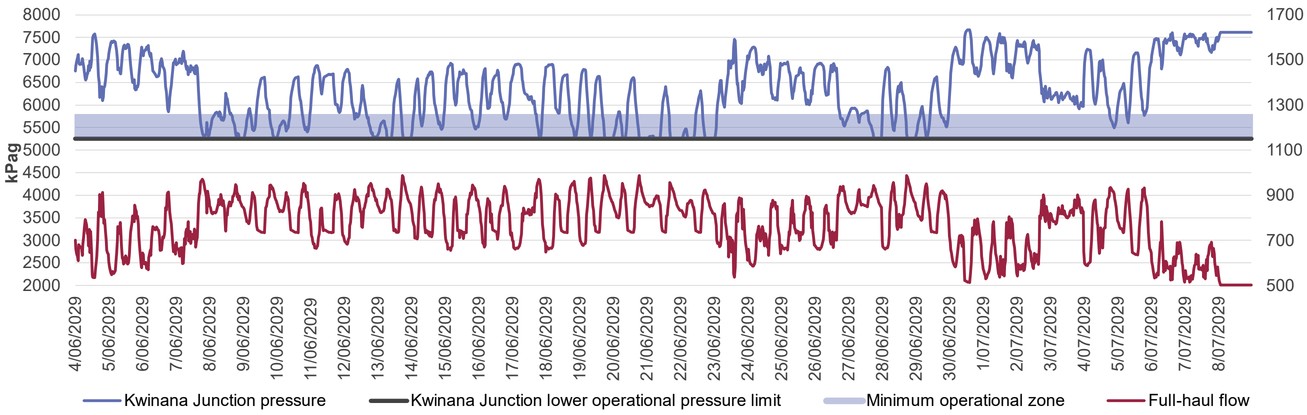
In the near term to 2028, pipeline infrastructure is expected to be adequate to manage peak day gas demand through operational measures and incremental investments, such as compressor re-wheeling. From 2029, additional measures may be required to accommodate or offset increasing peak day gas demand and volatility associated with growth in renewables and retirement of coal-fired generation, such as:

- enhancing flexibility in contracting arrangements for peak demand,
- leveraging dual fuel generation (that is, running on liquid fuels),
- withdrawing gas from existing underground gas storage facilities,
- increased capacity and utilisation of electricity (or gas) demand-side response,
- investment in new long duration (electricity or gas) storage,
- investment in gas infrastructure that allows for peaking capabilities (e.g. looping or mainline expansion), or
- a combination of the above mitigations.

Modelled simulations were based on the technical design limitations of the pipeline and do not factor in market or operational disruptions, or prudent operational measures that are required to maintain the integrity of pipeline operations.

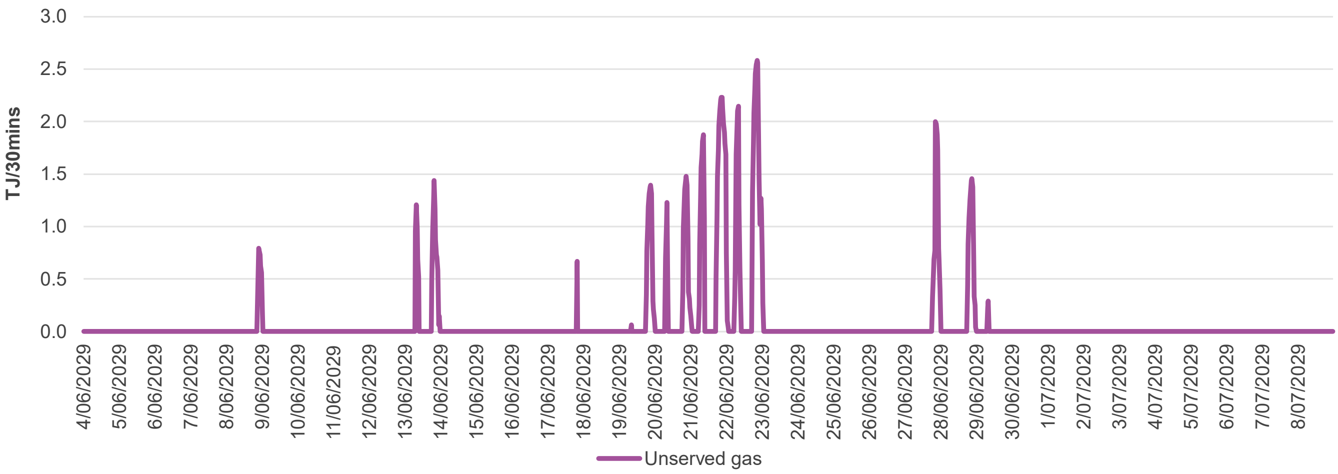
Figure 25 and **Figure 26** illustrate a modelled outcome of a simulation covering a five-week period in the winter season of 2029 where sustained high GPG gas demand is observed and pipeline pressure falls to the minimum design pressure.

