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ECONOMICS AND INDUSTRY STANDING COMMITTEE

INQUIRY INTO THE ROLE OF WESTERN AUSTRALIA IN THE GLOBAL EFFORT ON DECARBONISATION

Australian Energy Producers | 10 October 2025

Australian Energy Producers (AEP) welcomes the opportunity to comment on the Economics and Industry Standing Committee's *Inquiry into the role of Western Australia (WA) in the global effort on decarbonisation.*

EXECUTIVE SUMMARY

AEP strongly reaffirms Premier Cook's call for 'Team WA' to show "how Liquefied Natural Gas (LNG) is contributing to the decarbonisation of our major trading partners and laying the groundwork for export of clean energy products, like ammonia and hydrogen, and ultimately green iron, into the future."[1]

This submission highlights how the oil and gas sector provides affordable and secure energy, while reducing emissions, both locally and globally. WA's oil and gas projects are delivering lower upstream emissions intensity, reducing emissions across the production chain and working with mid- and downstream customers to reduce whole of supply chain emissions.

WA's LNG exports play a critical role in helping our trading partners in Asia decarbonise while meeting their rapidly growing energy requirements. Countries in the Asia-Pacific region utilise Australian LNG to directly displace coal in power generation, cutting both carbon emissions and harmful air pollutants.[2] In 2021, the Australian Government estimated that Australian LNG has the potential to reduce global emissions by up to 166 million tonnes per year by displacing the use of coal and other more emissions-intensive fuels in the region.[3]

At the same time, natural gas power generation provides the flexibility and reliability that renewable energy sources alone cannot yet guarantee. Natural gas underpins regional energy security by firming variable renewable generation, supporting our trading partners' economies, and leveraging WA's proximity to key markets for efficient supply.

Additionally, technologies such as carbon capture and storage (CCS) allow CO_2 to be captured from industrial point sources or directly from the air, transported and safely and permanently stored in geological formations. Utilising this technology allows WA's already world-class resources to enhance processing efficiencies and produce some of the lowest carbon intensity LNG exports to North Asia.

As the peak body representing Australia's upstream oil and gas exploration and production industry, AEP has long advocated for policies that support domestic and regional energy security, economic growth, and the transition to net zero emissions by 2050.

[1] Roger Cook MLA, CEDA – Energy Speech, 10 July 2025
[2] S&P Commodity Insights, *Pathways to Accelerate Power Emissions Reduction in Asia*, 2025
[3] Australian Government, *Australia's Long-Term Emissions Reduction Plan 2021*

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Australian Energy Producers highlights for the Committee's consideration that:

- Australia's major trading partners, such as Japan, Korea, and China are pursuing decarbonisation through a mix of renewables, nuclear, and LNG. Natural gas from WA is central to energy security and reaching net zero in the region.
- WA accounts for 60 per cent of Australia's LNG exports and 12 per cent of global supply and contributes about 20 per cent of national GDP or some $440 billion in 2023-24. WA's LNG plays a pivotal role in supporting Asia's energy security and decarbonisation.
- LNG offers approximately a 47 per cent reduction in lifecycle carbon intensity compared with coal for electricity generation.[4]
- Global LNG demand is projected to rise 58 per cent by 2050, driven by growth in Asian markets as nations seek cleaner, more reliable energy sources.[5]
- Natural gas supports the transition away from coal, provides the firm dispatchable energy required to unlock large-scale renewable energy deployment, provides chemical feedstocks, supports high-heat processes, and powers industries across the economy. This is particularly important for those industries which cannot be easily electrified, including the processing of Australia's critical minerals which is vital to achieve net zero emissions.
- The oil and gas industry is central to deploying key emissions reduction technologies, including CCS and low-carbon 'blue' hydrogen produced from natural gas with CCS.
- Natural gas remains an ongoing economic opportunity for Australia and especially for WA, for many decades to come.
- Failure to recognise the long-term, critical role of natural gas and LNG in the energy mix will cost jobs, deter investment, and undermine manufacturing and industry in Australia and forego the significant and ongoing economic opportunity.

Key Recommendations:

- Recognise natural gas as essential to WA's energy security and affordability, maintain regular acreage releases, support new onshore and offshore developments, and finalise reforms to enable unconventional gas exploration.
- Streamline regulatory approvals by implementing Vogel-McFerran Review recommendations, introducing statutory timeframes, and removing duplication with Commonwealth processes to speed up project delivery.
- Support a strong domestic gas and LNG export industry by aligning the Domestic Gas Policy to allow LNG exports from onshore developments beyond 2030 where domestic supply is secured.
- Work with the Commonwealth to maintain stable fiscal and regulatory settings, remove exploration barriers, progress key project approvals, and advance a national CCS roadmap.
- Finalise WA's CCS framework, expand 'green' approvals support for emissions-reduction projects, back early CCS developments, and adopt a technology-neutral approach to low-carbon hydrogen.

[4] S&P Commodity Insights, *Pathways to Accelerate Power Emissions Reduction in Asia*, 2025
[5] Wood Mackenzie, *Australia's Natural Gas Investment Competitiveness*, 2025; Shell LNG Outlook 2025

COMMENTS AND RECOMMENDATIONS

Pathways for Major Trading Partners' Decarbonisation and WA's Potential Contributions

Australia's major trading partners such as China, Japan, and South Korea, accounted for the bulk of Australia's LNG exports in 2024, with China at 33 per cent, Japan at 32 per cent, and South Korea at 15 per cent. These nations are actively pursuing decarbonisation of their economies through a mix of renewables, nuclear and LNG, leaving WA well-placed to contribute to their strategies.

