HOW TO BUILD A GAS EMPIRE: PART 1

NASSERAN

BEETALOO

FRACK

BHA Y

100

LINT

nosan

TONLE

CORPORATE PROFITS IN JAPAN AND KOREA ARE DRIVING AUSTRALIA'S GAS EXPANSION – BUT AT WHAT COST?



OWER

DOWNSTREAM

OIL RIG

AUSTRALIAN CONSERVATION FOUNDATION Nature needs us,

now

GAS

MIDSTRE



ABOUT THIS REPORT

This is a publication of Jubilee Australia Research Centre, in collaboration with the Australian Conservation Foundation and the Fossil Free Japan coalition.

Authors: Suhailah Ali and James Sherley (Jubilee Australia Research Centre)

Reviewers: Goni Ben Gara (Solutions for Our Climate); Wesley Morgan (University of New South Wales); Hiroki Osada (Friends of the Earth Japan); Meg Good, Elizabeth Sullivan (Australian Conservation Foundation); Mia Watanabe (Oil Change International)

Additional contributions: feedback on drafts - Luke Fletcher, Shona Hawkes (Jubilee Australia Research Centre), Gavan McFadzean, Meabh Friel (Australian Conservation Foundation); initial consultation - Yuki Tanabe (Japan Center for a Sustainable Environment and Society), Dongjae Oh (Solutions for Our Climate); research support - Louis Goddard (Data Desk), Clare Molesworth (University of New South Wales), Eadaoin Roughan (University of Sydney)

Design: Twofold Design

Cover illustration: Fran Johnson-Cash

Published: July 2025

CONTACT US:

PO Box 20885 World Square NSW 2002 info@jubileeaustralia.org www.jubileeaustralia.org

JUBILEE AUSTRALIA RESEARCH CENTRE

Jubilee Australia is a Sydney based research centre which strives for a fairer future where a healthy planet, empowered communities and just economies go hand in hand. We conduct research-based advocacy, in partnership with other organisations and communities across Australia and the Asia-Pacific, to defend the rights of people and the planet over profit, and hold corporations and governments accountable. For more information, visit <u>www.jubileeaustralia.org</u>.

AUSTRALIAN CONSERVATION FOUNDATION

ACF is Australia's national environment organisation. We are 600,000 people who speak out for the air we breathe, the water we drink, and the places and wildlife we love. We are proudly independent, non-partisan and funded by donations from our community. For more information, visit <u>www.acf.org.au</u>.

FOSSIL FREE JAPAN

Fossil Free Japan is a coalition of civil society organisations and movements from Japan and across the world working together to end Japan's support for gas, coal and oil. For more information, visit <u>https://fossilfreejapan.org/</u>

CONTENTS

Exe	ecutive summary	3
Intro	oduction	6
1.	The role of Australian gas in Japan and Korea's Gas Empire	10
	Upstream to midstream	11
	Midstream to downstream	13
2.	The true costs of the Gas Empire	14
	The Gas Empire is costing Australians	14
	The Gas Empire is actively derailing the transition to renewables	15
	What's in the pipeline? The Gas Empire's expansion plans across Northern Australia and Papua New Guinea	16
	Browse to North West Shelf	16
	Ichthys expansion	16
	Middle Arm & Beetaloo	17
	Papua LNG	18
	Greater Sunrise	18
	Global justice	18
3.	Australia is buying into the Gas Empire strategy	20
	The Asia Zero Emission Community: greenwashing for the Gas Empire	20
	Australian energy policy, in service to the Gas Empire	22
Со	nclusion and recommendations	24
Ref	erences	26

ACRONYMS

AZEC	Asia Zero Emission Community			
CCS	carbon capture and storage			
СЕТР	Clean Energy Transition Partnership			
CO,	carbon dioxide			
DCCEEW	Department of Climate Change, Energy, the Environment and Water			
DFAT				
	Department of Foreign Affairs and Trade			
DISR	Department of Industry, Science and Resources			
ECA	export credit agency			
IEA	International Energy Agency			
JBIC	Japan Bank for International Cooperation			
K-Sure	Korea Trade Insurance Corporation			
KDB	Korea Development Bank			
KEXIM	Export-Import Bank of Korea			
KoFC	Korea Finance Corporation			
KOGAS	Korea Gas Corporation			
LNG	liquefied natural gas			
MoU	Memorandum of Understanding			
Mt	million tonnes			
Mtpa	million tonnes per annum			
NDC	nationally determined contribution			
NEXI	Nippon Export and Investment Insurance			
NSW	New South Wales			
NT	Northern Territory			
NWS	North West Shelf			
PRRT	Petroleum Resource Rent Tax			
SA	South Australia			
SEP	Strategic Energy Plan			
TAS	Tasmania			
QLD	Queensland			
WA	Western Australia			

EXECUTIVE SUMMARY

Australia is the second largest exporter of gas in the world. Japan and Korea are two of the main destinations for this gas. While these countries have historically relied on Australia's gas exports (i.e. liquefied natural gas, or LNG) to meet their energy needs, both countries have made public commitments to transition away from fossil fuels and increase renewable energy capacity, and their domestic demand for gas is already declining.

