

Making a submission to the WA government's inquiry into the role of Western Australia in the decarbonisation of its major trading partners



Public submissions due by 10 Oct 2025



Tabled by 15 Aug 2026

Better Climate

Submission guide

OCTOBER 2025

This guide was developed by the Better Climate team at the Conservation Council of WA to assist the public in making submissions to The WA Government inquiry into the role of Western Australia in the decarbonisation of its major trading partners.

Summary

The WA Government is holding an inquiry into the role of Western Australia in the decarbonisation of its major trading partners. Submissions are due by 10 October, however, extensions until 24 October can be requested by emailing laeisc@parliament.wa.gov.au.

CONTEXT

Every increment of global temperature increase will intensify multiple and concurrent hazards, resulting in a clear moral imperative to confront the climate emergency in an urgent and decisive manner. To do so, there is an immediate need to phase out fossil fuels to limit warming to 1.5°C.

Yet, WA enabling continued high fossil fuel usage and export through LNG, blue fuels and CCS threatens to sabotage international efforts to limit global warming, and the world remains on track for 2.7°C of heating. **WA needs to do its part and urgently reduce emissions to avoid the worst of climate change.**

WHAT IS WA'S ROLE?

WA is choosing to not reduce its greenhouse gas emissions and is placing gas – a fossil fuel – at the centre of its “decarbonisation” plans by continuing the large-scale export of LNG and ramping up gas-powered mineral extraction.

These policies are not aligned with the Paris Agreement's 1.5°C limit and are inconsistent with a transition away from fossil fuels in an accelerating fashion. The International Energy Agency and the IPCC have clearly stated that there should be no new fossil fuel development if the world is to limit warming to 1.5°C.

Maintaining high levels of fossil fuels use and export is not a decarbonisation measure, it is inconsistent with climate goals and at odds with science.

The WA government has been silent on gas's role as a fossil fuel and has shown insufficient ambition to reduce our emissions.

How to make a submission

Details of the submission can be found on the [inquiry homepage](#). To [lodge your submission](#) you will need to complete the five easy steps of:

1. Filling in your personal details
2. Choosing whether you want your submission to be public or private
3. Optionally, read our briefing below to inform the content of your submission
4. Write your submission
5. Confirm your submission

FORMATTING

You may find it helpful to organise your submission into sections based on the committee's terms of reference, and make recommendations on:

1. The pathways our major trading partners have to decarbonising and the potential for Western Australia to contribute through:
 - a) LNG exports, to provide energy security as they exit coal and transition to renewable energy.
 - b) Blue and green fuels, such as hydrogen and ammonia.
 - c) Green iron.
 - d) The importance of carbon capture and storage to the above.
2. The Committee will consider:
 - a) Any current barriers to investment in large scale decarbonisation projects and the pathway to green fuels.
 - b) Opportunities for State and Federal support.

The pathways our major trading partners have to decarbonising and the potential for Western Australia to contribute through:

a) LNG exports, to provide energy security as they exit coal and transition to renewable energy.

There is no pathway to decarbonisation through focusing on LNG exports. Gas is not a transition fuel. Gas is a fossil fuel. When released in its natural state (methane) gas has a global warming potential 80-times higher than that of carbon dioxide (CO₂) over a 20-year period.[1] When combusted, gas releases CO₂. Whichever way you look at it, gas is a fossil fuel.

When full lifecycle emissions (fugitive emissions from extraction, transport, liquefaction, shipping, storage, regasification, distribution and end use) are considered, gas can be even more polluting than coal.[2] A persistent and inaccurate claim from industry and government is that gas is a transition fuel that is replacing coal use in Asia. Not only have government and fossil fuel proponents been unable to prove that gas is displacing coal in Asia, a CSIRO report shows that gas' impact on emissions reduction is either negative or neutral and that exports could be displacing renewables;[3] while a US Department of Energy report shows that LNG exports would lead to increases in global net emissions, despite aggressive assumptions regarding CCS uptake.[4]

