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Future Gas Strategy Taskforce
Oil and Gas Division
Department of Industry, Science and Resources (DISR)
Industry House, CANBERRA, ACT, 2600

Via email: GasOptions@industry.gov.au

Dear Taskforce

Woodside Energy Group Ltd (Woodside) welcomes the opportunity to contribute to the Australian Government's development of a Future Gas Strategy (the Strategy), which is urgently needed to:

- Affirm the clear role for gas in Australia and Australian gas use internationally due to its flexibility, scalability, dependability, and emissions profile when compared to other fossil fuel sources.
- Demonstrate Australia's leadership in the energy transition and ability to responsibly develop gas projects in the national interest.
- Articulate the ways in which gas positively contributes to the community as a fuel source, feedstock for products and equipment and to the economy.
- Address the ongoing policy uncertainty related to timely approvals of needed gas projects, which is disrupting local and regional energy markets.
- Highlight the benefits of Australian gas at a time when access to secure, affordable, and reliable energy supply is becoming increasingly challenged in a volatile and uncertain world.
- Provide certainty to workers and businesses including the Australian manufacturing industry on the medium- and long-term role of gas so that they can make decisions and invest with certainty.
- Emphasise that carbon capture and storage (CCS) is an opportunity for Australia to reduce the emissions intensity of its gas, other industries and support regional decarbonisation by offering CCS as a service.
- Prioritise policy reforms that incentivise lowest cost abatement from heavy emitting industries and facilities.

Woodside supports all four objectives of the Strategy and sees them as interrelated goals: providing affordable and reliable energy for Australians; maintaining strategic partnerships and energy security in our region; and simultaneously progressing decarbonisation of our trading partners and decarbonisation in Australia.

Australia has an opportunity to be a regional and global leader in the energy transition but must get the policy settings right and embrace the opportunities a strong Australian gas industry presents. If we don't get it right, there is a real risk energy development will stall and Australia will miss out on the benefits.

Gas continues to play a role in Australia and the globe's future in most 1.5 degree aligned climate modelling scenarios. The extent of gas's role in the energy mix will be determined by the many variables that shape future gas demand. As the global population is increasing and developing nations' energy consumption is rising, the Government must recognise Australia has bountiful resources to support both renewable and non-renewable energy developments. It is in this frame that gas has a unique role to play in both Australia's domestic and export economies. [1,2]

[1] The United Nations, UNFPA State of the World Population 2023.
[2] UN Department of Economic and Social Affairs – Division for Sustainable Development.

Woodside addresses these issues (and others), openly and transparently in our Climate Report which details our climate-related plans, activities, progress and climate-related data.[3]

The link between a viable gas industry and a secure domestic National Electricity Market (NEM) was clearly articulated by the Australian Energy Market Operator (AEMO) in March 2023:

Gas availability impacts the security of the NEM, and operation of the NEM has an impact on gas demand. The two markets are joined at the hip, what happens in one impacts the other. Gas generation will enable higher rates of renewables and support the power system against the degrading performance and impending retirement of coal generation.[4]

In addition to the importance of gas domestically, the Strategy must also send a strong and an important signal to our regional partners that Australia is open for business.

Australia should take pride in its gas sector, including in its ability to produce and supply gas in an environmentally responsible[5] way to markets that are committed to the energy transition and maintain their own emissions reduction targets.

The Strategy must detail a realistic pathway for Australia into the future, whereby responsible resource development is understood, and new gas supply is prioritised. But to continue to invest and take risks, the industry needs fiscal and regulatory stability.

In making the attached submission (Attachment 1), Woodside has sought to provide evidence and market-based perspectives. In doing so, we would like to draw the Government's attention to the following recommendations, which we believe would make a significant impact in improving how the gas industry operates today:

