

# How the North West Shelf Extension threatens WA's domestic gas market

***Woodside's North West Shelf Extension has not identified sufficient gas supply for its export capacity. This is already resulting in applications to divert domestic gas to the export terminal. This will permanently destabilise WA's domestic gas market.***

## Briefing note

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Approving Woodside's North West Shelf (NWS) Extension proposal would dramatically reshape WA's domestic gas market. The proposal to extend the life of the liquified natural gas (LNG) export facility for half a century would lock in a level of export demand almost two and half times greater than WA's domestic gas demand. Worse, it would do so without identifying where this gas would come from. If approved, this will create a dynamic of shortages and price increases potentially more severe than what the east coast gas market has experienced since LNG exports began there in 2014.

Because 15% of production from projects is *theoretically*<sup>i</sup> reserved for WA's domestic market, it is often assumed that more LNG exports will result in more domestic gas. This assumption should not be applied to the NWS Extension because its gas supply arrangements are fundamentally different to other LNG projects.

Approvals of previous LNG export facilities in WA, including NWS to date, have all included specific details on gas supply. Each has included details on which offshore gas fields would supply gas, at volumes sufficient for the relevant LNG production capacity.

Woodside has not identified supply sufficient for the capacity of the NWS Extension. The main potential offshore supply, Browse, is far from certain, and could only fill a fraction of the NWS Extension's capacity over the proposed 50 year life.

Instead, Woodside describes its strategy for the Extension as the "transformation of the Karratha Gas Plant (KGP) into a third party gas tolling facility."<sup>iii</sup> The gap between the capacity of the NWS Extension and identified supplies, the gap that Woodside hopes "third parties" might fill, will place **huge pressure on WA's domestic gas supply.**

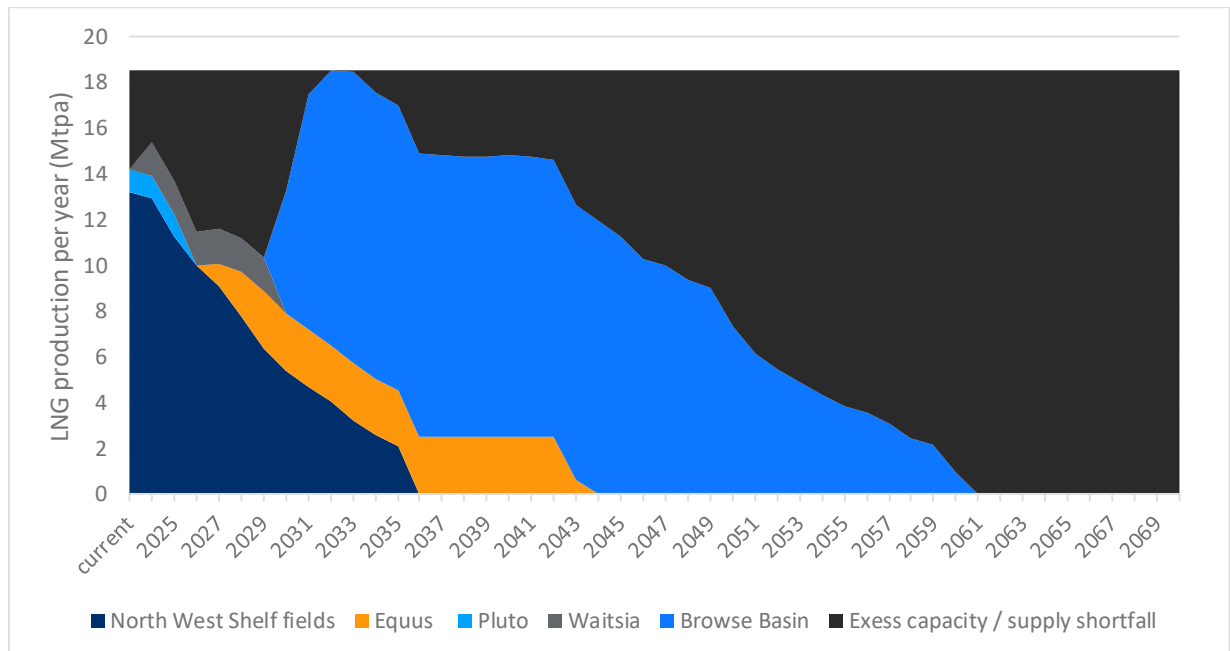
This increase would be far larger than that caused by Queensland’s LNG facilities that drove major price increases on the east coast. The Queensland projects came with identified gas fields estimated as sufficient to feed the new LNG facilities. The NWS Extension does not.