Figure 25 Modelled DBNGP flow (TJ/day) compared to Kwinana Junction pressure (kPag) for a high GPG gas demand period in winter 2029



kPag: kilopascals gauge pressure.
Source: AGIG

Figure 26 Modelled unserved gas (TJ/30 minutes) south of Kwinana Junction for a high GPG gas demand period in winter 2029



Source: AGIG

During the weeks leading up to this simulated event, gas demand from GPG through compressor station 9 was modelled at between 550 TJ/day and 900 TJ/day. Subsequently, weather conditions during the following week lead to higher sustained utilisation of GPG and gas demand, with demand ranging from 700 TJ/day to 950 TJ/day. With average demand sitting above the 845 TJ/day T1 DBNGP nameplate capacity, line pack began to be drawn down, as evidenced by declining pipeline pressures in **Figure 26** above. Shortfalls in gas delivery represent the result of reaching a minimum operating pressure threshold in the pipeline.

Modelled simulations assumed sufficient gas supply is available to meet projected gas demand regardless of commercial arrangements between consumer, supplier and shipper. If only customer-contracted transport positions were to be included in the assessment, AGIG's modelling does not indicate any shortfalls in the period from 2026 through to 2030 arising from infrastructure constraints. Historically, any augmentations to the pipeline network have been led by customer demand and underpinned by contracted positions.

AEMO notes that the infrastructure adequacy assessment included in this 2025 WA GSOO is not exhaustive. It is designed to provide insights into potential infrastructure adequacy issues and does not consider all relevant factors such as cost, regulatory approvals, land use, social licence, safety or operational challenges, nor does it include a cost benefit analysis of the options available. It is not to be used for the purposes of gas network planning and does not amount to a recommendation or representation regarding gas infrastructure options or investments.

The interdependencies of Western Australia's gas and electricity networks is of growing importance in a future electricity system supplied by renewable energy, firmed with storage and backed up by gas. AEMO will continue to work with stakeholders to refine its approach to the infrastructure assessment in future WA GSOOs.

4.2.4 Sensitivity analysis

Sensitivity analysis was modelled with Bluewaters Power Station being unavailable from 1 October 2030, compared to 1 October 2028 under the *Step Change* scenario. Under AEMO's infrastructure adequacy assessment, and supplementary infrastructure modelling undertaken in collaboration with AGIG, the extended availability of Bluewaters Power Station is projected to reduce the magnitude and frequency of peak day gas shortfalls in 2029 and 2030.

Differences were observed where pipeline pressures exceeded design limits during the peak of high gas demand events under the sensitivity case, compared to the *Step Change* case where consistently high gas flows in days and weeks preceding the peak demand events resulted in unserved gas being modelled to occur more frequently.

Although lower in magnitude and frequency under the sensitivity case, forecast unserved gas arising from infrastructure constraints may still require mitigations as outlined in Section 4.4.

4.3 Western Australia domestic gas market uncertainties

The period from 2028 onwards is subject to considerable uncertainty, particularly in relation to consumption.

Prior to 2030, a supply gap in the domestic gas market could materialise if supply projects cannot be accelerated to match consumption, or consumption is greater than forecast. Supply uncertainties increase after 2030 as production from existing fields declines.

Key uncertainties that could impact forecast gas supply adequacy include:

- **Supply flexibility** – limited supply flexibility remains in the market, with gas production facilities operating at close to maximum capacity. If one of the larger gas plants went offline unexpectedly, there could be an immediate but short-term supply shortfall. Line packing of the 1,500 km DBNGP, combined with the Mondarra and Tubridgi storage facilities, and balancing provide by the Karratha Gas Plant, may provide a short-term buffer to supply outage events.
- **Coal supply** – the domestic gas market balance may tighten if coal supply is restricted or coal-fired power stations retire earlier than expected, leading to an increase in consumption of gas for SWIS GPG. Conversely, the gas market balance may be improved if coal-fired power stations were to continue operating later than expected, reducing consumption of gas for SWIS GPG. In this 2025 WA GSOO, AEMO assumed Bluewaters is unavailable from 1 October 2028. AEMO has undertaken sensitivity analysis in this WA GSOO to understand the impacts on gas supply adequacy

if coal supplies to Bluewaters Power Station are further secured to October 2030. Under this sensitivity, gas consumption would reduce by 4 TJ/day in 2028, 38 TJ/day in 2029 and 34 TJ/day in 2030**.** Further detail of this sensitivity analysis is presented in Section 2.