In 2024, Australia exported 79 million tonnes of LNG, of which 48 million tonnes, or 61 per cent, came from WA.[6] Many of Australia's and WA's major LNG customers, such as Taiwan, South Korea, and Japan, have pledged to reduce their greenhouse gas emissions to net zero by 2050 in line with their long-term commitments under the Paris Agreement. In these countries, WA natural gas supports manufacturing and industry, the roll-out of renewable power and the phase-out of coal-fired power generation. Further, a range of other countries in the region including China and India as well as emerging markets in Southeast Asia (particularly Vietnam) see LNG imports as an important element of their energy transition. The Philippines, for example, is on track for an annual decline in coal-fired electricity output for the first time in nearly two decades amid rising LNG use.[7]

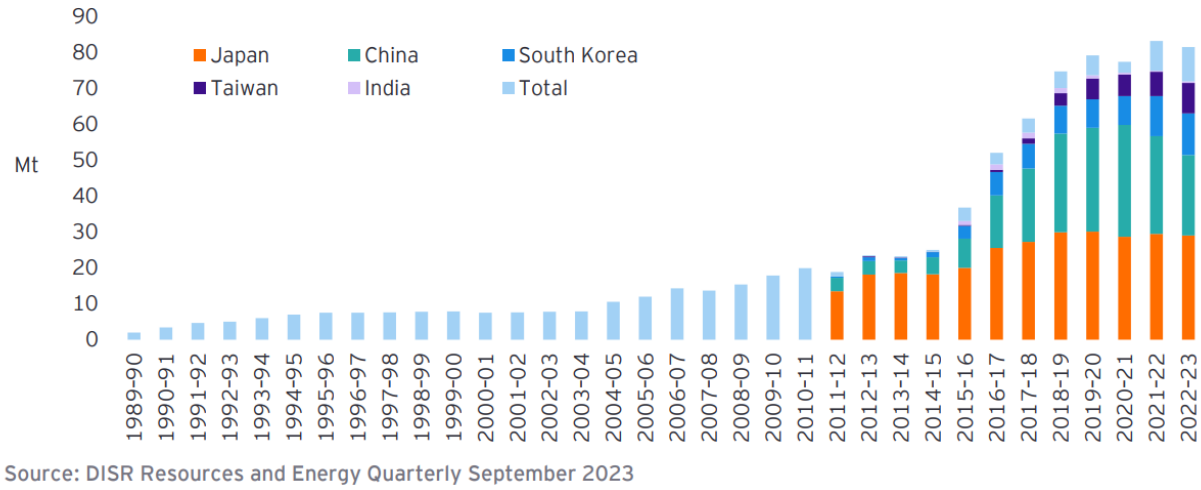

Figure 1 Australian LNG exports, by country of destination

LNG exports provide energy security through the energy transition

Natural gas delivered as LNG is essential to helping countries in the Asia-Pacific region maintain energy security by supporting the roll-out of renewable energy and displacing coal-fired power generation.

In the same way that natural gas plays a key role in energy security and emissions reduction in Australia, LNG is central to energy and climate planning in the region. Countries that have constrained

[6] Government of WA, *WA LNG Profile – August 2025*

[7] www.reuters.com/sustainability/climate-energy/philippines-set-first-coal-power-decline-17-years-amid-rising-lng-use-2025-07-22

renewable energy potential due to factors such as geography, climate, or population density, as well as decreasing domestic natural gas supply are expected to rely heavily on LNG.

The Australian Government estimates that Australian LNG has the potential to reduce global emissions by up to 166 million tonnes per year by displacing the use of coal and other more emissions-intensive fuels in the region.[8] With global demand for LNG increasing, Australia is perfectly placed to capitalise on this opportunity by providing energy security to our trading partners by supplying lower emissions fuels.

Lower-emission, secure natural gas from Australia is critical to energy security and reaching net zero in the region.

Partner countries in the region continue to rely on Australia for reliable, affordable, and lower-emissions LNG exports. In 2023, Australian natural gas provided 41 per cent of Japan's, 33 per cent of China's, 40 per cent of Taiwan's, and 25 per cent of South Korea's total LNG import needs.[9] Many countries in the Asia-Pacific region have invested heavily in Australia's LNG industry and across the Australian economy in order to ensure stable, reliable energy to meet their economies' needs.

Australia has long been recognised as a trusted and reliable partner, underpinned by stable political, legal, and regulatory systems, with a geographical advantage over many other LNG producing nations. Australia's average LNG shipping time to key Asian LNG customers is around 8-9 days, compared with 12-14 days from Qatar and 21-35 from the US Gulf Coast.[10] Reduced transit times enhance both the cost competitiveness and environmental performance of Australian LNG by minimising cargo boil-off and reducing fuel consumption and shipping emissions.