The NWS is Australia’s largest LNG facility with a total demand of around 2,500 TJ/day, **more than double current total domestic gas demand in WA** of around 1,100 TJ/day.<sup>iii</sup> The NWS facility is currently supplied by offshore gas in Commonwealth waters, but these fields are rapidly depleting and Woodside expects them to end by 2036.<sup>iv</sup>

This means the extension of NWS will lock in **export demand equivalent to more than double total WA domestic gas demand for decades**, with no secure source of supply.

Figure 1 below uses Woodside’s ASX disclosures to chart available and potential gas sources. It shows that the NWS facility will face an export gas supply gap (shown in black) to 2029, and then again from the early 2030s. No non-domestic sources have been identified to fill this gap.

**Figure 1: NWS Extension capacity and potential supply**



Source: Woodside documents analysed in Verstegen (2024) *Submission to Inquiry into the WA Domestic Gas Policy*, Excess LNG export capacity and state energy policies as emerging threats to WA’s domestic gas market, environment, and economy

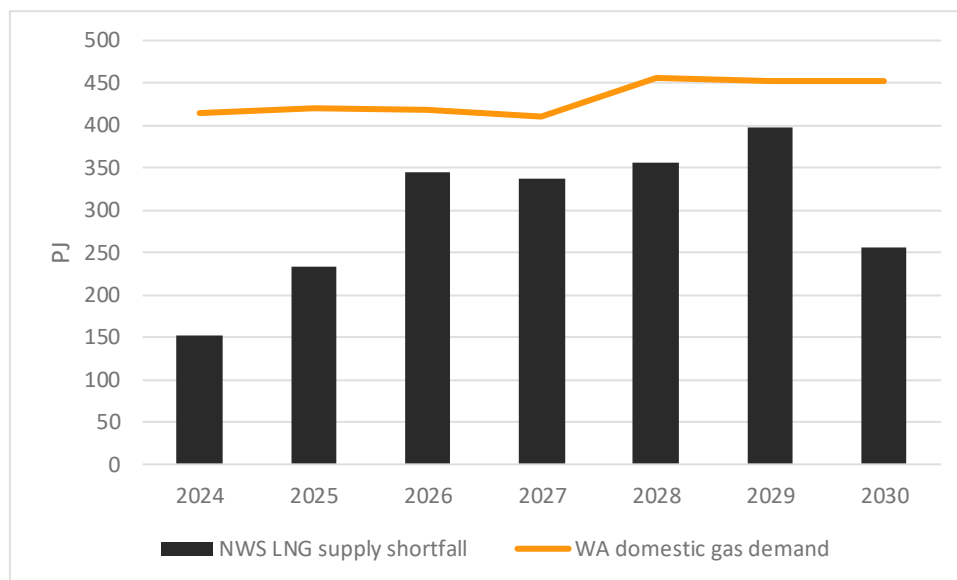
The analysis in Figure 1 is supported by Wood Mackenzie research that notes the NWS facility would have “up to 7 million tonnes per annum (mtpa) of spare capacity available by 2027, equating to “to 40% of the project’s nominal capacity.”<sup>v</sup>

It is important to note that Figure 1 is based on a best case scenario. It assumes:

- Existing NWS fields last to 2036.
- Inclusion of gas from the declining Pluto fields (the ‘Pluto Accelerator’).
- The Browse Basin – a highly uncertain development which will supply only 32% of aggregate demand over the life of the NWS extension.
- The Equus field – an even more uncertain third-party development which would only marginally increase supply.

Figure 2 below compares the NWS Extension supply gap to 2030 with total current WA demand in the domestic market.

**Figure 2: NWS Extension supply shortfall vs current WA domestic gas demand**



Source: Woodside documents analysed in Sustainable Energy Now (2024) *Submission to Inquiry into the WA Domestic Gas Policy*, Excess LNG export capacity and state energy policies as emerging threats to WA’s domestic gas market, environment, and economy. WA GSOO 2023, Table 1, p.5.