- Government to make a clear and unequivocal statement in support of the gas industry, the jobs it sustains, the revenue it creates, the economic growth and living standards it supports and the role of gas in the energy transition. In doing so, this should acknowledge the role the safeguard mechanism has in reducing emissions across production assets, and the complementary nature of gas for renewable energy build-out.
- Commit to improving legislation and revising existing offshore environmental regulations at the earliest opportunity, particularly to ensure approvals are provided in a timely manner and with certainty. This has the added benefit of providing a framework to streamline the approvals process required for renewable energy projects, the transmission network and critical minerals sector. All of which is critical to ensuring long-term investment and growing secure jobs in energy related sectors.
- The Strategy should outline that is not going to artificially seek to curtail supply in an attempt to reduce demand as this will only exacerbate price volatility.
- Expedite the wholesale review of environmental management regulatory frameworks for offshore resources, complete with a detailed timeline of activities and milestones to work towards. This should also consider the proposed Environment Protection and Biodiversity Conservation Act reforms to ensure further uncertainty does not add to the current problem.
- Reinstate annual offshore exploration and carbon, capture and storage acreage release rounds so that the opportunity for future supply is maintained in line with market demand / supply gaps.
- Extend the Capacity Investment Scheme to include gas power generation.
- Pursue policies that incentivise lowest cost abatement from heavy emitting industries and facilities. For example, consider amendments to Safeguard Mechanism rules to incentivise renewable power purchase or importation from renewable energy projects developed outside the facility boundary. It is our view that a stable energy transition will be one in which energy is secure, affordable, and reliable and in this regard, we look forward to supporting the Government in the development of the Future Gas Strategy.

[3] woodside.com/docs/default-source/investor-documents/major-reports-(static-pdfs)/2022-climate-report/climate-report-2022.pdf?sfvrsn=240783fc_16.
[4] AEMO | Gas supply improved for winter 2023 but risks remain.
[5] Australian LNG producers are subject to the Safeguard Mechanism, which requires emissions reductions or offsetting of emissions, which many competing LNG producing countries and facilities are not currently subject to.

- Establish a Gas and Critical Minerals Ministerial Council under the National Cabinet architecture to create a direct link to the Energy and Climate Change Ministerial Council. This could serve the dual purpose of ensuring resource development keeps pace with energy transition targets and remove any conflicting policy positioning. It could also be the forum for discussing the role of gas in providing energy security to critical regional partners.
- Appoint an Energy Envoy for the Government who can support existing engagement with regional trading partners and reinforce Australia's ongoing efforts across the economy to maintain energy security while reducing emissions.

We look forward to discussing the above matters with you in due course.

Yours sincerely

ATTACHMENT 1: WOODSIDE SUBMISSION TO FUTURE GAS STRATEGY

1. INTRODUCTION TO WOODSIDE:

Founded in Australia in 1954, Woodside is proud to be an energy company with a spirit of innovation and determination.

Woodside has supplied energy to Western Australia for almost 40 years and since establishing Australia's Liquefied Natural Gas (LNG) industry in 1989, our energy has also enabled industry, kept the lights on and heated and cooled homes around the world.
Woodside's roots remain in Australia with our headquarters in Perth and largest operational footprint in the Pilbara - but in 2022 we became a truly global business.

The merger with BHP Group Limited's (BHP) oil and gas portfolio (BHP's petroleum business) has increased the scale and diversification of our portfolio, which includes oil and gas assets and interests in Australia, the Gulf of Mexico, the Caribbean, Senegal and Timor-Leste. We also have a focused exploration program.

But it's our economic contribution that's the most significant, directly employing more than 3000 people in Australia and providing energy to local industry and homes.

2. NATURAL GAS, CLIMATE CHANGE AND THE ENERGY TRANSITION:

Global efforts to reduce global greenhouse gas emissions in order to meet climate goals are changing the way the world produces and consumes energy. The pace of the energy transition is uncertain and there is a wide range of potential scenarios that outline demand for oil, gas and new energy products that are consistent with limiting global temperature rise.

Woodside currently has a portfolio of oil and gas assets, and we are also developing a portfolio of new energy products and lower carbon services. This includes our portfolio of CCS opportunities which have the potential to store more than 3 million tonnes per annum (Woodside equity) of carbon dioxide by 2030[6] and support the decarbonisation of Woodside's base business and customer emissions.

Across our portfolio we seek to match the pace, scale and needs of our customers as they determine their own decarbonisation pathways. We see an ongoing role for natural gas to support our customers' plans to secure their energy needs, while they reduce their emissions. Woodside's existing liquified natural gas (LNG) supplies as well as current projects such as Scarborough, and future opportunities such as the Browse and Sunrise developments have the potential to contribute to natural gas supply for decades to come.