LNG vs. Coal Emissions Profile Analysis

Natural gas delivers a significant emissions advantage over coal, offering a significantly cleaner alternative for power generation. A 2024 Berkley Research Group study found that LNG from the US exported to Asia has a lifecycle greenhouse gas intensity of 507 kg CO_2e/MWh, roughly 53 per cent lower than coal's 1077 kg CO_2e/MWh, with combustion emissions nearly 3 times lower. Similarly, a 2025 S&P Global Commodity Insights analysis reported that LNG from Australia, the US, and Qatar has a 47 per cent lower lifecycle carbon intensity (148 gCO_2e/MJ) than coal (277 gCO_2e/MJ) in Japan, Vietnam, and the Philippines.[11]

The International Energy Agency's (IEA) report *The Role of Gas in Today's Energy Transitions*, examined the role of fuel switching, from coal to natural gas, to reduce greenhouse gas emissions and air pollutants globally. The report found that since 2010, coal-to-gas switching saved around 500 million tonnes of CO_2 – estimated to be the equivalent of putting an extra 200 million electric vehicles on the road running on zero-carbon electricity over the same period (see figure 2). The report also highlighted a significant opportunity in the global electricity generation sector to reduce emissions

[8] Australian Government, *Australia's Long-Term Emissions Reduction Plan 2021*

[9] DISER, *Global Resources Strategy Commodity Report: Liquefied Natural Gas*, 2022

[10] DISR, *Resources and Energy Quarterly: September 2023*, 2023

[11] S&P Commodity Insights, *Pathways to Accelerate Power Emissions Reduction in Asia*, 2025

by switching from coal-fired power plants to gas-fired power plants, which presented a potential "quick win for emissions reductions".[12]

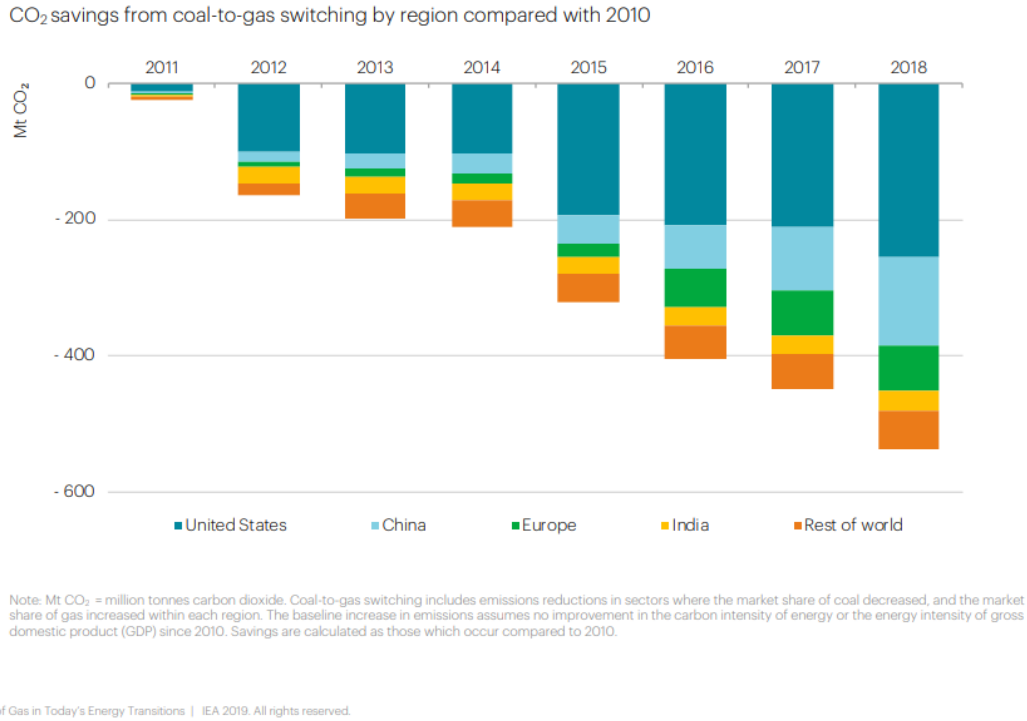

Figure 2 Coal-to gas switching has helped prevent faster growth in emissions since 2010...

WA's LNG sector brings significant environmental benefit to Australia and Australia's trading partners, and increasing the uptake of gas and LNG as a lower emissions energy source is an achievable and actionable policy area which can improve global efforts to decarbonise.

Australia's extensive gas resources will be crucial in meeting the challenge of reducing global greenhouse gas emissions at lowest possible cost while enhancing Australia's, and in particular WA's, economic potential.

Natural gas export demand forecast

Natural gas demand is projected to increase in the region under current energy and climate policies. Many of the counties in the Asia-Pacific region such as Japan, Korea, and Singapore are facing the challenge of meeting net zero while contending with limited renewable energy options.

Countries including Indonesia, Malaysia, Thailand, Myanmar, Vietnam, and Bangladesh face decreasing domestic gas production. Others, such as the Philippines and India remain heavily reliant on coal and oil and are turning to natural gas and LNG as their means to achieve deep emissions reductions while strengthening energy security and keeping energy affordable.

Across this region, the IEA finds that current energy and climate policies – from counties that have mostly committed to net zero – will see a 24 per cent increase in natural gas demand between today

[12] IEA *The Role of Gas in Today's Energy Transition,* 2019

and 2050 to reduce emissions and to keep economies running. The IEA's *Roadmap to Net Zero Emissions in Indonesia*[13] found that Indonesia would move from being a net exporter of LNG from 2030 to importing around USD $10 billion of natural gas in 2050 to support its transition away from coal, leading to a significant net reduction in total country emissions.