In spite of this, the Japanese and Korean governments continue to invest heavily in the extraction, processing, transport and deployment of gas. Arguments in favour of this expansion of Australian gas are often made in the name of regional "energy security", or as a step towards cleaner energy alternatives. In reality, this fossil fuel proliferation is building out **an Asia-wide Gas Empire intended to keep the gas industry operating and profiting for as long as possible**. The primary target market for this gas expansion is Southeast Asia, which is set to be one of the world's largest drivers of energy demand growth over the next decade. Japanese government directives explicitly direct Japanese companies to increase overseas LNG investments in order to, in their words, "cultivate Asian demand".

This Gas Empire exists in service of corporate profits, yet it's often the taxpayer footing the bill. Public finance is used to de-risk costly gas projects and enable the participation of Japanese and Korean companies. Jubilee's analysis revealed that **Japan and Korea poured USD\$20.5 billion of public finance into Australian LNG projects between 2008 and 2024**. Japan's export credit agency JBIC is responsible for 64% of this total finance and is involved in the majority of current LNG projects in Australia.

The Japanese government is hiding behind the guise of being loyal consumers of Australian gas, claiming that it 'keeps the lights on in Tokyo', while Japanese buyers are already over-contracted and are increasingly reselling their surplus gas; **of the 39.4 million tonnes of LNG loaded from Australian export projects by Japanese buyers between January 2023 and April 2025, 29% went to other countries in Asia**. These resales are part of the Gas Empire strategy; pouring public finance into every step of the LNG supply chain, shoring up commercial opportunities for companies, and turning profits. It results in a vicious cycle of new upstream projects coming online, which then require midstream operators to process and transport, and downstream projects to use the gas - thus creating and maintaining artificial demand, and driving further gas expansion.

The Gas Empire is costing communities and the climate. The majority of Australian LNG facilities are not paying royalties, none are paying Petroleum Resource Rent Tax, and very minimal pay company tax. The gas buildout in Southeast Asia is derailing the transition to renewable energy in the region. In the face of mounting geopolitical instability, the increasing dependence on gas imports is a major risk to energy security. The scale of proposed gas expansion in Australia and Papua New Guinea would drastically ramp up carbon emissions, and pose disastrous economic, environmental and societal risks to communities across the region.

The Australian government has bought into the Gas Empire strategy. This includes supporting Japan's greenwashing exercise, **the 'Asia Zero Emission Community' (AZEC), which is attempting to prolong fossil fuel use in Southeast Asia and Australia** instead of putting full support into renewable energy. Australia is involved in 12 proposed joint ventures under AZEC, only three of which are focused on renewables, while eight involve fossil fuel technologies. Some Australian politicians have become convinced of the Gas Empire's false narratives, and accordingly devised Australia's Future Gas Strategy to shore up supply. Consultation for the Strategy deliberately focused on Australia's gas trading partners and corporate stakeholders, leaving out highly impacted regional partners that would have been critical of gas exports (e.g. Pacific countries).

Australia has become an enabler in Japan and Korea's Gas Empire. The question is, will we choose to continue supporting the expansion of the empire, increasing their short-term profits as climate change wreaks havoc on people and the planet? Or will we take a stand, ensuring that energy demand and decarbonisation across our region is met by cheaper, cleaner renewable energy, keep global warming below 1.5°C and allow communities to flourish.



Recommendations for the Australian government

Given that existing Australian gas projects significantly exceed the energy security needs of Japan, Korea and Australia, and gas expansion only serves the profits of the Gas Empire at the expense of communities and a safe climate, no new gas is needed 1. Commit to a phase out of fossil fuel extraction, commencing with an immediate end to the approval of new or expanded gas projects

This should be included in Australia's upcoming nationally determined contribution (NDC) and reiterated at COP31, which would significantly improve Australia's credibility in international climate diplomacy, particularly if Co-President. Achieving the Paris agreement's goal of 1.5°C is only feasible with a near term phase out of fossil fuels.

2. Ensure that the Australian government's Commonwealth Gas Market Review considers opportunities to prohibit gas companies entering into future LNG contracts that would require the development of new or expanded gas projects

As current long-term LNG contracts are expiring in the first half of the 2030s, the recently commenced Commonwealth Gas Market Review is an important opportunity for the Australian government to develop a pathway for LNG exporters to transition away from committing to new long-term LNG contracts that require new gas projects to be serviced, while still ensuring that Australia's dwindling domestic gas needs are met during the transition.

3. Negotiate bilateral decarbonisation agreements with trading partners to support an orderly transition away from fossil fuels for mutual benefit

Proactive diplomacy with Japan and Korea would reaffirm our position as a trusted trading partner while we phase out fossil fuel exports and transition to renewable energy. This is a recommendation from the Climate Change Authority's 2024 Sector Pathways Review.