Figure 2 shows that **the supply gap in will be equivalent to around 78% or more of forecast total WA domestic gas demand from 2026-2029.**<sup>vi</sup>

**Woodside and their JV partners will be highly motivated to fill this supply gap with gas that would otherwise supply the domestic market.**

Wood Mackenzie also see little chance of filling the supply gap from non-domestic gas sources, saying “other possible candidates, such as Clio-Acme, or excess gas from Greater Gorgon field development, now look unlikely,” and points out that “neither the Scarborough nor Browse developments are straight-forward to deliver.”

Approval for the NWS extension will **directly undermine the security of the domestic gas market**, far beyond the weaknesses of the Domestic Gas Policy recently demonstrated by the WA Parliamentary inquiry. Furthermore, domestic gas proponents including Mineral Resources,<sup>vii</sup> Beach Energy, Black Mountain<sup>viii</sup> and others

are already jostling for export ban exemptions to supply the NWS facility. The Waitisia JV partners including Beach Energy have already received approval to supply 200 TJ/day to NWS.<sup>ix</sup> While this is a large loss to the domestic gas supply (18% of current demand), it will only supply 8% of the total demand from NWS for a period of six years.

**Contracts for exporting onshore gas at the NWS facility compete directly with domestic gas consumers and reduce the reserves of gas available to supply the domestic market into the future.**

The approval of NWS will lock in a multibillion-dollar incentive for these companies and Woodside to pursue export approvals for the next 50 years. Gas shortage and price problems in the domestic market created by Woodside will become the problem of the WA Government and the WA community.

### **Recommendation**

While the EPA assessment does not consider the wider impacts on the economy including the domestic gas market, these are properly matters for the Minister to consider following the EPA assessment.

The recent report of the Parliamentary Inquiry into domestic gas policy in WA recommended an ‘ongoing inquiry’ into the WA LNG export market, to understand how LNG export demand may affect the state’s domestic market supply.<sup>x</sup> The Australia Institute supports this recommendation.

To be clear, the Australia Institute believes the NWS project **should be rejected on climate grounds**. The proponents themselves acknowledge the project will result in lifecycle emissions of 88 Mt CO<sub>2</sub>e annually and 4.3 billion tonnes over its lifetime<sup>xi</sup> which is clearly unacceptable. The Australia Institute’s position is consistent with IEA, UN and IPCC, and supported by scientists and experts in Australia and globally.<sup>xii</sup>

However, purely in relation to its impact on the domestic gas market, The Australia Institute recommends that **no decision should be made to approve Woodside’s NWS Extension until a transparent public analysis has been undertaken of the impacts of this project on WA’s domestic gas supplies and reserves**.

Such a process must require Woodside to demonstrate how it intends to supply the proposed operating life of the NWS facility from offshore (non-domestic market) sources and consider the strategic implications of the demand shortfall for the WA domestic gas market. **No approvals for this facility should be provided that would result in depletion of domestic reserves for export by Woodside.**

