Submission to the Future Gas Strategy

Diplomats for Climate Action Ltd welcomes the opportunity to respond to the Government's consultation on a Future Gas Strategy for Australia. Diplomats for Climate Action represents over 100 former Australian diplomats, trade commissioners and development experts who are concerned about climate change and advocate high ambition in climate policy.

The discussion paper questions relating to international LNG (liquefied natural gas) exports seem to assume that Australia should continue to export LNG well into the future and the consultation seeks justification for this from producers and international consumers.

Diplomats for Climate Action urges the Government to take a broader, whole of economy view of Australia's export potential, in particular factoring in the Government's commitment to make Australia a renewable energy superpower. In such a context, continuing to prioritise LNG exports would seem at best inconsistent and at worst contradictory to our commitments in the Paris Agreement to work with the global community to limit global heating to as close as possible to 1.5 degrees Celsius above pre-industrial levels. That said, unilaterally phasing down exports is unlikely by itself to achieve our climate goals.

Diplomats for Climate Action offers this proposal as a way to achieve a rapid and substantial phase-down of Australia's fossil fuel exports in a way that will genuinely reduce global greenhouse gas emissions. It is designed to protect our political, strategic and economic interests, and to ensure our trading partners do not simply turn to alternative suppliers.

<u>Recommendations</u>

1. Australia should explicitly tie its commitment to being a reliable supplier of fossil fuel energy resources in the short to medium term to active multilateral and bilateral efforts to accelerate the energy transition in its major trading partners.
2. The Government should develop explicit bilateral strategies in its top three LNG markets - Japan, China and the Republic of Korea - not only to co-operate in new technologies but also to directly support their efforts to decarbonise their electricity and industrial sectors, with a view to reducing and eventually eliminating their demand for Australian LNG into the medium and long term.
3. These strategies should be developed across relevant government agencies and overseas posts, and be a high priority for Australian diplomacy in these countries.

Diplomats for Climate Action believes that ultimately, the future of gas in Australia should be that most of it stays in the ground. At the same time, Diplomats for Climate Action recognises Australia is a significant energy supplier and its reputation as a reliable international trade and investment partner is important for the whole economy. Diplomats for Climate Action also recognises that limiting, reducing or phasing out Australian fossil fuel exports without addressing the demand for those exports will not be an effective way to

reduce global greenhouse gas emissions and thus the threat of climate change. While Australia exports more coal than any other country, Australia's coal exports in 2021 (363Mt)[1] met only about 4.5% of global coal demand (7947Mt)[2]. In 2022, Australia was the world's second largest LNG exporter, but Australia's LNG exports in 2022 (83.2Mt or 112.3bcm)[3] met only about 2.8% of global LNG demand (4083bcm)[4]. Unilateral phase-down of Australia's exports would be disruptive in the short term (particularly for Japan - see below), and, in the absence of significant decarbonisation in our export markets, our partners would source supply from elsewhere. For gas, this is likely to be Qatar, United States or Russia.[5]

For this reason, Diplomats for Climate Action urges the Government to develop a future gas export strategy that includes active diplomacy with our major trading partners to accelerate the decarbonisation of their economies and thus substantially reduce and potentially eliminate their need for fossil fuels, including those exported by Australia. A diplomatic strategy might have the following elements.

1) Assurance to our international partners that Australia is, and will remain, a reliable supplier of energy, while signalling that their energy needs will be best secured with non-fossil fuel sources of energy (which Australia can also supply)

The Government has assured our major trading partners that Australia will remain a reliable supplier of energy. Given the urgency of the climate crisis, however, it is not sufficient to do this and hope our international partners will implement their own decarbonisation strategies without additional active encouragement and engagement by Australia.

The Government needs to signal clearly that Australia's vision for its economic future is in clean energy exports - which the Government has already made a central feature of its economic strategy - and that it wishes to engage actively with trading partners to accelerate the energy transition both in Australia and in the region. An important component of this will be to ensure that implementation of Australia's domestic climate policy, and particularly the Safeguard Mechanism, which limits emissions from large industrial projects to an overall carbon budget,[6] does not include any carve outs for export fossil fuels. Promoting decarbonisation in our trading partners must include ensuring rigorous and consistent application of our domestic emissions reductions policies.