With the Gas Empire derailing the transition to renewables in Asia, the cycle of creating artificial demand for gas by financing and building gas infrastructure across the supply chain must be broken

4. Work with Japan and Korea to honour their international commitments and shift public finance out of fossil fuels and into renewable energy

This includes the Paris Agreement, the COP28 Agreement to transition away from fossil fuels and Japan's G7 commitment to end direct public support for overseas fossil fuel projects. Australia can take an active role in advocating for Japan and Korea to join the Clean Energy Transition Partnership, given the government's ongoing commitment to this initiative. Taxpayer money, regardless of its origin, cannot continue underwriting fossil fuel expansion, and should be used to support the transition to renewable energy in the region.

5. Hold AZEC to account

Australia must play a stronger role within AZEC to champion renewable energy and reject false solutions, which prolong the use of fossil fuel technologies under the guise of decarbonisation.

Fossil fuel interests disproportionately influenced Australia's Future Gas Strategy and continue to impede meaningful climate action; this must be counteracted in the lead up to a COP₃₁ co-presidency with the Pacific

6. Exclude fossil fuel lobbyists from State Delegations and prohibit fossil fuel corporate sponsorships at COP31

For Australia to successfully co-host COP31 in partnership with the Pacific, where fossil fuel phase-out is a key priority, the government must address the undue influence of the fossil fuel industry on climate negotiations. Australia should support public calls for the United Nations Framework Convention on Climate Change (UNFCCC) to establish an Accountability Framework that excludes fossil fuel lobbyists from State Delegations and the COP Presidency, and prohibits fossil fuel companies from sponsoring COP events.

INTRODUCTION

On 10th January 2025, the World Meteorological Organisation confirmed what many other groups had forecast; that 2024 was the first calendar year with a global mean temperature of more than 1.5°C above pre-industrial levels.¹ Not only was 2024 the hottest year on record, but it has capped off a decade of record-breaking temperatures, with every year since 2015 featuring in the top ten hottest years on record.¹

In this same year, the Australian government released its Future Gas Strategy - a policy that signalled to the world that Australia would continue to explore, extract and export gas (Box 1) for another generation.

The International Energy Agency (IEA) has stated that **no new gas fields or liquefied natural gas (LNG) facilities are needed in the global pathway to net zero emissions by 2050**, in line with limiting the average global temperature increase to 1.5°C, the Paris Agreement's temperature goal.² Australia is one of the world's largest fossil fuel exporters and is the second largest climate polluter in the world based on the total carbon emissions from these exports.³ The emissions from the Australian government's projected fossil fuel exports are incompatible with the 1.5°C goal, and pose escalating risks to Australian communities and our natural environment, and Pacific nations with whom the government is bidding to co-host COP31.^{4,5}

Australia exports the majority of gas that it produces (73% in 2022-2023) and production has increased by 365% since the year 2000.^{6,7} Processing into LNG allows gas to be transported overseas by tanker ships. Australia currently has 10 operating LNG facilities, eight of which came into operation between 2012 and 2018 (Table 1 and Figure 1).⁸ Australia's gas exports have accordingly increased by 954% since the year 2000, with **Australia now the second largest LNG exporter in the world**.^{6,9} The majority of Australia's LNG exports are delivered to Asian markets, with Japan accounting for 36% or 29 million tonnes (Mt) in 2022-2023, followed by China (28%, 22.5 Mt) and the Republic of Korea (14%, 11.6 Mt).¹⁰ Japan, Korea and China are in fact the leading LNG importers in the world.⁹

International public finance has played an outsized role in enabling global LNG expansion, with the biggest financiers being Japan, China, US and Korea; Australia is one of the top three recipients of this financing.¹¹ While Australia has committed to ending its own public financing of fossil fuels overseas through the Clean Energy Transition Partnership (CETP), it is still allowing and encouraging overseas governments to underwrite its home grown gas expansion.

Although China is becoming increasingly dominant in the global LNG industry,¹² this report focuses on Japan and Korea due to their historical role as buyers, investors, contractors and distributors of gas - creating a regional 'Gas Empire' which will be explained in the following section.

The shift to renewable energy is accelerating around the world, and Australia's commitment to this transition has been clearly evidenced by its increasing investments in the sector, including the Future Made in Australia initiative. The IEA predicts global demand for gas will peak by 2030 in all three scenarios for future energy use, and gas has a small and decreasing role to play in Australia's future energy mix.^{13, 14} At COP28 in 2023, almost 200 countries, including Australia, Japan and Korea, agreed to accelerate the transition away from fossil fuels and triple renewable energy capacity by 2030.¹⁵ Japan aims for renewables to dominate their 2040 electricity mix at 40 to 50%, while halving its fossil fuel use.¹⁶ Korea is planning to quadruple its renewable energy capacity by 2038, and reduce the share of LNG in their power mix from 28% to 10.6%.^{17,18} Australia expanding gas production in order to continue exporting to Japan and Korea undermines these international climate commitments and domestic energy targets. Why then, do these countries keep claiming that gas is needed for their 'energy security' and why does the Australian government keep supporting this claim?

This is part 1 of a two part report series. Part 1 reveals how Japan and Korea have built a Gas Empire to pursue corporate profits; how this costs Australians, delays the transition to renewables and fuels gas expansion in our region; and how the Australian government has enabled the Gas Empire. Part 2 will delve further into the downstream aspects of this gas expansion, including how countries in Asia are being locked into gas and the impact on frontline communities.