As Australia transforms to a net zero and a secure energy future, gas can:

- Continue to provide reliable energy whilst alternatives such as renewables are increased, especially since using those renewables to first displace coal-fired generation and convert the light vehicle fleet should be a priority from an emission perspective[7] and will likely take decades.
- Enable short-medium term emissions reduction (e.g., from coal-to-gas switching) as part of interim transition pathways.
- Facilitate conversion to renewables by providing "firming".
- Provide energy in hard to abate uses, such as industrial feedstock and high temperature industrial heat.
- Provide potential pathways to incorporate hydrogen within Australia's energy landscape.[8]

[6] https://www.woodside.com/docs/default-source/asx-announcements/2023-asx/investor-briefing-day-2023.pdf?sfvrsn=a282d577_3 slide 71
[7] For example, see Boston Consulting Group 2023 "*The Role of Gas Infrastructure in Australia's Energy Transition*"
[8] Microsoft Word - 2023 Gas Statement of Opportunities v1.2 (aemo.com.au).

Reasons why natural gas is useful in these applications include[9]:

- When used to generate electricity, natural gas emits around half the life cycle emissions of coal.[10]
- More than half of the world's natural gas supply is used in sectors other than power generation, such as in industrial applications and fertiliser manufacturing, some of which have lower emissions intensity than power generation.[11,12]
- In the form of LNG, natural gas is transportable and flexible between destinations, which is an advantage during an uncertain and potentially volatile energy transition.[13]
- While energy storage technologies (such as batteries) continue to improve, natural gas enables cost effective and reliable conversion of power grids to renewable electricity because of its ability to 'firm up' intermittent generation (that is, support intermittent renewable generation by quickly ramping up or down to ensure stable electricity supply).[14]
- Natural gas is also used for hydrogen manufacture by steam methane reforming. This process, including CCS, is predicted by the International Energy Agency (IEA) to represent almost half of hydrogen production in 2030 in their Net Zero Emissions by 2050 Scenario.[15]

Other countries will have similar uses but at different scale over time, and it is important that the Strategy assesses export demand independently of domestic demand. In the Asia-Pacific region, key trading partners such as Japan are clear that they need Australia to continue as a secure, affordable, and reliable supplier of energy, including LNG as a key transition fuel in their economy. The importance of Scarborough to regional energy security was demonstrated in August when LNG Japan agreed to purchase a 10% non-operating participating interest in the joint venture.[16]

Because each country will determine its own best pathway for reducing emissions and providing secure energy supplies, there is a range of uncertainty associated with future gas demand.

Scenarios with different temperature outcomes, including those still consistent with the Paris Agreement, can typically have higher levels of gas demand.[17] Therefore, it would be a mistake for Australia to pick a single scenario for future domestic or regional gas demand and act as if it were certain.

While the purpose of the Strategy paper is to clarify the future role of gas in meeting energy and emissions goals, it is important that the production of gas is also consistent with achieving emissions goals. The Australian gas sector is covered by Australia's Safeguard Mechanism, which regulates facility greenhouse gas emissions that will also reduce over time as part of meeting Australia's climate targets. This should provide confidence to the Australian community that the production and supply of gas, including exported LNG, is being regulated in accordance with Australia's international commitments. For example, to date Woodside has identified ~28 million tonnes cumulative of Scope 1 and 2 emissions avoidance and reduction opportunities that enable a pathway to net zero operations by 2050.[18] Offsetting emissions by retiring carbon credits also has an important role. While we recognise this is not in DISR's direct remit, the Strategy also has an opportunity to outline the process and timeline for accessing international credits as access to a deep, credible, and liquid carbon credit market is going to be essential to Australian industry reaching their decarbonisation goals.

Recommendation: The Strategy should outline that is not going to artificially seek to curtail supply in an attempt to reduce demand as this will only exacerbate price volatility.

[9] https://www.woodside.com/docs/default-source/investor-documents/major-reports-(static-pdfs)/2022-climate-report/climate-report-2022.pdf?sfvrsn=240783fc_16.
[10] IEA 2019. "The role of gas in today's energy transitions", page 4.
[11] IEA 2021. "World Energy Outlook 2021", page 185.
[12] Perdaman Urea Project 2019. "Greenhouse Gas Assessment – Final Report", pages 7-8.
[13] https://www.iea.org/commentaries/record-year-for-gas-liquefaction-investment-lights-a-path-towards-market-flexibility.
[14] Wood, T. and Ha, J. (2021). "Go for net zero". Grattan Institute. Page 30.
[15] IEA 2021. "Net Zero 2050 – A Roadmap for the Global Energy Sector", page 76.
[16] https://www.woodside.com/docs/default-source/asx-announcements/2023-asx/woodside-to-sell-10-scarborough-interest-to-lng-japan.pdf?sfvrsn=caa9b47f_3.
[17] climate-report-2022.pdf (woodside.com) Page 12.
[18] https://www.woodside.com/docs/default-source/asx-announcements/2023-asx/investor-briefing-day-2023.pdf?sfvrsn=a282d577_3 slide 18.