Australia is in an influential position here: we are a significant energy supplier, as well as a recognised leader in many aspects of clean energy technology and the transition. We must leverage this position to accelerate the energy transition in our destination markets so that we can continue to be an energy supplier, but of clean energy rather than fossil fuels.

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[1] Geosciences Australia, *Australia's Energy Commodity Resources - Coal*, https://www.ga.gov.au/digital-publication/aecr2023/coal, accessed 4 November 2023
[2] International Energy Agency, *Coal Market Update - July 2022*, https://www.iea.org/reports/coal-market-update-july-2022/demand, accessed 4 November 2023
[3] Geosciences Australia, *Australia's Energy Commodity Resources - Gas*, https://www.ga.gov.au/digital-publication/aecr2023/gas, accessed 4 November 2023
[4] International Energy Agency, *Gas Market Report Q3-2022*, https://iea.blob.core.windows.net/assets/c7e74868-30fd-440c-a616-488215894356/GasMarketReport,Q3-2022.pdf, accessed 4 November 2023
[5] https://www.statista.com/statistics/274528/major-exporting-countries-of-lng/
[6] Australian Government Clean Energy Regulator, *The Safeguard Mechanism*, https://www.cleanenergyregulator.gov.au/NGER/The-Safeguard-Mechanism, accessed 4 November 2023

2) Development of a targeted bilateral strategy with our major gas markets (Japan, China and Republic of Korea) to accelerate the decarbonisation of their domestic economies.

In addition to taking a leadership role in international climate negotiations (see below), Australia has the opportunity to leverage its strong bilateral relationships with its biggest gas export markets - Japan, China, and Republic of Korea - to accelerate their paths to net zero and, over the medium to long term, end their reliance on Australian fossil fuels.

a) Japan

Japan is Australia's largest export market for LNG.[7] The long-standing bilateral energy relationship between Australia and Japan is arguably the most important bilateral energy relationship in the world. While Japan has diversified its energy sources in recent years, Australia remains by far its most important energy supplier. Australia and Japan have a close and multi-faceted bilateral economic and security relationship. For these reasons, Diplomats for Climate Action recommends the Government prioritise a bilateral strategy with Japan, drawing on official, business and academic relationships and expertise.

Both Australia and Japan have committed to net zero greenhouse gas emissions by 2050 and already have a significant number of bilateral arrangements for co-operation in green hydrogen,[8] low-emissions steel,[9] critical minerals,[10] and a Partnership on Decarbonisation through Technology.[11]

But Japan's domestic energy sector is still heavily dependent on fossil fuels (around 78%)[12], including Australian gas. Zero emissions sources contributed around 21% of Japan's electricity in 2022, a significant increase on a decade earlier driven by an increase in solar power, but still relatively low given Japan's renewable energy potential. Hydropower remains the largest source of renewable energy, but has very limited expansion potential.

Japan's net zero plan envisages a continuing significant role for fossil fuels,[13] and a heavy reliance on carbon capture and storage to mitigate its climate impacts. Given a history of under-performance of carbon capture and storage technology,[14] and Japan's high dependence on imported fossil fuels, this is a high risk strategy for both the world's climate security and for Japan's energy security.

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[7] https://www.energyquest.com.au/australian-2022-lng-export-revenue-over-a90-billion/, accessed 5 November 2023

[8]https://www.dfat.gov.au/about-us/publications/trade-investment/business-envoy/business-envoy-february-2022/clean-hydrogen-collaboration-japan, accessed 5 November 2023

[9]https://www.dcceew.gov.au/climate-change/international-commitments/international-partnerships#japan, accessed 5 November 2023

[10]https://www.minister.industry.gov.au/ministers/king/media-releases/australia-japan-strengthen-critical-minerals-cooperation, accessed 5 November 2023

[11]https://www.minister.industry.gov.au/ministers/taylor/media-releases/japan-australia-partnership-decarbonisation-through-technology, accessed 5 November 2023