Wood Mackenzie finds that global LNG demand is projected "to rise 58 per cent by 2050 (from 435 mmtpa in 2025 to nearly 690 mmtpa by 2050). The Asia-Pacific region currently accounts for approximately 63 per cent of global LNG demand and the region's LNG demand is expected to grow at a 2.5 per cent Compound Annual Growth Rate from 2025 to 2050, eventually comprising nearly 75 per cent of global LNG demand by 2050."[14]

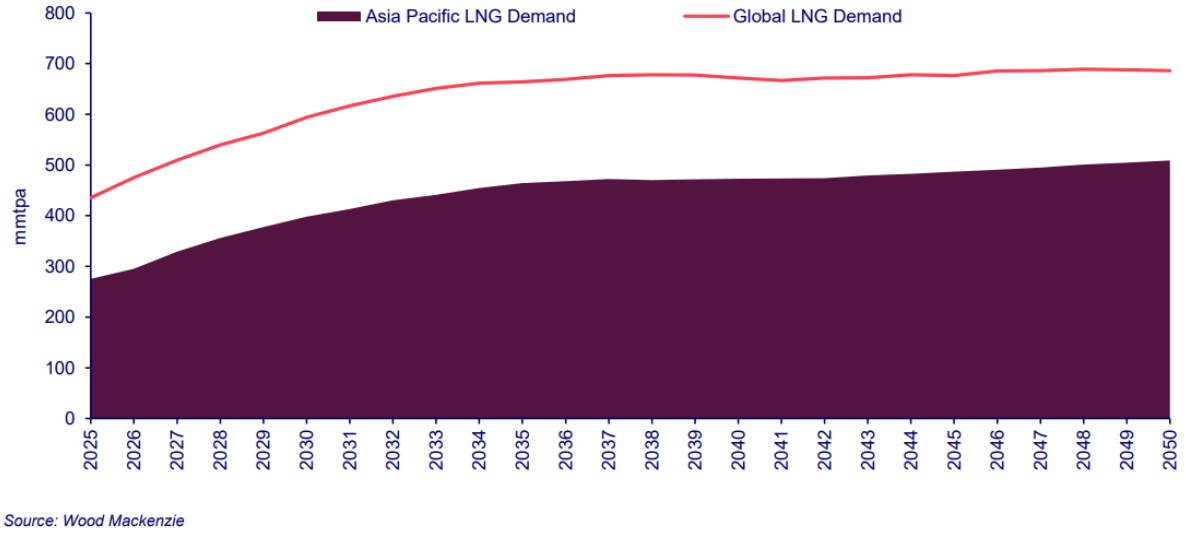

Figure 3 Global LNG demand, 2025-2050

In 2022, the IEA highlighted that in the Southeast Asian region "*Near-term growth in the region's natural gas output falls short of rising demand, increasing the call on LNG markets*".[15] This results in the Southeast Asian region, which has historically been an exporter of natural gas, expecting to become a net importer of gas by 2025. In response to the increasing global demand, an additional 180 million tonnes of LNG capacity per year is currently under construction, mainly in the United State and Qatar.[16]

Natural gas export supply

Australia's LNG industry is uniquely positioned to reduce regional greenhouse gas emissions while also contributing substantially to economic development.

Australia's resources of natural gas and proximity to growing export markets, with around 55 per cent of the world's population within a 5,000km radius, makes WA well-placed to meet growing energy

[13] IEA, *Roadmap to Net Zero Emissions in Indonesia*, 2022

[14] Wood Mackenzie, *Australia's Natural Gas Investment Competitiveness*, 2025

[15] IEA, *Southeast Asia Energy Outlook 2022*

[16] Government of WA, *WA LNG Profile – August 2025*

demands and contribute to the global energy transition while substantially contributing to Australia's economic prosperity. The demand for energy as part of the industrialisation of Asian economies is a key driver, and the properties of natural gas as a lower emitting and cleaner burning fuel is a significant factor for rising international demand for LNG.

Blue and green fuels, such as hydrogen and ammonia

AEP supports a technology neutral approach that drives investment in the diverse projects and innovations needed to deliver Australia's transition to net zero and to support our major trading partners decarbonise. Favouring certain projects or technologies can suppress innovation and investment, increase sovereign risk, and lead to sub-optimal economic and environmental outcomes.

AEP recommends reevaluating WA's 'Renewable Hydrogen Strategy', which strongly emphasises 'renewable' or 'green' hydrogen production which uses "energy generated from renewable sources such as the sun and wind" and instead adopt a technology neutral approach that includes all lower-carbon hydrogen pathways to enable maximum emissions reductions at the lowest cost.[17]

Other jurisdictions are already embracing technology-agnostic approaches. For example, Japan enacted the Hydrogen Society Promotion Act in May 2024[18], which targets lower-carbon hydrogen based on its carbon intensity – the amount of CO_2 emitted per unit of hydrogen produced – without prescribing specific production technologies. This framework also includes hydrogen produced overseas and imported into Japan, further reinforcing its inclusive and pragmatic stance.

Natural gas and CCS-based hydrogen (often referred to as 'blue hydrogen') is a process where hydrogen is produced by separating "hydrogen from a gas mixture obtained from fossil fuels, using carbon-capture technologies to deal with the emissions".[19] This is currently, and is expected to remain for the foreseeable future, the cheapest lower-carbon hydrogen pathway. Blue hydrogen will play an important role in establishing hydrogen as a fuel source and maximising emissions reductions per dollar invested, while paving the way for other lower-carbon hydrogen pathways as they scale up and costs decrease.