The International Energy Agency's 2023 NZE roadmap[5] shows gas use needs to be declining already and in an accelerating fashion. Research shows that the present expansion of LNG capacity globally vastly exceeds levels consistent with limiting warming to 1.5°C and is more consistent with a global warming outcome of 3°C, with LNG capacity greatly exceeding any need for coal to gas switching as part of 1.5°C compatible energy transitions.[6]

In WA alone, before accounting for any extra emissions leakages from shipping LNG overseas, there are numerous gas-powered facilities that are more emissions intensive than some of the state's coal-fired power plants.[7]

Asian energy security does not require sustained Australian fossil fuel production. Analysis from the Institute for Energy Economics and Financial Analysis (IEEFA) found that Japan resells more LNG overseas than it imports from Australia, whilst its LNG demand decreased 25% in the decade to 2023 and is set to fall a further 25% by 2030.[8] Japan has clearly signalled a plan to reduce gas use in favour of renewable alternatives in their Outline of Strategic Energy Plan, [9] and the Republic of Korea's 10th Basic Energy Plan for Electricity Supply and Demand, has set a target to reduce the share of gas derived electricity.[10]

LNG exports contradict decarbonisation efforts and are a dangerous departure from climate action.

b) Blue and green fuels, such as hydrogen and ammonia.

Blue fuels are an enabling mechanism for fossil fuel production, they are not a decarbonisation method. According to the IEA Global Hydrogen Review, worldwide hydrogen production was 95 Mt in 2022 and linked to more than 900 Mt of CO₂ emissions.[11]

Blue hydrogen is produced from gas, through an energy intensive and polluting method called steam reforming, which breaks down methane into hydrogen, CO₂ and waste products.[12]

Theoretically, the CO₂ waste product is captured and stored, but CCS has so far delivered low success rates, and there is no guarantee that sequestration is attempted for the CO₂ from the original gas source. Steam reforming and CCS require power sources, which are often gas-fired. As a result, total emissions for blue hydrogen are estimated to be only slightly less than that of grey hydrogen.[13]

Hydrogen can be blended with gas in existing distribution systems and used for heating, power generation and industrial applications, but blends of only 5-20% hydrogen are feasible due to safety considerations.[14]. Because the combustion of hydrogen releases less energy than the same volume of gas, a greater volume of blended gas must be burned in order to produce the same amount of energy that burning pure gas would.[15]. Therefore a 5% blend of hydrogen result in far less than 5% a reduction in emissions.

Green hydrogen is inefficient as an energy source, with approximately 20-45% of initial available energy lost during production (electrolysis) and distribution.[16]. These energy inefficiencies are further exacerbated when hydrogen is used for transport. For this reason, hydrogen should only be used in non-electrifiable processes.

Leakage, NO_x emissions, and other toxics emissions are potentially significant pollutants from hydrogen production processes.[17].

Being inefficient and expensive to produce, store and transport, hydrogen is not a prominent globally traded commodity. There may not be a multitude of proposed use cases that end up being significant users of hydrogen, particularly as a fuel or energy carrier.[18]. Green hydrogen can serve to embody renewable energy into finish products, for example, as a chemical feedstock or a reducing agent for green iron and steel production, particularly in-situ.

Being the smallest molecule in the universe, hydrogen has a propensity to leak. Hydrogen is not a greenhouse gas, as it does not trap heat directly, but it is billed as an 'indirect greenhouse gas' as it is involved in chemical reactions in the atmosphere that enable or enhance the effects of other greenhouse gases.[19].

An example of how hydrogen is used to prolong the use of fossil fuels is Woodside's H2Perth Project. Originally billed as a green hydrogen project, H2Perth was to use significant amounts of gas to produce mostly blue hydrogen and approximately one-third green hydrogen.[20]. A September 2025 update to the project shows that the proponent no longer plans to produce any green hydrogen, with the facility to only produce blue hydrogen.[21]. The proponent remains without a functioning CCS facility. The overall climate and decarbonisation utility of hydrogen depends on production method, sector use and leakage rates.[22].

c) Green iron.

At 7-9% of global GHG emissions, iron and steel production is one of the world's most emissions-intensive industries.[23]. To reach global net-zero targets, the steel production chain needs to rapidly decarbonise. These emissions disproportionately come from the Asia-Pacific region, where some nations face constraints on renewable energy generation.