[12] International Energy Agency, *Japan*, https://www.iea.org/countries/japan, accessed 5 November 2023

[13] International Energy Agency, *Japan 2021 - Energy Policy Review*, March 2022, https://iea.blob.core.windows.net/assets/3470b395-cfdd-44a9-9184-0537cf069c3d/Japan2021_EnergyPolicyReview.pdf

[14] Stanford News, *Stanford study casts doubt on carbon capture*, 25 October 2019, https://news.stanford.edu/2019/10/25/study-casts-doubt-carbon-capture/

Australia, as a trusted and likeminded economic and security partner, and a long-standing supplier of energy, is in a strong position to work with Japan to accelerate decarbonisation of its electricity, which could then underpin broader decarbonisation - around 41% of Japan's energy use is in heavy industry.[15] Australia should open a conversation with the Japanese government and business based on the following:

- Japan and Australia are important energy partners and this relationship underpins both countries' economic security;
- Both Japan and Australia have committed to net zero greenhouse gas emissions by 2050, which will require a very different energy mix, based on zero-emissions sources;
- It is in the economic and strategic interests of both countries that our energy partnership continue in a decarbonised world;
- Both countries must therefore work together at both official and business level to shape that energy partnership for a decarbonised future.

Japan has greatly increased its solar power capacity in recent years, and there is potential for further expansion, particularly on disused farmland, and for solar thermal energy as a source for heating (currently largely supplied by oil and gas).[16] Moreover, Japan's natural potential in geothermal and wind power, particularly offshore wind, has not been realised.

Australia, as the world leader in rooftop solar generation, has much to share with Japan in terms of grid management for intermittent and two-way electricity flows, as well as programs to encourage greater take-up and better management of distributed solar resources. Australia is also engaging in cutting edge research in solar thermal technologies,[17] which could help to meet current gas-reliant residential heating and industrial uses.

Australia is accelerating its investment in offshore wind,[18] notably using floating platforms, which are better suited to the very deep waters around Japan. Australia's recent experience in developing a regulatory framework and, importantly, community engagement in offshore wind projects, could provide valuable lessons for Japan.

Japan would benefit from investing in Australian capacity to manufacture clean energy resources such as solar panels, wind turbines and batteries. This would take advantage of Australia's minerals resources while securing supply from a likeminded bilateral partner.

Japan's geology as a volcanic archipelago means it has abundant geothermal resources, which could be used as a base load source of electricity generation as well as a heat source for both residential and industrial uses - both of which are heavily dependent on gas. Long investment lead times and uncertainty of future markets, as well as community concerns, have limited private sector development of those resources.[19]

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[15] International Energy Agency, *Japan 2021 - Energy Policy Review*, March 2022, https://iea.blob.core.windows.net/assets/3470b395-cfdd-44a9-9184-0537cf069c3d/Japan2021_EnergyPolicyReview.pdf
[16] See above
[17] https://www.astri.org.au/, accessed 5 November 2023
[18] https://www.dcceew.gov.au/energy/renewable/offshore-wind, accessed 5 November 2023
[19] International Energy Agency, *Japan 2021 - Energy Policy Review*, March 2022, https://iea.blob.core.windows.net/assets/3470b395-cfdd-44a9-9184-0537cf069c3d/Japan2021_EnergyPolicyReview.pdf

While Australia does not have significant capacity in geothermal technology, recent clean energy partnership announcements made by the Prime Minister and the US President include commitments to work together on accelerating decarbonisation in third countries. Much of the focus of this commitment is likely to be joint programs in developing countries, but given Japan's economic heft and emissions profile, a trilateral cooperation arrangement between Japan, Australia (Japan's most important fossil fuel supplier) and the US (a world leader in geothermal technology) could make a considerable contribution to addressing climate change. A government-level trilateral investment collaboration with two of Japan's most trusted economic and security partners could de-risk investment in geothermal energy.

b) China

China is Australia's second-largest export market for LNG.[20] Australia's relationship with China is complex and challenging, but climate change is an area of common interest and potentially an area for bilateral cooperation. China is both the world's largest coal producer and consumer,[21] and the world's largest producer of solar panels and generator of renewable energy.[22] Australia leads the world in per capita distributed solar (mostly on residential rooftops). Both countries have committed to net zero greenhouse gas emissions, Australia by 2050 and China by 2060. Both countries are significant producers of the critical minerals needed for the clean energy transformation.