Promoting natural gas and CCS-based low-carbon hydrogen as part of WA's hydrogen strategy will help facilitate and accelerate the establishment of a hydrogen economy and infrastructure. The success of natural gas–based hydrogen projects hinge on the availability of CCS. WA is a leading jurisdiction in CCS capability and is uniquely positioned to leverage existing competitive advantages to promote natural gas and CCS-based low-carbon hydrogen. WA has the opportunity to lead competing jurisdictions in the clean energy economy. Projects and infrastructure will be strengthened and benefit from increased hydrogen investment, innovation, research, and development.

The advancement of natural gas-based low carbon hydrogen, paired with CCS, can result in net zero emissions, or even net carbon-negative hydrogen production. Not only does CCS enable cheapest and best value low carbon hydrogen production, it also supports the development of CO_2 removal – negative emissions – technologies such as direct air capture and bioenergy with CCS.

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[17] WA Government, *WA's Renewable Hydrogen Strategy 2024-2030*

[18] *Reference: METI website - Hydrogen Society Promotion Act Enacted. Toward a Forthcoming Hydrogen-based Society. Part 2: Utilization of Clean Hydrogen*

[19] CSIRO, *'Green' or 'blue' hydrogen – what difference does it make? Not much for most Australians*

These technologies can leverage CO_2 transport and storage infrastructure used in low-carbon hydrogen production to generate zero or even negative emissions hydrogen or offset residual emissions elsewhere in the economy which are technically challenging or expensive to abate.

By maintaining a technology neutral approach to a necessary portfolio of projects and mitigation solutions, the WA Government can ensure the most efficient and cost-effective system is encouraged and the best outcomes are achieved for industry, the public, and the state.

Green Iron

There is currently no globally accepted definition of 'green iron.' Consistent with the International Energy Agency's Breakthrough Agenda proposal for 'green steel,' the term 'green iron' is used to describe iron produced with near-zero emissions."[20]

Gas, CCS, and blue hydrogen can be critical enablers to transition proven conventional technologies to future 'green' solutions such as green iron and steel. Gas serves as an immediate, lower-emission energy source for iron production, while blue hydrogen, produced from gas with CCS, offers a scalable, low-carbon alternative to reduce emissions in existing facilities. CCS can mitigate emissions from these processes, leveraging WA's geological storage potential to ensure progress of net-zero goals. By prioritising these ready-to-deploy technologies, WA can de-risk projects, attract investment, and build infrastructure that supports the eventual adoption of green iron production when it becomes commercially viable, ensuring a robust and sustainable pathway to green iron exports.

Importance of Carbon Capture and Storage

Reaching net zero by 2050 will be "virtually impossible" without CCS.[21] CCS is a proven technology with decades of successful use globally and plays a unique role as it can address emissions from existing facilities, mitigate emissions from hard-to-abate industry, support low-carbon hydrogen production and underpin large-scale carbon removal. The IEA Net Zero Emissions Scenario (NZE) requires 1.2 billion tonnes of CO_2 to be captured annually in 2030, increasing to 6.2 billion tonnes in 2050. To achieve this "the NZE Scenario requires more than ten new CCS equipped facilities to be commissioned each month between [November 2022] and 2030" alongside accelerated deployment of renewable energy, energy efficiency, low-carbon hydrogen and a range of other emissions reductions technologies.[22] The Intergovernmental Panel on Climate Change median scenarios see 17 billion tonnes of CO_2 stored per year in 2050.

Independent analysis from EY in 2023 shows that while CCS is critical to achieving net zero by 2050, captured CO_2 volumes vary across scenarios.[23] Most projections show 6-8.5 Gt of CO_2 captured in 2050, underscoring the broad consensus on the need for large-scale CCUS deployment, including for natural gas. In the IEA NZE scenario, 57 per cent of natural gas supply and use in 2050 is linked to CCS.

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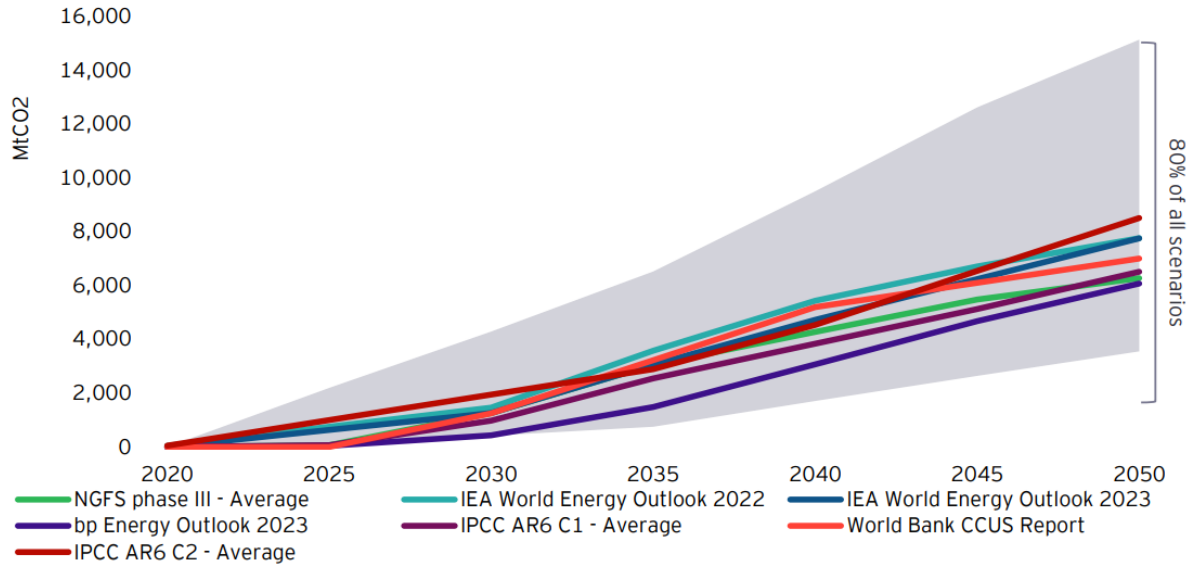
[20] Mandala, *Realising WA's green iron potential, December 2024*, p.12
[21] IEA, *Energy Technology Perspectives 2020 – Special report on CCUS*, 2020
[22] IEA, Net Zero Emissions by 2050 Scenario (NZE)
[23] EY, *The future role for natural gas in Australia and the Region,* 2023