Box 1: Gas is a dangerous fossil fuel

Gas is mostly made up methane, which is a greenhouse gas 80 times more potent than (CO₂) in terms of its global warming potential in the short term.¹⁹ Methane venting, flaring and leaks occur across the gas supply chain, from extraction to processing and export.²⁰ Burning gas for energy production then produces CO₂ and other pollutants, which alongside the methane leaks and energy required to extract, liquify and transport gas as LNG, can make exported gas more polluting than coal.²¹

Project name	Location	Operator	Japanese and Korean stakeholders ^a	Capacity (Mtpa)	Start up	Lifetime ^b
North West Shelf Project	WA	Woodside	Japan Australia LNG; JBIC	18.5	1989	2070 ^c
Darwin LNG	NT	Santos	SK E&S INPEX; JERA; Tokyo Gas	3.7	2006	2050
Pluto LNG	WA	Woodside	Kansai Electric Power; JBIC	4.9	2012	2042
Gorgon Project	WA	Chevron	Osaka Gas; JERA; JBIC	15.6	2016	2056
Queensland Curtis LNG	QLD	Shell	JBIC	8.5	2015	2035
Gladstone LNG	QLD	Santos	KOGAS	7.8	2015	2040
Australia Pacific LNG	QLD	Origin and ConocoPhillips	KDB	9	2016	2046
Wheatstone Project			JOGMEC; Mitsubishi; Kyushu Electric; Nippon Yusen Kabushiki Kaisha; JERA; JBIC	8.9	2017	2047
Ichthys LNG	NT	INPEX	INPEX; Osaka Gas; Kansai Electric Power; JERA; Toho Gas; Tokyo Gas; Chubu Electric Power; JBIC; NEXI; KEXIM; KDB; K-SURE; KoFC		2018	2058
Prelude FLNG	WA	Shell	INPEX; KOGAS	3.6	2019	2044
Barossa Gas Field	NT	Santos	SK E&S JERA; JBIC; KDB; KEXIM	3.7	2025 ^d	2050
Scarborough Gas Field	WA	Woodside	JERA; LNG Japan; JBIC; JOGMEC	8	2026	2051
Waitsia Gas Project Stage 2	WA	Beach Energy	Mitsui E&P Australia; JBIC	N/A ^e	2026 ^f	2046

Table 1: Operating LNG export facilities and gas projects in development in Australia

a Partners and financiers. b Based on lifespan from first gas/start up. c Provisional approval given to 2070 from the Federal government at the time of writing.
d Expected. e Will be exported through North West Shelf. f Unclear; construction activities continuing to 2026. Mtpa, million tonnes per annum; WA Western Australia; QLD, Queensland; NT, Northern Territory. Sources: Global Energy Monitor; company websites; news articles.





LNG carrier in Darwin, Australia. Credit: EA Given/Shutterstock.com



1. THE ROLE OF AUSTRALIAN GAS IN JAPAN AND KOREA'S GAS EMPIRE

Japan and Korea have both historically relied on imports to meet their energy needs, including gas, with Australian LNG making up significant shares of their total gas supply.²² Australia's exports to Japan and Korea are secured by long-term LNG sales and purchase agreements (or LNG contracts) which are due to expire in the first half of the 2030s with no confirmed contract extensions.²³ Both countries are already seeing declining domestic demand for gas.^{24, 25} Meanwhile, the decreasing costs of solar, wind and battery technology mean that these countries could further accelerate their energy transition; Japan could reach 80 to 90% clean energy electricity share by 2035, with Korea also having abundant renewable potential to meet projected demand.^{26, 27, 28}

However, the Japanese and Korean governments continue to invest heavily in gas - not for the sake of energy security, but to build a Gas Empire that keeps the gas industry operating for as long as possible. This empire is in service to corporations that are involved in every step of the gas supply chain, including the *upstream* segment which involves exploration, drilling, extraction and production; *midstream* liquefaction, transport and regasification; and *downstream* consumption as fuel or conversion into other products.²⁹

The primary target market for this gas expansion is Southeast Asia, which is set to be one of the world's largest drivers of energy demand growth over the next decade.³⁰ Government policies, including Japan's Seventh Strategic Energy Plan (SEP) released earlier this year, explicitly direct Japanese companies to increase overseas LNG investments, reaffirming a previously set target of 100 million tonnes of LNG to be handled by Japanese companies per year by FY2030 in order to **"cultivate Asian demand"**.^{31, 32} These companies in turn are reaping the profits; for example, Japanese companies earned at least USD\$14 billion in gas-related profits in 2023-2024 (Figure 2).³³ Japanese utility companies and affiliated industry associations have significantly influenced Japan's SEP in favour of fossil fuels, and demand public financial support for LNG while opposing support for renewables; as described by InfluenceMap, "this selective approach to public funding highlights the sector's broader effort to **protect its existing business model** amid growing pressure for decarbonization".³⁴

This section examines Japan and Korea's involvement at each level of the gas supply chain, with a focus on Australian gas.