While Australia and China are competitors in many areas of the global clean energy transformation, they share a common interest in global reduction of greenhouse gas emissions and even when there is tension or even hostility in the bilateral relations, much can be done through lower level technical co-operation.

During periods of significant tension over human rights, Australia and China were still able to conduct low-profile human rights training and exchanges of judicial and corrections officers. A similar approach to technical exchanges and joint programs could be adopted for clean technology, particularly in steel-making where Australia has been the major source of China's imports of iron ore and metallurgical coal, and where China is actively seeking to decarbonise, notably by mandating a target of 50% recycled steel by 2025.

Strategic competition will place limits on technology-sharing, but there is still scope for cooperation, for example in systems for creating a national power market, which the International Energy Agency identifies as a priority for decarbonising China's electricity sector.[23] Australia's experience in developing systems to manage distributed, intermittent and two-way electricity generation (rooftop solar) could also be useful to China.

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[20] https://www.energyquest.com.au/australian-2022-lng-export-revenue-over-a90-billion/, accessed 5 November 2023

[21] Statista, *Leading coal consuming countries worldwide in 2022*, https://www.statista.com/statistics/265510/countries-with-the-largest-coal-consumption/, accessed 4 November 2023

[22] Statista, *Leading countries in installed renewable energy capacity worldwide in 2022*, https://www.statista.com/statistics/267233/renewable-energy-capacity-worldwide-by-country/, accessed 4 November 2023

[23] https://iea.blob.core.windows.net/assets/666f55e2-83a8-470d-b8e4-f48618aeec1e/BuildingaUnifiedNationalPowerMarketSysteminChina.pdf

c) *Republic of Korea*

The Republic of Korea (ROK) is Australia's third largest gas market, accounting for around 10% of Australian LNG exports.[24]

Like Japan, ROK has committed to net zero greenhouse gas emissions by 2050. Also like Japan, ROK's electricity sector is heavily dominated by fossil fuels.

Australia's clean energy co-operation with ROK is focused on hydrogen, low-emissions steel and iron ore, and carbon capture and storage.[25]

Australia is a trusted and long term economic partner for ROK. Australia should make a concerted bilateral diplomatic effort to leverage its position as a significant LNG supplier as well as a country with experience in the renewable energy transformation.

The International Energy Agency has recommended ROK redesign incentives in its power sector to reward low carbon generation.[26] As a world leader in distributed solar electricity, and with an ambitious program to convert its electricity sector to renewable energy, Australia has much experience and expertise to share on redesigning electricity systems, including pricing, to both manage and incentivise distributed generation.

ROK has potential to expand its offshore wind and tidal power generation. ROK currently hosts the world's largest tidal energy project.[27] Australia does not currently have significant tidal power projects, but a project funded by the Australian Renewable Energy Agency on the potential for tidal power not only identified promising sites in Australia, but also examined the technical, economic and investment conditions necessary to make tidal power viable.[28] Those principles and findings could be usefully shared and ROK's experience in running a significant tidal power plant would be valuable for Australian policy makers and investors.

Offshore wind is an area where Australia is developing expertise and experience, particularly in community consultation and earning social licence. This is one of the major impediments to offshore wind investment in ROK, and presents opportunities for bilateral co-operation in information sharing.[29]

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[24] https://www.energyquest.com.au/australian-2022-lng-export-revenue-over-a90-billion/, accessed 5 November 2023

[25] https://www.dcceew.gov.au/climate-change/international-commitments/international-partnerships#korea, accessed 5 November 2023

[26] International Energy Agency, *Reforming Korea's Electricity Market for Net Zero*, 2021, https://www.iea.org/reports/reforming-koreas-electricity-market-for-net-zero/executive-summary

[27] International Energy Agency, *Korea 2020 - Energy Policy Review*, 2021, https://iea.blob.core.windows.net/assets/90602336-71d1-4ea9-8d4f-efeeb24471f6/Korea_2020_Energy_Policy_Review.pdf

[28] Penesis, I., Hemer, M., Cossu, R., Nader, J.R., Marsh, P., Couzi, C., Hayward, J., Sayeef, S., Osman, P., Rosebrock, U., Grinham. A., Herzfeld, M. and Griffin, D., *Tidal Energy in Australia: Assessing Resource and Feasibility in Australia's Future Energy Mix*, 2020, Australian Maritime College, University of Tasmania.