Recommendation: Pursue policies that incentivise lowest cost abatement from heavy emitting industries and facilities. For example, consider amendments to Safeguard Mechanism rules to incentivise renewable power purchase or importation from renewable energy projects developed outside the facility boundary.

3. ENERGY MARKET CONTEXT:

World energy markets are currently extremely volatile as surging energy prices impact economic conditions and disrupt customers' expectations for secure, affordable, and reliable energy. Heightened geopolitical tension, rerouting of energy flows and an uncertain energy transition continue to contribute to a period of volatile energy prices.

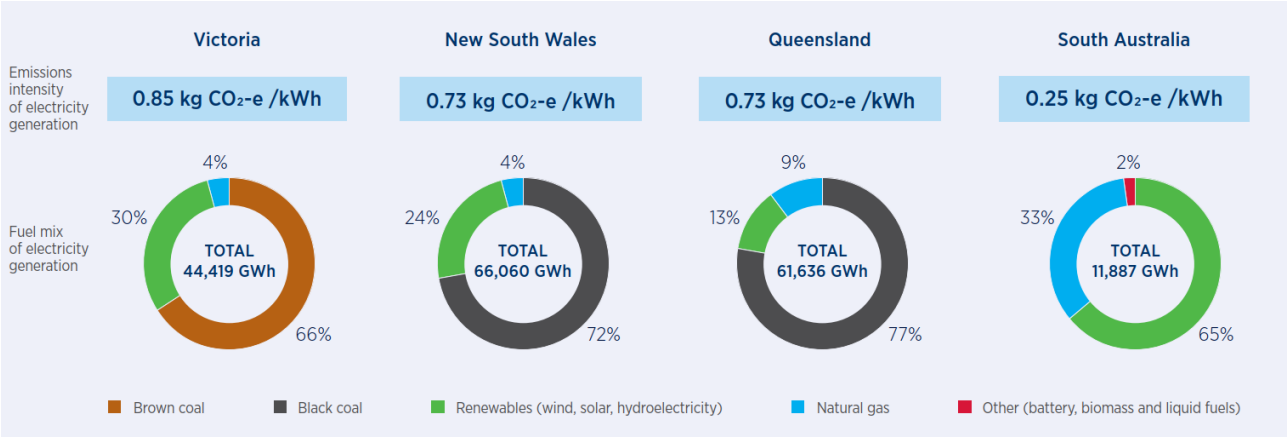
According to Wood Mackenzie, global LNG demand is expected to grow by more than 60% in volume between 2021 and 2040[19], and Australia has an opportunity to be an energy leader by providing this energy responsibly. Wood Mackenzie outlined that market growth is largely driven across Asian and European nations, phasing out Russian natural gas supply. This is supported by previous International Energy Agency reports, which have outlined that an estimated $365 billion of upstream oil and gas investment will be needed every year to 2030, and $171 billion every year thereafter to 2050.[20]

Domestically, as Australia transforms to meet a net zero emissions future, gas will continue to complement alternative forms of energy, and to provide a reliable and dispatchable form of electricity generation and may, when combined with CCS, provide potential pathways to incorporate hydrogen within Australia's energy landscape.[21] AEMO describes this challenge as a "double transformation: electrification of the economy while switching to firmed renewables" as the source of power generation.[22] The AEMO's Integrated System Plan (ISP) published in 2022 estimates that a doubling of total electricity delivered and a nine fold increase in utility scale variable renewable electricity (VRE) will be needed by 2050, in its most likely "Step Change" scenario. Noting the Step Change scenario is aligned with delivering Australia's net zero commitments.[23]

In addition to firming services, natural gas-fired power generation has the potential to accelerate the decarbonisation of the power system, from today. Figure 1 (below) shows the 12-month average mix of fuels used to generate electricity, in the four Australian mainland states connected to the NEM.[24] What the data demonstrates is the twin potential of natural gas in decarbonising power, i.e gas can both supplement renewables – as is the case in South Australia – and well as firm them as is the growing case in New South Wales and Queensland. It also offers Victoria a potential opportunity to eliminate coal-fired power generation more quickly.