Source: EY Analysis of the IPCC AR6 scenario data, NGFS phase III scenario data, the IEA World Energy Outlook 2022, IEA World Energy Outlook 2023, bp Energy Outlook 2023 and, the World Bank Decarbonizing Natural Gas through Carbon Capture, Utilization and Storage (CCUS), 2023.

Figure 4 CO2 capture under Net Zero Scenario (including IPCC AR6 C2 Scenarios)

Importing international CO_2 for permanent storage, as identified both in the Climate Change Authority's advice to the Australian Government, and in the Australian Government's Resources Plan, represents an opportunity for Australia to leverage our world-class CO_2 storage resources and extensive CCS experience and capacity to become a regional CO_2 storage focal point. WA's CO_2 storage resources can be made available to help regional partners meet their net zero commitments while presenting a new opportunity for investment. Policy frameworks in Asia are emerging to support the development of CCS industries. As an example, the CCS Business Act in Japan aims to promote the development of the business environment for CO_2 capture and storage.[24]

A 2024 study from Wood Mackenzie found that Australia could generate up to $600 billion by developing a CCS industry and positioning itself as a regional storage hub. With far greater geological storage potential than it requires for its own emissions, WA could help trading partners like Japan and South Korea, which face limited domestic options, to meet their net zero goals. While recent laws and budget commitments support international CO_2 storage and cooperation, Wood Mackenzie stressed the need for clearer policies and regulatory certainty to unlock investment. CCS presents not only an emissions solution but also a major economic opportunity, with the potential to create new jobs, revenue, and position Australia as a decarbonisation powerhouse.[25]

The WA Government's Carbon Capture, Utilisation and Storage (CCUS) Action Plan, released in 2024 reinforces WA's net zero ambitions with $26 million in funding for key projects. The plan aims to boost policy certainty, accelerate deployment of CCUS technologies, and attract new investment

[24] Ministry of Economy, Trade and Industry, *Cabinet Approvals on the "Bill for the Act on Promotion of Supply and Utilization of Low-Carbon Hydrogen and its Derivatives for Smooth Transition to a Decarbonized, Growth-Oriented Economic Structure" and the "Bill for the Act on Carbon Dioxide Storage Businesses*

[25] Chiang S (2024) Can Australia become APAC's CCS hub of choice?. *Australian Energy Producers Journal* 64(S1), S125–S129. doi:10.1071/EP23228

to grow the industry. WA is positioned as a leader in CCUS within Australia, and setting an example for national action to align Federal policy with international recognition of the technology's essential role in achieving net zero would bring much needed certainty to this emerging sector. Global CCS investment is growing rapidly, and Australia must compete with jurisdictions, most notably North America and Europe, that offer strong policy and financial incentives.[26] Canada and the United States continue to provide tax credit and direct investment policies totalling tens of millions of dollars in Canada and $3.7 billion in the United States. In late 2024, the United Kingdom's key CCS initiatives, Net Zero Teesside and Northern Endurance Partnership, achieved financial close with a total of £8 billion in debt financing. The European Union's *Innovation Fund* provides €2.4 billion, and the *Connecting Europe Facility for Energy* provides €600 million to accelerate CCS deployments in Europe. Other European Union jurisdictions providing financial support can be seen in Figure 5.[27]

EU Member State	Legal framework	Type of projects	Aid instrument	Amount	Scheme duration	Commission decision
The Netherlands	Energy and Environmental Aid Guidelines (EEAGs)	Renewable electricity, gas and heat, use of industrial waste heat and heat pumps, electrification, waste incineration, CCS, and hydrogen	Direct grant	€30 billion	Until 31 December 2025	Dec-20
Denmark	CEEAGs	CCS	Direct grant	€1.1 billion	January-April 2023	Jan-23
Denmark	CEEAGs	BECCS	Direct grant	€350 million	Until 31 December 2024	Dec-23
Sweden	CEEAGs	BECCS	Direct grant	€3 billion	July 2024-December 2028	Jul-24
Greece	CEEAGs	Onshore and offshore infrastructure part of the Prinos project	Direct grant	€150 million	From October 2024	Oct-24
France	CEEAGs	Electrification, CCS, CCU and energy efficiency	CCfD	€3 billion	15-year contract	Dec-24
Germany	CEEAGs	Electrification, CCS, CCU, energy efficiency and hydrogen	Other, direct grant	€5 billion	Until 31 December 2026	Mar-25

Figure 5 State aid schemes supporting CCS developed by EU Member States

With only two major CCS projects currently operating in Australia (Gorgon and Moomba), the industry remains in its early stages, and further growth will depend on clear regulation, competitive costs, and supportive business models.