[29] International Energy Agency, *Korea 2020 - Energy Policy Review*, 2021, https://iea.blob.core.windows.net/assets/90602336-71d1-4ea9-8d4f-efeeb24471f6/Korea_2020_Energy_Policy_Review.pdf

3) Intensification of multilateral diplomacy to push for accelerated ambition amongst all Parties to the UN Framework Convention on Climate Change, and particularly signatories to the Paris Agreement

The Government is seeking to host the 31st Conference of Parties to the UNFCC (COP31),[30] which will present an opportunity to seek a genuine increase in ambition among Parties to the Convention. Current projections by the UN[31] and other international agencies[32] suggest that existing Paris Agreement commitments will fall well short of what is needed to keep global heating to below 2 degrees Celsius above pre-industrial levels, let alone close to 1.5 degrees. Active diplomacy by Australia in the lead-up to COP31 should have the explicit aim of seeking significantly improved commitments for 2035.

The Government's active and rigorous implementation of its own emissions reduction targets, in particular in the electricity sector,[33] but also measures in the industrial sector through the Safeguard Mechanism[34] and its promised sectoral decarbonisation plans,[35] will underpin its credibility in advocating more aggressive decarbonisation in our trading partners. If it is to achieve increased international ambition for 2035, it will need to ensure that its sectoral decarbonisation plans can deliver a significantly more ambitious greenhouse gas emissions target for 2035 than the 43% it has already committed for 2030.

Actively seeking investment partnerships from fossil fuel importing countries in Australian manufacture of clean energy components such as batteries, solar panels and wind turbines, and actively working with those partners to decarbonise their domestic economies, will also help to demonstrate a genuine commitment to ending demand for Australian fossil fuels.

Conclusion

A feature of the climate debate in Australia is pointing out that our biggest contribution to global emissions is through our exported fossil fuels. The solution to this, however, cannot lie only in Australia. The global energy trade is not only an economic phenomenon but also a geo-strategic issue. Diplomats for Climate Action offers this proposal as a way for Australia to leverage its status as a major energy exporter to make a targeted and meaningful contribution to reducing global greenhouse emissions in a way that will enhance our bilateral relationships and bolster our strategic as well as our economic interests.

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[30] Senator the Hon Penny Wong, *Australia's International Climate Engagement*, media release 5 November 2022, https://www.foreignminister.gov.au/minister/penny-wong/media-release/australias-international-climate-engagement

[31] United Nations, *For a livable climate: net zero commitments must be backed by actions*, https://www.un.org/en/climatechange/net-zero-coalition, accessed 4 November 2023

[32] International Energy Agency, *Tracking climate pledges: can the Global Stocktake be a landmark moment for energy sector ambition?*, 16 October 2023, https://www.iea.org/commentaries/tracking-climate-pledges-can-the-global-stocktake-be-a-landmark-moment-for-energy-sector-ambition

[33] Australian Office of Financial Management, *Australian Government Climate Change commitments, policies and programs*, November 2022, https://www.aofm.gov.au/sites/default/files/2022-11-28/Aust%20Govt%20CC%20Actions%20Update%20November%202022_1.pdf

[34] Australian Government Clean Energy Regulator, *The Safeguard Mechanism*, https://www.cleanenergyregulator.gov.au/NGER/The-Safeguard-Mechanism, accessed 4 November 2023

[35] Department of Climate Change, Energy, the Environment and Water, *Net Zero*, https://www.dcceew.gov.au/climate-change/emissions-reduction/net-zero, accessed 4 November 2023