As the world's largest iron ore producer, and the bulk of exports not currently compatible with existing green steel technologies, WA is a significant enabler of the embodied emissions of steel.[24]. Given its ore reserves and renewable energy potential, WA has an opportunity to contribute to the dramatic reduction of emissions from steel production. To do this, WA must establish a large-scale onshore green iron industry. Government support and ambition is required to develop the state's green iron manufacturing capacity and ensure its commercial viability.

WA can set ambitious goals for local green steel production and meeting green iron demand of trading partners. A detailed industry plan for WA is needed, with secure transition pathways for workers. WA must collaborate with trading partners to establish complementary trade policies, incentives, and a successful green steel supply chain. Support for the introduction of a strong regional carbon price would also act as an enabling mechanism.[25].

Decarbonising the iron and steel production chain requires significant renewable deployment, but WA's current deployment rates are too slow to drive scaled emissions reductions.[26]. The co-location of renewable energy resources with green iron industrial hubs should be maximised, with Renewable Energy Zones linked to Strategic Industrial Areas, and the establishment of a single common-user grid infrastructure in the greater Pilbara with very high volumes of renewable energy capacity.[27].

The current lack of a common definition for green steel is a key barrier to establishing an effective industry.[28] Alignment on strict emissions boundaries for a global green steel definition is required – green iron and subsequent processes must be produced using renewable electricity and green hydrogen. Strict definitions are important to avoid greenwashing. In August 2025, the Port Hedland hot briquetted iron plant, originally called the Port Hedland Green Steel Project, was approved by the WA EPA, yet the plant does not plan to be green (100% powered by renewable energy) until 2049. Until then, the facility will be powered by gas.[29]

Global investment is already shifting toward green steel and is outpacing policy initiatives and project progress in WA.[30]

d) The importance of carbon capture and storage to the above.

There are no projects operating anywhere in the world that have delivered CCS on time, on budget, or in the quantities promised.[31]. It is far safer and cheaper to avoid fossil fuel emissions in the first place.

As evidenced by WA's Gorgon project, and the proposed Browse gas and CCS proposal, CCS projects don't need to be demonstrable or commercial to be used by fossil fuel companies to get new fossil fuel projects approved. CCS must not be used as an enabling mechanism for new or extended fossil fuel projects.

The emissions sequestered from CCS in Australia are meagre compared to the enormous amount of public investment,[32] while technical and financial challenges continue to plague the industry.[33].

IEA's net zero emissions (NZE) scenarios have relied on successively less CCS, as its relative cost effectiveness has declined. The 2023 version of the scenario uses 38% less CCS than the 2021 version.[34] This low CCS use is because alternatives are often cheaper and more effective at reducing emissions. Pathways that achieve the Paris Agreement's 1.5°C limit in a sustainable manner show a near complete phase out of fossil fuels by around 2050 and rely to a very limited degree, if at all, on fossil CCS.[35], [36].

Recent studies show that CO2 storage periods of less than 1,000 years are insufficient for neutralising remaining fossil CO2 emissions under net-zero emissions.[37] Further, the storage potential for CO2 is not unlimited, as there are practical planetary boundaries to how much can be securely stored, therefore, carbon storage needs to be prioritised for certain emissions and treated as a limited intergenerational resource.[38].

Current CCS efforts are not decarbonisation initiatives since there is no restriction on fossil fuel production and development. The promise of CCS is continually overstated and threatens to absolve responsibility of dealing with the issue of emissions reductions – delaying action in the present in the hope of salvation in the future. Given the history of failure and under delivery of CCS, restoring atmospheric greenhouse gas concentrations to safe levels via stringent near-term gross emissions reductions must be the priority.

CCS serves to create a false impression that we can achieve our climate goals and maintain large-scale fossil fuel consumption.

Final

WA must substantially increase the speed of its renewable deployment and aim to achieve a just transition away from fossil fuels. This involves managing the communal, material, land, and nature impacts of the rollout with deliberate and coordinated policies.