[19] https://www.woodmac.com/news/opinion/strong-gas-demand-raises-questions-over-emissions/#:~:text=Those%20economic%20considerations%2C%20similar%20in%20other%20emerging%20economies%2C,to%20about%20857%20billion%20cubic%20metres%20in%202040.
[20] IEA 2021. World Energy Outlook 2021. All rights reserved. Table 6.1, page 278.
[21] Microsoft Word - 2023 Gas Statement of Opportunities v1.2 (aemo.com.au).
[22] AEMO 2022: 2022 Integrated System Plan. © 2022 Australian Energy Market Operator Limited. Page 9.
[23] AEMO 2022: 2022 Integrated System Plan. © 2022 Australian Energy Market Operator Limited. Page 23.
[24] Fuel mix percentages accessed online https://www.aemo.com.au/energy-systems/electricity/national-electricity-market-nem/data-nem/data-dashboard-nem on 31 January 2023.

Figure 1: Emissions intensities and fuel mixes in the NEM[25,26,27]



We also see a significant trend towards new LNG contracts being packaged with CCS, hydrogen and / or ammonia opportunities. This is demonstrated by LNG Japan's recent agreement to purchase a 10% non-operated participating interest in the Scarborough Energy Project which was coupled with a non-binding agreement to collaborate on global opportunities in new energy which could include ammonia, hydrogen, CCS and carbon management technology.[28]

From our perspective, the energy transition is not a matter of gas 'or' renewables and new energy products; it is gas 'and' these solutions. The value of public, proactive, clear and consistent messaging from Government in this regard cannot be underestimated.

Recommendation: Government to make a clear and unequivocal statement in support of the gas industry, the jobs it sustains, the revenue it creates, the economic growth and living standards it supports and the role of gas in the energy transition.

4. NET BENEFIT OF RESPONSIBLE GAS DEVELOPMENT AND WHAT'S AT RISK:

Jobs

Woodside directly employs more than 3000 people in Australia and our operations will continue to create new construction and ongoing jobs.

For example, the development of Scarborough and Pluto Train 2 is expected to generate a peak workforce of more than 3,200 people during construction (2,000 for PT2 construction at peak), and almost 600 direct jobs are expected to be created or sustained during Operations.

A report released in August 2023 by ACIL Allen commissioned by Gas Energy Australia shows the significant contribution gas makes to the Australian economy (during the period FY2021-22).[29]

The analysis shows significant growth over the 12-month period, with gas generating $121.17 billion in domestic economic activity to underpin 5.25% of Gross Domestic Product.

The report also highlights employment data, with Australian gas creating over 17,000 extra full-time jobs over the year to see almost 259,000 local jobs supported by gas.

[25] Fuel mix percentages accessed online https://www.aemo.com.au/energy-systems/electricity/national-electricity-market-nem/data-nem/data-dashboard-nem on 31 January 2023.
[26] Australian Department of Climate Change, Energy, the Environment and Water 2022. "Australian National Greenhouse Gas Factors." Electricity generation emissions intensities have been sourced.
from the emission factors in Table 1, pages 7-8. These factors represent the emissions from the consumption of electricity purchased from a grid.
[27] Total electricity generated is sourced from the "Greenhouse and energy information by designated generation facility 2020-21" www.cleanenergyregulator.gov.au. On-grid only.
[28] woodside.com/docs/default-source/asx-announcements/2023-asx/woodside-to-sell-10-scarborough-interest-to-lng-japan.pdf?sfvrsn=caa9b47f_3.
[29] acilallen.com.au/uploads/projects/767/ACILAllen_GEAEconomicContribution2023.pdf.

Revenue / tax
This financial year alone, the gas industry is set to contribute $16.2 billion to state and federal revenue pools.

In 2023, Australian Energy Producers (AEP) commissioned research by Wood Mackenzie and found that Australian governments will collect $100 billion in tax from gas exports over the coming two decades.[30]

Woodside has made, and continues to make, a substantial contribution to government, the community and the economy.

Woodside is a substantial corporate taxpayer in Australia and paid A$2.702 billion in Australian taxes and royalties to the Commonwealth and State Governments in 2022.

Since 2011 Woodside has paid more than A$18 billion in Australian taxes and royalties.

This demonstrates that when Woodside and our industry performs well, our contribution to government revenue is significant.

The direct social contribution of our business is significant, including $25.5 million through our global community partnerships in 2022 alone.

In 2022, Woodside and our joint venture partners committed to investing up to A$65 million over the next five years to support community development in the North West of Australia.