Figure 2: Japanese companies' gas-related profits in the 2023-2024 financial year, reproduced with permission from Bloomberg News.³³ Data compiled from Bloomberg based on publicly traded companies in Japan. Note, major Japanese commercial banks, insurance companies, engineering firms and steelmakers also benefit from gas interests and related business lines, but the specific contributions to profits can't be estimated.



UPSTREAM TO MIDSTREAM

Figure 1 and Table 1 provide an overview of Australia's operating LNG export facilities and gas projects in development, all of which involve Japanese and Korean public financiers and/or companies with stakes in the project. Note, several operating projects have expansions underway (Pluto) or planned (Gorgon and Ichthys).

Overseas public financial institutions have played a critical role in propping up Australia's fossil fuel industry, particularly LNG expansion.³⁵ Private financial institutions are increasingly recognising fossil fuels as a risky investment and making commitments to net zero emissions, with the industry then turning towards public financial institutions to finance new fossil fuel projects and expansions. Public financial institutions often provide guarantees or early stage-loans to help minimise risk and increase investor confidence in large projects that may otherwise not have attracted private lenders.³⁵

The Japanese and Korean governments have directed their public financial institutions to invest in LNG projects in Australia in order to supply their Gas Empire.

To quantify the extent of this public finance, Jubilee examined the following institutions:*

- Japan and Korea's export credit agencies (ECAs): Japan Bank for International Cooperation (JBIC), Nippon Export and Investment Insurance (NEXI), Export-Import Bank of Korea (KEXIM) and Korea Trade Insurance Corporation (K-Sure);
- Japanese government agency Japan Organization for Metals and Energy Security (JOGMEC);
- Korean development financial institution Korea Development Bank (KDB); and government owned institution that merged with KDB, Korea Finance Corporation (KoFC)

We found that Japanese and Korean public finance of Australian LNG projects totalled USD\$20.5 billion[†] between 2008 and 2024.

"

JBIC, one of the largest public financiers of gas,³³ is involved in nine out of the 13 projects operating or in construction, and responsible for 64% of this total finance (around USD\$13.2 billion).

Looking at this financing over time, there was a huge spike in 2012, corresponding primarily to investments in the Ichthys and Wheatstone LNG projects (Figure 3). Overall, there are two clusters of financing: the first from 2008 to 2015 reflective of Australia's LNG growth wave where eight LNG projects reached FID between 2007 and 2012⁸ and the second from 2019 to 2024 due to project refinancing, the development of new gas fields and LNG terminal expansions. Between 2023 and 2024, Japan invested a total of USD\$2.9 billion in the Scarborough gas field; **this stands in direct contradiction to Japan's G7 commitment to end new direct public support for overseas fossil fuel projects by the end of 2022.**^{36, 37}



- * Analysis was conducted using transaction-level data from Oil Change International's 'Public Finance for Energy Database', available at <u>energyfinance.org</u>. Transactions include loans, equity and guarantees.
- t This is primarily loans, with 17% in guarantees.

Beyond stakes in these projects, the Ichthys LNG project in the Northern Territory provides an example to further demonstrate Japanese and Korean corporate underpinning of Australian gas expansion. Aside from around 70% of the LNG produced going to Japanese buyers, Japanese companies were also involved in the construction of the onshore LNG plant (JGC Corporation and Chiyoda Corporation) and the gas export pipeline (Mitsui Corporation, Sumitomo Corporation and Metal One Corporation).³⁸ Korean companies were involved in building the Central Processing Facility (Samsung Heavy Industries) and the Floating Production Storage and Offloading unit (Daewoo Shipbuilding & Marine Engineering).³⁸ Public finance helps enable the participation of these companies, and was critical to this project; a financial advisor on the deal said it would have been "totally impossible" without the involvement of ECAs.³⁹ Japan and Korea provided a total of USD\$9.5 billion in public finance to Ichthys LNG (Figure 1). The project was initially set to cost USD\$34 billion but ended up blowing out to USD\$45 billion due to cost overruns and delays during construction.⁴⁰

INPEX, Japan's largest oil and gas exploration and production company and the operator of Ichthys LNG, aims to increase the production of oil and gas by 30% over the next decade, with an aim to meet the energy demands of emerging Asian economies.⁴¹ This expansion would require further financial support from public institutions, which due to project delays and increased costs, could place significant financial burden on the Japanese public.³¹

Turning to transportation, Korea dominates the LNG shipyard and shipbuilding market, and has provided US\$44.1 billion in public finance to LNG carriers, with a dramatic increase in financing in 2022.⁴² Japanese companies Mitsui OSK Lines and NYK Lines are amongst the top five LNG shipowners globally.⁴² With a glut of new LNG carriers coming online, the market is being pushed into oversupply, not only locking in financing for purposes incompatible with global climate targets, but also risking stranded assets thus further exposing public financiers to growing financial risks.⁴³

MIDSTREAM TO DOWNSTREAM

With Japan's declining LNG demand, Japanese buyers are now over-contracted and increasingly reselling gas to other countries.^{24, 44} This is in line with the government's LNG transaction targets - directing these buyers to transact increasing volumes of LNG as their domestic sales decrease, in order to maintain and grow the Gas Empire. Japanese companies, with the support of public financiers, are building out midstream and downstream LNG infrastructure across Asia, including import terminals and power plants, in order to create demand for their surplus gas.^{44, 45}