- **VRE development** – domestic gas consumption could also increase if new VRE projects and supporting electricity network infrastructure are delayed (projects connecting to the Western Power network and new network augmentations such as the Clean Energy Links). Annual weather conditions can also contribute to reduced VRE contribution and consequently increased GPG demand.
- **Changing pattern of gas usage and infrastructure adequacy** – the growing role of gas for firming VRE is shifting SWIS GPG usage patterns, with uncertainty as to the adequacy of the pipeline and storage infrastructure system to meet those changing patterns. Close alignment with the WEM ESOO helps the WA GSOO reflect the changing pattern of gas consumption, including short-term gas demand peaks during periods of low renewables output and during peak electricity demand events. These changing patterns are likely to increase operational impacts on gas infrastructure to meet shorter and sharper consumption needs, explored in AEMO's adequacy assessment of pipeline and storage infrastructure in Section 4.2.
- **New gas supply projects** – delays to anticipated gas supply projects could widen forecast supply gaps, reducing the forecast surplus in 2029 and increasing the supply gaps from 2030. Risks remain for Perth Basin projects, where the geology is proving complex. AEMO will continue to engage closely with the developers of anticipated and uncertain gas supply projects to keep updated. On 19 September 2024, an update to Western Australia's Domestic Gas Policy was released aimed at encouraging new onshore gas projects prior to 2030 to ensure energy needs are met[135].
- **New gas consumption projects** – new gas consumption projects could start earlier than forecast, potentially widening supply gaps in the market. For example, in the *Step Change* scenario, the Perdaman Karratha Urea Project is targeting start-up in 2027, with full gas consumption by 2028. If the project ramped up to full production faster than modelled in this 2025 WA GSOO, it would further tighten the domestic market in 2027. The Perdaman Karratha Urea Project has achieved several critical project milestones, including financial close in April 2023,[136] and is now under construction. The project is contracted to take 130 TJ/day[137] of gas primarily from the new Scarborough Energy Project, which is anticipated to commence supply from October 2026 with production ramping up to reach 180 TJ/day.
- **Demand reduction or destruction** – gas price-sensitive industries could choose to reduce or cease operations if gas or alternatives are not available at competitive prices. Responses to AEMO's FIR for this WA GSOO indicate that consumption reduction could happen at $10.00/GJ[138]. Conversely, responses indicated that expanded operations or increased gas consumption could occur at $4.30/GJ.
- **Western Australia pipeline and storage constraint** – simulations indicate the Western Australian gas pipeline and storage network has adequate capacity in the near term for forecast gas demand in the *Step Change* scenario. In the medium term, constraints on the DBNGP were observed on the pipeline section from the Perth Basin to metro areas from 2029 onwards, assuming sufficient gas supply is available to meet demand. Over time, additional measures may

[135] See https://www.wa.gov.au/government/media-statements/Cook-Labor-Government/Updated-domestic-gas-policy-to-secure-WA%27s-energy-future-20240919.

[136] See https://perdaman.com.au/2023/04/20/perdaman-urea-project-closes-financing/.

[137] See https://www.woodside.com/docs/default-source/media-releases/long-term-domestic-gas-sale-between-woodside-and-perdaman-becomes-unconditional.pdf.

[138] The median gas price that influences reduced or expanded operations decreased from the 2024 to 2025 WA GSOOs, from $10.75/GJ to $10.00/GJ (reduced gas consumption) and from $4.60/GJ to $4.30/GJ (increased gas consumption).

be required to meet daily demand needs efficiently. AEMO is working with DEED to identify potential least cost measures.

Western Australia's gas supply depends on a small number of large resource projects, while consumption is dominated by large gas-consuming projects. This implies that domestic gas supply adequacy is sensitive to the actions of a handful of key players, who in turn are influenced by external factors, such as global commodities pricing, energy policy and decarbonisation targets.

4.4 Actions and events that could reduce or eliminate medium-to long-term potential supply gaps

In the medium term, the following actions may reduce or eliminate the risk of a supply gap before 2030:

- Development of uncertain projects or gas fields that are beyond those classified as committed and anticipated, such as Corvus (Varanus Island), Ocean Hill and Walyering 2C resources, could add up to 143 TJ/day of new supply by 2030. However, these projects would require accelerated progress through to FID and project execution.
- Increased flexibility for reservation of existing gas reserves to the domestic market could better match daily peaks and increasing seasonal domestic gas demand. In the near term, management of peak days could include a combination of storage and pipeline line pack. In the medium term, flexibility may come in the form of increasing output from the Karratha Gas Plant and production from storage facilities. Increasing output from the Karratha Gas Plant would require a diversion of LNG gas supplies to the domestic market, so is unlikely to be a sustainable solution without changes to state and commercial agreements.
- Large gas users may transition more rapidly to lower emissions electricity sources. However, this would require a commercial, regulatory and technological pathway to incentivise an accelerated transition.

The potential supply volumes remain uncertain, as several proposed supply projects in the Perth and Carnarvon Basins are at early stages of appraisal.

Over the longer term, new sources of gas supply may include:

- debottlenecking and expansion of existing facilities, including the domestic gas plants attached to LNG projects,
- further successful exploration, for example, in the Perth and Canning Basins, leading to new development opportunities, and
- backfill projects at existing facilities, such as Corvus being developed through Varanus Island, and domestic gas delivery from Equus and Browse being developed via the North West Shelf infrastructure and Karratha Gas Plant. Equus and Browse, if developed, could contribute 50 TJ/day and up to 213 TJ/day to domestic gas supply adequacy starting from 2032 and 2033, respectively. The contribution of Corvus and Ocean Hill, if developed, could be up to 95 TJ/day and 40 TJ/day starting 2029, respectively.

Long-term demand-side responses could include:

- acceleration of build-out rates of VRE and battery energy storage systems, leading to lower gas demand from SWIS GPG in the longer term, and
- acceleration of industrial decarbonisation being accelerated, decreasing gas demand in the long term.