Contribution to domestic gas
Western Australia
In our almost 40 years of operation in WA, Woodside has supplied more than 3700 petajoules of gas to the domestic market. This is equivalent to 38 per cent – more than one third - of the volume of gas that we have exported as LNG. Going forward, it is expected that Woodside will supply approximately 22% of total WA's domestic gas market.[31]

The WA gas generation demand profile has changed significantly with the State Government's decision to retire State-owned coal-fired power generators by 2030. The AEMO forecasts that renewable power generation will only partially compensate for the loss of coal-fired baseload power, with gas-fired baseload and firming capacity needed to support system stability and reliability. Separately, planned reductions in mining sector demand as a result of decarbonisation efforts are offset by higher expected demand for mineral processing and refining. As a result, over the next decade electricity generation is expected to be the largest growing sector for gas demand and a key driver for the forecast supply shortfall from 2030. In its 2022 Gas Statement of Opportunities (GSOO), AEMO forecasts gas demand to grow at an average annual rate of 7.7% for the 10- year period to 2032.[32]

East Coast
Woodside's Bass Strait assets produce oil and gas through a network of offshore platforms, pipelines and onshore processing facilities. Through these assets, Woodside is expected to supply approximately 17% of the east coast's domestic gas.[33]

Supply and price challenges experienced during 2022 highlighted the central role of gas in Australia's energy mix and reinforced that any longer-term solution to current pricing issues will require investment in new gas infrastructure and supply. Given the factors that drove the price challenges – including the market being unable to respond to a sharp increase in gas demand caused by abnormal weather, intermittent renewables generation and increased unreliability of coal generation – are factors that could be repeated, only reinforces the need for stable policy settings.

[30] https://energyproducers.au/all_news/speech-appea-chair-meg-oneills-opening-address-of-the-appea-2023-conference-exhibition/
[31] Based on AEMO estimate of 2024.
[32] 2022-wa-gas-statement-of-opportunities.pdf (aemo.com.au) Page 28.
[33] Based on AEMO estimate of 2024. East coast Australia includes New South Wales, Victoria, South Australia, Queensland, Australian Capital Territory and Tasmania.

For example, while the Bass Strait facilities remain an important source of gas supply to the Australian east coast and the Gippsland Basin Joint Venture (GBJV) continue to invest in future gas supply, the gas market intervention temporarily put that at risk. This was illustrated at the time by the GBJV shortening its investment budget cycle from 12 months to six months due to a lack of regulatory rules being available.

Without increased supply, anticipated supply shortfalls are likely to be exacerbated. As AEMO stated in the 2023 Gas Statement of Opportunities:

Despite increased production commitments from the gas industry since the 2022 GSOO, gas supply in southern Australia is declining faster than projected demand.[34]

AEMO went on to say that as Australia undertakes the energy transition, gas will continue to complement zero emissions and renewable forms of energy, and to provide a reliable and dispatchable form of electricity generation and may provide potential pathways to incorporate hydrogen and other 'green' gases within Australia's energy landscape.[35]

5. DOMESTIC AND REGIONAL GAS DEMAND / SUPPLY:

In determining our view of gas demand and the role of gas in the energy transition, we review literature from the Intergovernmental Panel on Climate Change, the International Energy Agency, the Nationally Determined Contributions in key markets submitted to the United Nations, independent third party energy experts, and also study Australia's various State and Federal energy related programs and initiatives and supply/demand profiles for power grids in Australia's NEM.

Domestically, AEMO has outlined that the WA gas market is facing a tight supply-demand balance between 2023 and 2029. From 2030 onwards, the gas market is forecast to move into a larger deficit, with shortfalls of over 200 terajoules per day (TJ/d) between 2030 to 2032 (over 16% of demand each year). New supply from projects such as Scarborough and the proposed Browse project are critical to address the identified shortfall.[36]

For the east coast, AEMO warns that from 2027, without new supplies being developed it is not clear how domestic gas will be met.[37]

Gas is also an essential energy source and feedstock for Australian manufacturing. For example, the latest Australian Energy Update from the Department of Climate Change, Energy, the Environment and Water (DCCEEW) outlines that gas accounts for 42% of the energy that the sector uses.[38] It is also conceivable that gas can support turbocharging the National Reconstruction Fund which wants to significantly improve domestic manufacturing capabilities.