AEP calls on the WA Government to work with the Federal Government to develop a CCS roadmap for Australia and to progress simple government-to-government (G2G) bilateral arrangements with countries where there is demonstrated demand for Australian CO_2 storage. AEP also recommends the WA Government support the development of a CCS industry in WA by advocating Federally for financial incentives such as tax credits, grants, or carbon pricing mechanisms, as is done in other competing jurisdictions (e.g. Europe, North America, and some Asia-Pacific countries). The WA Government could also consider funding early 'anchor projects' to de-risk investment and support the demonstration of large-scale CCS feasibility. Progressing the development of bilateral agreements

[26] Wood Mackenzie, *Australia's Natural Gas Investment Competitiveness*, 2025
[27] Global CCS Institute, 2025. Global Status of CCS 2025 Australia

with key trading partners such as Singapore, Korea, and Japan remains critical to advancing the CCS Industry in WA.

Barriers and Opportunities

Current Barriers to Investment in Large-Scale Decarbonisation Projects and Pathways to Green Fuels

Barriers to Gas and LNG

WA's LNG exports play a vital role in helping Asia reduce emissions. However, barriers to new gas supply persist, including constraints on gas exploration and development in some jurisdictions, lengthy and uncertain permitting processes, as well as regulatory approvals that are at risk of appeal. Following years of federal regulatory interventions and market disruptions, a stable and predictable investment environment is essential to rebuild investor confidence.

A 2025 Wood Mackenzie report warned that Australia is losing its competitiveness in attracting natural gas investment, posing risks to energy security, economic growth, and emissions reduction goals. While global gas exploration investment has risen nearly 30 per cent since 2020, Australia has grown by only 15 per cent, with producers citing policy uncertainty and regulatory hurdles as key barriers. The report found that Australia now attracts just 15 per cent of international company investment portfolios, down from 40 per cent a decade ago, with some projects cancelled or moved offshore.[28] EY's 2023 study on the future role of natural gas in Australia and the region highlighted that these opportunities should not be taken for granted with competition growing for LNG supply to the region from countries such as the US and Qatar.[29]

Stable, bipartisan policy is critical to restore investor confidence, support new infrastructure, and recognise gas's role in the energy transition. With global LNG demand forecast to surge 58 per cent by 2050, particularly in the Asia-Pacific, Australia risks falling behind competitors like the US and Qatar unless it strengthens its investment and regulatory environment, including for future CCS projects.

Natural gas underpins manufacturing and industrial production in WA, providing 60 per cent of WA's electricity and 54 per cent of WA's primary energy consumption.[30] Natural gas plays a critical role across a range of industrial and manufacturing processes. This includes providing a high-temperature, precisely controllable heat source which is essential for firing of bricks and glass as well as for smelting and mineral processing, including iron and steel production. In iron production, natural gas also has a chemical role to play as a reductant. Natural gas is also used as a feedstock in other processes including in plastics, chemicals and pharmaceuticals.

Critical mineral processing in Australia cannot proceed without natural gas. Independent analysis from EY found that if Australia were to *"focus on onshore processing of critical minerals, it will be expected*

[28] Wood Mackenzie, *Australia's Natural Gas Investment Competitiveness*, 2025

[29] EY, *The future role for natural gas in Australia and the Region,* 2023

[30] Australian Energy Update 2024.

to increase the need for reliable, affordable, low-carbon power, heat, and chemical feedstocks in Australia from natural gas with and without CCS."[31]

Critical mineral processing, like other manufacturing and industrial processes, needs significant volumes of affordable, reliable energy both in the form of electricity and heat. Where heat is necessary, natural gas – or coal – are currently the most viable energy sources available. Alternative heat sources such as low-carbon hydrogen may become viable in the medium to long-term but currently they are not available at the scale required, and the costs per unit energy for low-carbon hydrogen is currently far more expensive than natural gas.

Where critical mineral processing requires significant electrical power, natural gas may still be the most viable energy source in the near to medium-term. This is due to the very large volumes of electricity that can be needed in often remote locations. Such volumes of renewable generation, particularly solar and onshore wind, require vast tracts of land along with significant firming capacity to facilitate running facilities 24 hours a day, 7 days a week, which in many cases may increase the cost of operation and/or slow the project development process. Deploying large scale renewable projects in industry will also need to compete with renewable projects that are being developed for the power network, which may raise supply chain challenges.

Barriers to CCS

Barriers to CCS technologies include permitting and regulatory complexities, high upfront capital costs, timeframes for development, G2G bilateral arrangement progress, and contested social licence.

Currently, CCS projects are capital intensive. These high costs can limit scalability despite significant potential in WA. Regional cooperation on CO_2 storage has the potential to create economies of scale and facilitate and reduce development costs to mitigate this barrier. Importing CO_2 can play an important role in meeting net zero targets in Australia and the region. Countries such as Japan, South Korea and Singapore have limited CO_2 storage potential and are seeking to partner with Australia for storage solutions given our abundant geological CO_2 storage resources, industry expertise, and world-leading regulatory frameworks.[32]

While Australia's federal CCS regulatory frameworks are effective, WA is in the process of finalising its CCS regulatory framework. The Department of Mines, Petroleum, and Exploration is taking appropriate steps to ensure alignment between state and federal frameworks, and similarly, it is imperative that regulatory frameworks and policy align with international jurisdictions and policy. Regulatory hurdles pose challenges, but these may diminish as technologies mature and risks become clearer.