In 2024, Australia was the largest source of Japanese LNG resales, supplying 41% of cargos, followed by the US supplying $38\%.^{46}$ The total market value of Japan's resales of Australian LNG in 2024 is estimated to be between USD\$7.3 to 9.3 billion, with profits likely exceeding USD\$664 million.^{46,‡}

Analysis by Data Desk of Australian LNG flows via Japanese buyers to countries with Japanese-financed gas infrastructure found two major destination countries - Thailand and Taiwan.⁴⁷ Thailand's import terminal receiving this LNG involved engineering work by Tokyo Gas, while two nearby power plants were funded by loans from JBIC, built by Mitsubishi Hitachi Power Systems and partly owned by Mitsui & Co.⁴⁷

Additional analysis by Data Desk looking into shipment volumes between January 2023 and April 2025 using Kpler data found that of **the 39.4 million tonnes of LNG loaded from Australian export projects by Japanese buyers, 29% went to third countries**. Korea, Taiwan and China received the largest volumes, approximately 3 to 4 million tonnes each since the start of 2023, followed by Thailand with around 1 million tonnes. Taiwan and Korea are the highest value LNG markets for Australian gas producers, with Japan effectively becoming a competitor.^{45, 46}

The Japanese government is hiding behind the guise of being a loyal consumer of Australian gas, claiming that it 'keeps the lights on in Tokyo', while Japanese buyers are reselling a third of this gas at a profit.⁴⁵ These resales are part of the Gas Empire strategy; pouring public finance into the LNG supply chain, shoring up commercial opportunities for companies, and turning profits. It results in a vicious cycle of new upstream projects coming online, which then require midstream operators to process and transport, and downstream projects to create and maintain demand, driving further gas expansion. The following section explores the true costs of this vicious cycle.

+ Originally reported as AUD\$11 to 14 billion, and AUD\$1 billion; converted to USD based on the average exchange rate for 2024 (0.6644).



2. THE TRUE COSTS OF THE GAS EMPIRE

THE GAS EMPIRE IS COSTING AUSTRALIANS

Australia is essentially giving away a large proportion of its gas for free. Six out of Australia's ten LNG facilities don't pay any royalties and no gas export project has ever paid Petroleum Resource Rent Tax (PRRT).^{48, 49} In addition, very little company tax is paid; for example INPEX made USD\$14 billion selling Australian gas in 2022-2023, of which it paid USD\$4.5 million (0.3% of this income) in company tax.^{50, §} In fact, Australian teachers pay twice as much tax as the *entire oil and gas industry* pays in company tax and PRRT.⁵¹

By prioritising LNG exports, the gas industry is also passing needlessly high energy costs onto Australian consumers. The development of the Queensland LNG export sector has coincided with a *tripling of gas prices*, impacting major industrial gas users and leading to the closures of manufacturing facilities.^{52, 53} Redirecting these LNG exports into the east coast gas market could significantly ease prices and looming supply concerns.⁵⁴ Only 20% of the gas produced in Australia is used domestically, of which the LNG industry itself uses 80%.^{13, 53} Meanwhile, gas demand in the eastern states has plunged in the last 10 years; this declining demand can be met with existing gas supplies - no new gas developments are needed to meet Australia's energy needs.¹³ So why isn't Australian gas being used to meet our dwindling domestic needs first?

Redirection of gas exports into the domestic market poses a serious threat to the profits of the Gas Empire. As the most vocal champion of these profit margins, Japanese government and corporate representatives have made repeated interventions in Australian political discourse in response to policy developments that support Australia's climate and energy priorities. For example, a Japanese government official expressed concern at proposed controls of gas exports under the Domestic Gas Security Mechanism to ensure sufficient supply of gas to meet the needs of Australian gas consumers, touting the importance of Japan's energy security.⁵⁵ Following the Albanese government's price cap on new gas in late 2022 to protect consumers from price spikes, the chief executive of INPEX claimed that Australia was 'quietly quitting' the LNG trade, which would lead to 'very sinister consequences' including threats to global security.⁵⁶ Speaking to policy and regulatory uncertainty, including frustration with the Safeguard Mechanism, a JERA executive warned "the clock is ticking, and inaction [to address the competitiveness of Australian LNG]

§ Originally reported as AUD\$21 billion and AUD\$6.7 million; converted to USD based on the average exchange rate for 2022-2023 (0.6734).

could potentially cost Australia thousands of jobs, billions of dollars in lost revenue and weaken regional trade partnerships."⁵⁷ In response to the Opposition's proposed gas reservation policy in the lead up to the 2025 federal election, the chief executive of the Institute of Energy Economics Japan, a Japanese government-funded think tank, stated how this would harm Japan's revenue from LNG sales, explicitly stating that **"our policy is to expand our LNG network for Asia, and Australian gas assists in this"**.⁵⁸ The interests of the Gas Empire, i.e. corporate profits, will always come before Australians; INPEX, for example, chose to build a 890km pipeline from the offshore Ichthys gas field in Western Australia (WA) to Darwin, allowing it to avoid the WA domestic gas reservation policy.⁵⁹

THE GAS EMPIRE IS ACTIVELY DERAILING THE TRANSITION TO RENEWABLES

By financing and building LNG infrastructure in Southeast Asia, the Gas Empire is incentivising gas dependency and undermining the development of renewable energy in the region.