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- <sup>i</sup> The Final Report of the Parliamentary Inquiry in the WA Domestic Gas Policy, comprehensively shows LNG producers have delivered only a fraction of their domestic gas obligations. Tinley et al (2024) *Domestic Gas Security In a Changing World, Inquiry into the WA Domestic Gas Policy: Final Report*, [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](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)
- <sup>ii</sup> Woodside (2020) *ASX Announcement, NWS Project Participants Execute Gas Processing Agreements*, [https://www.woodside.com/docs/default-source/asx-announcements/2020-asx/nws-project-participants-execute-gas-processing-agreements.pdf?sfvrsn=1379d276\\_2](https://www.woodside.com/docs/default-source/asx-announcements/2020-asx/nws-project-participants-execute-gas-processing-agreements.pdf?sfvrsn=1379d276_2)
- <sup>iii</sup> Woodside are applying for continuations of NWS capacity 18.5 Mtpa LNG, Woodside 2019, North West Shelf Project Extension Environmental Review Document, [https://www.epa.wa.gov.au/sites/default/files/PER\\_documentation2/NWS%20Project%20Extension%20-%20Environmental%20Review%20Document.pdf](https://www.epa.wa.gov.au/sites/default/files/PER_documentation2/NWS%20Project%20Extension%20-%20Environmental%20Review%20Document.pdf). This converts to 902 PJ/year, 2,470 TJ/day. WA domestic gas demand in 2023 was 1,066 TJ/day, AEMO (2023) WA GSOO 2023, [https://aemo.com.au/-/media/files/gas/national\\_planning\\_and\\_forecasting/wa\\_gsoo/2023/2023-wa-gas-statement-of-opportunities-wa-gsoo.pdf?la=en](https://aemo.com.au/-/media/files/gas/national_planning_and_forecasting/wa_gsoo/2023/2023-wa-gas-statement-of-opportunities-wa-gsoo.pdf?la=en)
- <sup>iv</sup> KPMG (2022) *Woodside Petroleum Ltd, Independent Expert Report for the proposed merger between Woodside and BHP's petroleum business*, p.216, <https://announcements.asx.com.au/asxpdf/20220408/pdf/457vkk523x0q8z.pdf>
- <sup>v</sup> Offshore Engineer (2020) *Big Projects Will Be Needed to Fill Up North West Shelf's Spare Capacity, Woodmac Says*, <https://www.oedigital.com/news/481495-big-projects-will-be-needed-to-fill-up-north-west-shelf-s-spare-capacity-woodmac-says>
- <sup>vi</sup> Sustainable Energy Now (2024) *Submission to Economics and Industry Standing Committee Inquiry into the WA Domestic Gas Policy*, [https://www.parliament.wa.gov.au/Parliament/commit.nsf/lulnquiryPublicSubmissions/32ADC59153AE4C7448258B69002C1493/\\$file/20240519%20-%20DomGas%20-%20Supp%20Submission%20-%20Sustainable%20Energy%20Now%20a.pdf](https://www.parliament.wa.gov.au/Parliament/commit.nsf/lulnquiryPublicSubmissions/32ADC59153AE4C7448258B69002C1493/$file/20240519%20-%20DomGas%20-%20Supp%20Submission%20-%20Sustainable%20Energy%20Now%20a.pdf), AEM (2023) WA GSOO 2023, Table 1, p.5. [https://aemo.com.au/-/media/files/gas/national\\_planning\\_and\\_forecasting/wa\\_gsoo/2023/2023-wa-gas-statement-of-opportunities-wa-gsoo.pdf?la=en](https://aemo.com.au/-/media/files/gas/national_planning_and_forecasting/wa_gsoo/2023/2023-wa-gas-statement-of-opportunities-wa-gsoo.pdf?la=en)
- <sup>vii</sup> Milne (2023) *MinRes chases Western Australian government favour to export gas*, <https://www.smh.com.au/business/companies/minres-chases-western-australian-government-favour-to-export-gas-20231116-p5ekgu.html>
- <sup>viii</sup> Black Mountain (2021) *Media release, Black Mountain Energy Secures Export Exemption to Western Australian Domestic Gas Policy*, <https://www.blackmtn.com/press-release/black-mountain-energy-secures-export-exemption-to-western-australian-domestic-gas-policy/>
- <sup>ix</sup> Woodside Petroleum 2020 *ASX Announcement NWS Project Participants execute Gas Processing Agreements*, [https://www.woodside.com/docs/default-source/asx-announcements/2020-asx/nws-project-participants-execute-gas-processing-agreements.pdf?sfvrsn=1379d276\\_2](https://www.woodside.com/docs/default-source/asx-announcements/2020-asx/nws-project-participants-execute-gas-processing-agreements.pdf?sfvrsn=1379d276_2)
- <sup>x</sup> Recommendation 25 “That the State Government consider referring to an appropriate state government agency an ongoing inquiry into Western Australia’s LNG export market to pre-empt significant and potentially sudden impacts to the domestic market and the operation of the WA Domestic Gas Policy.” [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](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)
- <sup>xi</sup> Woodside (2022) *North West Shelf Project Extension Proposal, Woodside Energy Ltd*, p.10, [https://www.epa.wa.gov.au/sites/default/files/EPA\\_Report/EPA%20Report%201727%20-%20North%20West%20Shelf%20Extension%20Project%20-%20assessment%20report.pdf](https://www.epa.wa.gov.au/sites/default/files/EPA_Report/EPA%20Report%201727%20-%20North%20West%20Shelf%20Extension%20Project%20-%20assessment%20report.pdf)
- <sup>xii</sup> The Australia Institute (2023) *Australia’s Fossil Fuel Hypocrisy Called Out on the World Stage*, <https://australiainstitute.org.au/post/australias-fossil-fuel-hypocrisy-called-out-on-the-world-stage/>