References

- [1] Mar, K.A., Unger, C., Walderdorff, L. and Butler, T. (2022). Beyond CO₂ equivalence: The impacts of methane on climate, ecosystems, and health. *Environmental Science & Policy*, [online] 134, pp.127–136. doi:<https://doi.org/10.1016/j.envsci.2022.03.027>.
- [2] Howarth, R.W. (2024). The greenhouse gas footprint of liquefied natural gas (LNG) exported from the United States. *Energy Science & Engineering*, 12(11). doi:<https://doi.org/10.1002/ese3.1934>.
- [3] Hayward, J. and Graham, P. (2019). Modelling the emissions impact of additional LNG in Asia A report for Woodside Energy Pty Ltd. [online] Available at: https://www.woodside.com/docs/default-source/sustainability-documents/climate-change/modelling-the-emissions-impact-of-additional-lng-in-asia.pdf?sfvrsn=fb147f13_3.
- [4] ENERGY, ECONOMIC, AND ENVIRONMENTAL ASSESSMENT OF U.S. LNG EXPORTS. (2024). Available at: https://www.energy.gov/sites/default/files/2024-12/LNGUpdate_SummaryReport_Dec2024_230pm.pdf [Accessed 6 Oct. 2025].
- [5] IEA, 2023. Net Zero Roadmap: A Global Pathway to Keep the 1.5 °C Goal in Reach, 2023 Update.
- [6] Yang et al 2022. Global liquefied natural gas expansion exceeds demand for coal-to-gas switching in Paris compliant pathways. <https://iopscience.iop.org/article/10.1088/1748-9326/ac71ba/meta>
- [7] Cer.gov.au. (2022). Greenhouse and energy information by designated generation facility 2022–23 | Clean Energy Regulator. [online] Available at: <https://cer.gov.au/node/4444> [Accessed 6 Oct. 2025].
- [8] ieeefa.org. (n.d.). Japan does not need Australian LNG to keep the lights on in Tokyo. [online] Available at: <https://ieeefa.org/resources/japan-does-not-need-australian-lng-keep-lights-tokyo>.
- [9] The 7th Strategic Energy Plan February 2025 Agency of Natural Resources and Energy: https://www.enecho.meti.go.jp/en/category/others/basic_plan/pdf/7th_outline.pdf
- [10] www.kimchang.com. (n.d.). Key Contents of the 10th Basic Plan on Electricity Supply and Demand – Kim & Chang. [online] Available at: https://www.kimchang.com/en/insights/detail.kc?sch_section=4&idx=26720.
- [11] <https://www.iea.org/reports/global-hydrogen-review-2023>
- [12] Wikipedia Contributors. (2019, September 27). Hydrogen production. Wikipedia; Wikimedia Foundation. https://en.wikipedia.org/wiki/Hydrogen_production
- [13] Howarth, R.W. and Jacobson, M.Z. (2021). How green is blue hydrogen? *Energy Science & Engineering*, [online] 9(10). doi:<https://doi.org/10.1002/ese3.956>.
- [14] https://h2council.com.au/wp-content/uploads/2022/10/EPRI_Safety_of_Hydrogen_Pipeline_Blending_2019_3002017253.pdf
- [15] Fatih Sorgulu, Ozturk, M., Nader Javani and Ibrahim Dincer (2023). Experimental investigation for combustion performance of hydrogen and natural gas fuel blends. *International Journal of Hydrogen Energy*, 48(88), pp.34476–34485. doi:<https://doi.org/10.1016/j.ijhydene.2023.05.239>.
- [16] Hossain, M. and Siddique, Z. (2025). Hydrogen as an alternative fuel: A comprehensive review of challenges and opportunities in production, storage, and transportation. *International Journal of Hydrogen Energy*, [online] 102(102), pp.1026–1044. doi:<https://doi.org/10.1016/j.ijhydene.2025.01.033>.
- [17] Cho, H.H., Strezov, V. and Evans, T.J. (2022). Environmental impact assessment of hydrogen production via steam methane reforming based on emissions data. *Energy Reports*, 8, pp.13585–13595. doi:<https://doi.org/10.1016/j.egy.2022.10.053>.
- [18] <https://www.linkedin.com/pulse/hydrogen-ladder-version-50-michael-liebreich>
- [19] Marit Sandstad, Krishnan, S., Myhre, G., Sand, M. and Skeie, R.B. (2025). What to consider when considering climate effects of hydrogen – Towards an assessment framework. *International Journal of Hydrogen Energy*, [online] 145, pp.795–802. doi:<https://doi.org/10.1016/j.ijhydene.2025.06.055>.
- [20] Split opinions over green credentials of Woodside’s new Kwinana hydrogen hub. (2021). ABC News. [online] 25 Oct. Available at: <https://www.abc.net.au/news/2021-10-25/woodside-unveils-plans-for-hydrogen-plant-in-kwinana/100565502>.
- [21] Milne, P. (2025). Woodside’s Perth hydrogen plan: smaller, later, dirtier. [online] Boiling Cold. Available at: <https://www.boilingcold.com.au/woodside-shrinks-and-delays-perth-hydrogen-plan/> [Accessed 6 Oct. 2025].
- [22] Marit Sandstad, Krishnan, S., Myhre, G., Sand, M. and Skeie, R.B. (2025). What to consider when considering climate effects of hydrogen – Towards an assessment framework. *International Journal of Hydrogen Energy*, [online] 145, pp.795–802. doi:<https://doi.org/10.1016/j.ijhydene.2025.06.055>.
- [23] World Steel Association (2021). Climate change policy paper. [online] worldsteel.org. Available at: <https://worldsteel.org/publications/policy-papers/climate-change-policy-paper/>.
- [24] Springmount Advisory. (2024). Forging Our Future. [online] Available at: https://www.ccwa.org.au/forging_our_future.
- [25] Deloitte and WWF. 2025. Forging Futures: Changing the Nature of Iron and Steel Production. Available at <https://wwf.org.au/news/2025/new-report-says-green-iron-is-australias-economic-sweet-spot/>
- [26] ibid