66

Deepening Southeast Asian countries reliance on fossil fuels means they risk missing out on the opportunities provided by the declining costs of renewables, with over 99% of the wind and solar potential in the region remaining untapped.^{60,61}

Renewable energy is already becoming cheaper than gas across the region.^{62, 63} In the Philippines for example, utilityscale solar is now the cheapest source of bulk electricity generation, and increasing the share of renewables would reduce costs for consumers and boost energy security.⁶⁴



In order to keep gas a priority in these countries over renewables, Japanese and Korean industry interests have heavily influenced their domestic energy policies in favour of prolonging fossil fuel use.^{65, 66} This includes Indonesia, where gas is also more costly than renewables; Wicaksono Gitawon, a policy strategist at the Indonesian civil society organisation CERAH, told media outlet DW that "Japan should skip investment in gas [in Indonesia] and push for renewables [...] We already have a coal infrastructure locked in. They are now pushing for gas, and gas is a big investment, so it would be another lock-in. If we have a gas infrastructure in Indonesia, I don't think we would be able to achieve energy transition."⁶⁷ Far from helping enable the energy transition, these investments prolong the use of gas for decades and risk 'crowding out' investments in renewables.⁶⁸

Meanwhile, fossil fuels are driving up power sector emissions in Southeast Asia, which renewables could counteract while also driving economic growth.^{60,69} The IEA has described fossil fuel imports as a key *risk* to energy security in Southeast Asia, with projections of significant economic burden, price volatility, and vulnerability to geopolitical events.³⁰

LNG projects also pose direct threats to communities and ecosystems. A prime example is the JBIC-financed gas plant in the Verde Island Passage in the Philippines, which is harming both a critical marine biodiversity hotspot and the livelihoods of local fisherfolk.⁷⁰ Civil society across the region recognise these risks and have been vocal in rejecting fossil fuel expansion and advocating for a just transition to renewable energy.^{71, 72} Part 2 of this report series will delve further into the lock-in effects of gas expansion in Asia and the impact on frontline communities.

By locking in gas throughout Southeast Asia, Japan and Korea are attempting to create a growing market for Australian gas, leading to the development of new gas supplies to meet this demand - to keep the Gas Empire operating and profiting.

WHAT'S IN THE PIPELINE? THE GAS EMPIRE'S EXPANSION PLANS ACROSS NORTHERN AUSTRALIA AND PAPUA NEW GUINEA

There are already plans underway for a number of new and expanded gas projects in Australia and the Pacific with potential financing from Japan and Korea. This includes the Browse to North West Shelf (NWS) project; the Ichthys expansion; the Middle Arm Precinct with fracked gas from the Beetaloo Basin; Papua LNG in Papua New Guinea; and the Greater Sunrise project in the Timor Sea (Figure 1). These projects pose a range of environmental, economic and social risks.

Browse to North West Shelf

The Browse Basin in northwestern Australia is one of the largest oil and gas basins in Australia and a major target for exploitation, with over 200 petroleum exploration wells drilled since 1970.⁷³ There are currently two hydrocarbon accumulations which are delivering gas and condensate, Ichthys (Ichthys LNG project) and Prelude (Prelude FLNG), with the Browse to NWS project aiming to commercialise the Torosa, Brecknock and Calliance gas accumulations.⁷⁴ Woodside Energy's Browse to NWS project would be particularly emissions-intensive and threaten one of the richest marine environments in the world, containing the ecologically significant Scott Reef which supports over two thousand species.^{75, 76} The project has already received USD\$604 million from JBIC to finance the acquisition by Japan Australia LNG (a joint venture between Mitsubishi Corp. and Mitsui & Co.) of a stake in the Browse Gas and Condensate Fields.⁷⁷

Ichthys expansion

The Ichthys project currently has two LNG production units, or trains, and is expected to operate for 40 years, with ambitions for the development of a third train possibly by or around 2030.^{78, 79} There is the potential for the development of the Cash-Maple fields in the Timor Sea, for which the permit was acquired by Inpex and TotalEnergies in 2023, to secure long-term feedstock for Trains 1 and 2.^{80, 81} Train 3 would require new reserves being discovered, sourced, or acquired. This could come from offshore fields or from INPEX's acreage in the Beetaloo Basin in the Northern Territory (NT) - more on this below.⁸² In terms of offshore fields, Inpex has varying stakes in exploration and retention leases near the Ichthys project in the Browse Basin, and there are also existing fields in the neighbouring Bonaparte Basin, including the Verus gas field - one of the most carbon intensive gas fields in the world.^{79, 83, 84} Due to the heavy involvement of Japanese and Korean public finance in the Ichthys project, further

financing could be expected. Analysts suggest that Inpex may not have sufficient investment capital due to other planned projects, including the Abadi project in Indonesia and Bonaparte carbon capture and storage (CCS, for storing CO2 from Ichthys LNG).^{79, 85, 86} The expansion could increase Ichthys LNG's CO₂ contribution by 30%, bringing its total emissions to 590 MtCO₃; this is well over *the whole of Australia's annual CO2 emissions* from 2024 (446.4 Mt).^{87, 88}