Regionally, the importance of gas to key partners is clear. Developing nations need our gas to maintain their energy security in the face of rapid population and economic growth. These nations will need our new energy and renewables technology and skillset as they too begin their decarbonisation journey.[39] As highlighted in a recent report, Bangladesh, Pakistan, and India are actively seeking new long-term LNG supply contracts from diverse suppliers.[40]

Gas also has the potential to support Australia's key regional partners and the broader Climate agenda by making a meaningful and responsible contribution to the following workstreams: 'clean energy supply chains, methane reduction in the natural gas sector, and green shipping. A point that the Minister for Resources recently noted in a speech to the International Mining and Resources

[34] Microsoft Word - 2023 Gas Statement of Opportunities v1.2 (aemo.com.au) Page 4.
[35] Microsoft Word - 2023 Gas Statement of Opportunities v1.2 (aemo.com.au) Page 4.
[36] 2022-wa-gas-statement-of-opportunities.pdf (aemo.com.au) Page 3.
[37] Microsoft Word - 2023 Gas Statement of Opportunities v1.2 (aemo.com.au) Page 4.
[38] Australian Energy Update 2023 Page 9.
[39] BCA: BCA_SEIZE_THE_MOMENT-FINAL-WEB.pdf (nationbuilder.com) P17.
[40] Global LNG Outlook_February 2023.pdf Page 32.

Conference on 1 November 2023, where she stated, "*gas will also be needed to ensure the processing and refining of critical minerals and rare earths required for green energy technology.*"[41]

Furthermore, it is our view that gas not only presents an opportunity to enhance the energy security of our regional partners, but also our national security by providing Australia with an opportunity to fuel it's proposed strategic fleet, either via LNG or with fuels such as ammonia.

Recommendation: Establish a Gas and Critical Minerals Ministerial Council under the National Cabinet architecture to create a direct link to the Energy and Climate Change Ministerial Council. This could serve the dual purpose of ensuring resource development keeps pace with energy transition targets and remove any conflicting policy positioning. It could also be the forum for discussing the role of gas in providing energy security to critical regional partners.

Recommendation: Extend the Capacity Investment Scheme to include gas power generation.

Japan-Australia case study
As already outlined above in Section 3, our regional partners heavily rely on Australian gas for energy security.

The Australia-Japan partnership is Australia's closest and most mature in Asia, underpinned by deep and longstanding trade and investment ties.

Energy and resources lie at the heart of the Japan-Australia commercial partnership. Japan has few fossil fuel resources of its own and its geography and location make it unsuited to the easy adoption of renewable energy.

Australia is Japan's largest supplier of LNG, coal and iron ore. Japan relies on Australia to provide 70% of its coal imports and 40% of its gas ($35.1 billion).[42]

While the two countries are working together to support initiatives that will advance low emissions technologies and achieve net zero by 2050, Japan is likely to need Australian gas through 2050 with investment in LNG expected to continue for decades.

For example, former Tokyo Gas chairperson Michiaki Hirose recently said: "*Tokyo Gas currently has 12 million users, mainly in the Tokyo metropolitan area, and more than half of them are supplied by LNG import from Australia. We would like Australia to continue to provide us with a stable supply.*"[43]

Woodside has a long history of supplying LNG to Japan, but we are also pursuing collaborations in hydrogen and CCS with Japan to advance lower emissions technologies.[44]

Recommendation: Appoint an Energy Envoy for the Government who can support existing engagement with regional trading partners to reinforce Australia's ongoing efforts across the economy to maintain energy security while reducing emissions. Alternatively, add this objective to the role of the Net Zero Economy Agency Chair.

6. KEYS RISKS TO SECURE, AFFORDABLE AND RELIABLE SUPPLY OF GAS:

Government intervention in the domestic gas market
While the Gas Market Code (the Code) now applies to our marketing activities, we continue to advocate for policies that incentivise investment in new gas supply that can meet the need for dispatchable power essential for power grid stability with the ongoing growth of renewables generation.

[41] Minister for Resources; Minister for Northern Australia, Speech to the International Mining and Resources Conference, Sydney 1 November 2023.
[42] Japan country brief | Australian Government Department of Foreign Affairs and Trade (dfat.gov.au).
[43] LNG supply: Resources Minister Madeleine King says Australia will 'always be' a reliable supplier of gas to Japan (afr.com).
[44] https://www.woodside.com/docs/default-source/asx-announcements/2023-asx/investor-briefing-day-2023.pdf?sfvrsn=a282d577_3 slide 66

As industry and a range of independent authorities have made clear, bringing on new gas supply is the key to putting sustained downward pressure on prices and ensuring supply security for manufacturers, power generators and households. This was most evident by comments made by the Australian Energy Market Operator, General Manager – Reform Delivery who said:

"What's clear is the urgent need to build-out renewable energy with diversified firming generation – like batteries, hydro and gas – and transmission investment to provide homes and businesses with low-cost, reliable energy".[45]

While Woodside remains supportive of the Government's objectives of promoting access to gas, we believe there are other policies that could support the Code to achieve greater supply and put structural, long-term downward pressure on prices which were outlined in our submission to the Inquiry into the Competition and Consumer (Gas Market Code) Regulations 2023.[46] Our underlying principle is that Australians should be able to expect reliable energy, which comes from the m having the right investment climate.