To capture the opportunity of transboundary CO_2 from Asia, simple G2G bilateral arrangements need to be progressed at pace with countries where there is demonstrated demand for Australian CO_2 storage.

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[31] EY, *The future role for natural gas in Australia and the Region,* 2023

[32] CSIRO, *Australia's carbon sequestration potential*, 2022

Social concerns relating to CCS persist despite broad scientific consensus that "the risk of environmental impacts from geological storage of CO_2 is very low."[33] CCS projects are managed with strict methods and regulations, injection and storage sites are chosen carefully, and extensive monitoring plans are implemented to minimise leakage risks. The surface footprint is small, though pipelines may span hundreds of kilometres. CO_2 is not toxic but can be hazardous at high concentrations. Low-emission industrial hubs combining CCS, hydrogen, and renewable energy manufacturing are under discussion, with their social, environmental, and economic impacts, risks, and co-benefits being key considerations.

Opportunities for State and Federal Support

The WA Government has the opportunity to promote CCS projects in WA and Commonwealth adjacent waters through fact-based public messaging to the broader community. Positioning Australia as a clean energy supplier and regional CO_2 storage site could yield socio-economic and geopolitical benefits, including local job creation for specialists and service providers.

WA's LNG is a cornerstone of Australian and regional decarbonisation by supporting energy security and emissions reduction while driving economic growth. State and Federal government support through targeted policies can attract investment in new gas supplies and infrastructure, unlocking job creation and sustaining revenue for public services. AEP notes the following policy opportunities for the WA and Federal Government:

Deliver new gas supply for WA's energy security

- Ensure policies recognise the essential role of natural gas for WA's energy affordability, security, and sustainability.
- Maintain consistent annual acreage releases in WA and advocate for the regular release of acreage in Commonwealth waters to support new gas exploration.
- Publicly support the expansion of new gas developments both onshore and offshore.
- Finalise proposed changes to legislation in line with the Scientific Panel Inquiry recommendations from 2018 that would allow hydraulic fracturing, exploration and development of unconventional oil and gas resources.

Streamline approvals processes

- Streamline regulatory approval processes to expedite project delivery and attract investment.
- Implement the recommendations from the Vogel-McFerran Review and consult further on additional initiatives to improve and streamline regulatory approvals.
- Establish a case-appraisal approach to regulatory approvals to increase efficiency and support applicants through the process.
- Commit to statutory timeframes and implement clear requirements where applications are referred between departments for consideration and comment.

[33] CSIRO, *Australia's carbon sequestration potential*, 2022

- Seek state accreditation of WA approvals with the Australian Government to remove regulatory duplication and provide timely approvals for projects, including under the Environment Protection and Biodiversity Conservation Act (EPBC Act).

Back a strong domestic gas and LNG export industry

- Recognise the essential role that international LNG trade has in underpinning WA's domestic energy affordability, security, and economic and employment prosperity.
- Align the Domestic Gas Policy with the parliamentary committee's recommendation to allow onshore gas projects to export LNG beyond 2030 if the domestic market is adequately supplied.

Influence national energy policy

- Work with the Australian Government to ensure Commonwealth policies and regulations recognise the critical role WA's gas plays in both the Australian and WA economy and energy security.
- Advocate for no further increases to the Petroleum Resource Rent Tax (PRRT) to maintain a stable regulatory and investment environment.
- Remove restrictions on seismic surveys in Commonwealth waters, a critical technology for gas exploration and CCS developments.
- Work with the Australian Government to conclude environmental and regulatory approvals for projects of state significance such as the Browse development, and other key backfill projects.
- Urge the Australian Government to progress bilateral arrangements with Australia's regional neighbours to facilitate the international movement of carbon emissions for storage in Australia.
- Work with the Australian Government to develop a CCS roadmap for Australia and support the development of a CCS industry in WA.

Support CCS and other low emissions technologies

- Finalise the CCS Regulatory Framework to allow for the transportation and storage of carbon dioxide within WA and its waters.
- Implement the WA CCUS Action Plan within stated timeframes to help develop a CCS industry in WA.
- Promote opportunities for low-carbon hydrogen and CCS projects in WA and adjacent Commonwealth waters.
- Broaden the state's 'Green Energy Approvals Initiative' to include emissions reduction technologies and projects such as CCS to fast-track project approvals.
- Support decarbonisation of industrial hubs with fiscal incentives and the development of common user infrastructure (ports, transmission, carbon pipelines).

- Support the development of a CCS industry in WA by advocating for Federal financial support mechanisms such as tax credits, grants, and carbon pricing mechanisms, as is done in other competing jurisdictions.
- Consider funding early ‘anchor projects’ to de-risk investment and support the demonstration of large-scale CCS feasibility.
- Reevaluate WA’s ‘Renewable Hydrogen Strategy’ which strongly emphasises ‘renewable’ or ‘green’ hydrogen production, and instead adopt a technology agnostic approach, aimed to evaluate all low-carbon hydrogen pathways to enable maximum emissions reductions at the lowest cost.