- [27] Springmount Advisory. (2024). Forging Our Future. [online] Available at: https://www.ccwa.org.au/forging_our_future.
- [28] ibid
- [29] <https://www.abc.net.au/news/2025-08-19/green-hot-briquetted-iron-project-environmental-approval/105666950>
- [30] Springmount Advisory. (2024). Forging Our Future. [online] Available at: https://www.ccwa.org.au/forging_our_future.
- [31] Climate Council (2023). What is Carbon Capture and Storage? [online] Climate Council. Available at: <https://www.climatecouncil.org.au/resources/what-is-carbon-capture-and-storage/>.
- [32] Luciana Lawe Davies (2023). Carbon capture and storage is a dangerous rort. [online] The Australia Institute. Available at: <https://australiainstitute.org.au/post/carbon-capture-and-storage-is-a-dangerous-rort/>.
- [33] ieeefa.org. (2023). Gorgon CCS underperformance hits new low in 2023-24. [online] Available at: <https://ieefa.org/resources/gorgon-ccs-underperformance-hits-new-low-2023-24>.
- [34] IEA. 2023. Net Zero Roadmap: A Global Pathway to Keep the 1.5 °C Goal in Reach <https://www.iea.org/reports/net-zero-roadmap-a-global-pathway-to-keep-the-15-c-goal-in-reach>
- [35] IPCC. Special report: Global warming of 1.5°C <https://www.ipcc.ch/sr15/>
- [36] IEA. 2023. Net Zero Roadmap: A Global Pathway to Keep the 1.5 °C Goal in Reach <https://www.iea.org/reports/net-zero-roadmap-a-global-pathway-to-keep-the-15-c-goal-in-reach>
- [37] Brunner, C., Hausfather, Z. and Knutti, R. (2024). Durability of carbon dioxide removal is critical for Paris climate goals. *Communications Earth & Environment*, 5(1). doi:<https://doi.org/10.1038/s43247-024-01808-7>.
- [38] Gidden, M.J., Joshi, S., Armitage, J.J., Christ, A.-B., Boettcher, M., Brutschin, E., Köberle, A.C., Riahi, K., Schellnhuber, H.J., Carl-Friedrich Schleussner and Joeri Rogelj (2025). A prudent planetary limit for geologic carbon storage. *Nature*, [online] 645(8079), pp.124–132. doi:<https://doi.org/10.1038/s41586-025-09423-y>.