Changes to fiscal and tax settings
Without fiscal certainty, the investment in new gas supply will be challenged which will have a direct consequence on future supply and revenue.

Offshore environmental approvals
The existing Commonwealth regulations regarding offshore secondary approval consultation requirements have been subject to legal challenge, making it extremely difficult for the offshore regulator to issue timely assessments.

From a Woodside perspective, the Federal Court's decision on 28 September 2023 that the offshore regulator invalidly exercised its powers in accepting the Scarborough Marine Seismic Survey Environment Plan with certain conditions provided a clear demonstration of a regulatory system that is not working. This highlights the urgent need for reform of Australia's offshore approvals process as uncertainty over approvals has the potential to add cost and delays to any offshore activities to be undertaken in Australia.

We believe the Government could advance a workable solution to consultation issues under the current regime in accordance with the following principles:

- Set clear expectations.
- Define geographical scope of interests.
- Define nature of interests.
- Define consultation expectations, and in relation to Indigenous cultural values, adhere to the principle of consultation with the recognised native title or traditional owner representative entity.
- Define consultation timing.

While the above principles can provide greater clarity regarding consultation under the current regime, we
also believe deeper reform of the overall legislative framework governing offshore environmental approvals
will be required.

This issue has the potential to be exacerbated if proposed reforms to the Environment Protection and Biodiversity Act are unclear or add complexity to existing processes.

Recommendation: Commit to improving legislation and revising existing offshore environmental regulations at the earliest opportunity to ensure secondary regulatory approvals granted are robust.

Recommendation: Expedite the wholesale review of environmental management regulatory frameworks for offshore resources, complete with a detailed timeline of activities and milestones to

[45] AEMO | High international commodity pricing, coal outages, and rising gas-fired generation drives record prices for Q2 2022.
[46] Submission: Senate Inquiry into the Gas Market Code of Conduct (August 2023 (woodside.com).

work towards. This should also consider the proposed Environment Protection and Biodiversity Conservation Act reforms to ensure further uncertainty does not add to the current problem.

Acreage release

While the Department of Industry, Science and Resources and the offshore titles regulator conducted gazettal rounds in 2021 and 2022, there have been no new awards of acreage since the 2020 bid round. Prospectivity in existing exploration permits, close to existing infrastructure, is becoming limited, and without new acreage to assess for exploration and development, investment in future gas supply is limited.

Exploration requires significant investment in obtaining and assessing geological data and is therefore reliant on activities such as seismic surveys and drilling. Without a clear line of sight to future acreage releases and an improved secondary approval process, we predict it would take up to 8 years from acreage award to acquire data, drill an exploration well, assess and evaluate data and confirm any commercial gas discovery. All of this would be prior to submitting an application for a primary environmental approval or field development plan.

Recommendation: Reinstate annual offshore exploration and carbon, capture and storage acreage release rounds so that the opportunity for future supply is maintained in line with market demand / supply gaps.

7. CONCLUSION:

Australia has a leadership role to play through the energy transition. Australian gas has a critical role to play in supporting the deployment of renewable energy infrastructure for domestic electricity generation, as well as helping regional trading partners meet their energy and decarbonisation goals.

In terms of regulatory certainty, the implementation of clear processes and response times for project approvals is essential in unlocking reliable supply. Otherwise, energy investment will find another home, taking jobs and opportunities with it.

New gas supply and infrastructure cannot just be turned on when a crisis happens. It requires a clear strategy, unambiguous support from Government and an investment and regulatory framework that will attract the capital from international markets that is needed for large-scale projects.

Australia has a proud history of governments partnering with resource companies to establish new industries and deliver tangible benefits for all Australians. This includes our domestic gas and LNG sector that exists today. Australia has an opportunity, through the introduction of a coherent gas strategy that supports the development of new resources, to continue supporting domestic and international energy and decarbonisation goals as a critical element in the energy transition.