Middle Arm & Beetaloo

The Middle Arm Precinct is a proposed project to be constructed on the Middle Arm coastal peninsula of Darwin Harbour in the NT, in which Ichthys LNG and Darwin LNG are already located.^{89,90} However, despite the claimed emphasis on renewables and sustainability, the Middle Arm project is central to the expansion of gas production in the Beetaloo Basin, with a government briefing document stating that the "Middle Arm precinct is seen as a key enabler for Beetaloo gas to be transported north, further benefiting the Northern Territory's economy".⁹¹ A comprehensive report by the Institute for Energy Economics and Financial Analysis into the risks facing the project explains how the plan relies on too many unproven assumptions and how the underlying business model is not



viable, particularly the reliance on hydraulic fracturing, or fracking.⁹² Fracking is financially risky, alongside posing serious harm to the environment and human health.⁹³ The Beetaloo Basin currently has two fracking pilot production projects, one of which has already spilled contaminated water onto surrounding vegetation.^{94, 95} A recent expert review of the business case for Middle Arm concluded that none of its possible customers are likely or willing to make any meaningful contributions to the costs of developing or operating the precinct, deeming it a white elephant.⁹⁶ JBIC signed a Memorandum of Understanding (MoU) with the NT government in February 2024 that doesn't explicitly mention Middle Arm but speaks to relevant industries, which suggests they could be considering a loan.⁹⁷ JOGMEC also signed an MoU with the NT government last year similarly focused on energy sectors.⁹⁸ The potential emissions associated with full scale production fracking in the Beetaloo and processing in Middle Arm are staggering, with projected annual domestic emissions estimated at 49 Mt of CO2 equivalent, which corresponds to 11% of Australia's total emissions in 2024.⁹⁹

Papua LNG

Papua LNG is a proposed project led by TotalEnergies, with Japanese bank MUFG as the financial advisor. It is estimated to cost between USD\$10 to \$19 billion, with the final investment decision expected at the end of this year.¹⁰⁰ The project would emit over 220 Mt of CO₂, with almost all of the gas being exported, while PNG could instead be building a renewable energy future and meeting its own energy access needs.¹⁰¹ Concerns have been raised around the lack of free, prior and informed consent of impacted communities, as well as threats to the environment from land clearing, river dredging and seabed disturbance, and a range of economic risks.¹⁰² JBIC is looking into providing support to Papua LNG, while an increasing number of other public and private financial institutions are ruling out financing.^{103, 104, 105}

Greater Sunrise

The development of the Greater Sunrise gas fields has been over 50 years in the making, with disputes over oil and gas reserves in the Timor Sea drawing out decades of maritime boundary negotiations between Australia and initially, Portugal, then Indonesia and finally, Timor-Leste.¹⁰⁶ A Maritime Boundary Treaty was signed in 2018, recognising Australia and Timor-Leste's shared sovereign rights over Greater Sunrise and establishing revenue sharing arrangements.¹⁰⁷ Greater Sunrise is operated by Woodside, with partners Timor Gap (Timor-Leste's national oil company) and Osaka Gas.¹⁰⁸ INPEX has also expressed interest in the project, and has had a number of meetings with Timorese government officials to explore their potential role.¹⁰⁹ In December 2024, the Australian and Timorese PMs released a joint statement in which they committed to realising the project.¹¹⁰ One of the primary arguments for their commitment to the project is to support Timor-Leste's economic development; Timorese NGO La'o Hamutuk has pointed out that "exaggerated promises of vast revenues and economic benefits may distract from the urgent need to diversify Timor-Leste's economy away from oil and gas" and how "even according to the most optimistic projections, Sunrise will only finance Timor-Leste's state and economy for less than one generation.

We owe it to our children and grandchildren to think further ahead."¹¹¹

66

Global justice

The Gas Empire has already left a legacy of harm in Australia and around the world. Friends of the Earth Japan's report 'Faces of Impact' highlights stories of impacted communities for whom gas projects are a lived reality that harm people's livelihoods, health, cultures and human rights.¹¹² The following section explores how the Australian government has become complicit in perpetuating these harms.





West Java, Indonesia. Credit: Koalisi Rakyat Untuk Hak Atas Air (KRuHA)









People across the globe are raising their voices against JBIC and Japan's fossil gas financing. For more information visit <u>www.enddirtyfinancing.org</u>

3. AUSTRALIA IS BUYING INTO THE GAS EMPIRE STRATEGY

THE ASIA ZERO EMISSION COMMUNITY: GREENWASHING FOR THE GAS EMPIRE

In March 2023, Japan launched the Asia Zero Emission Community (AZEC) as a "platform for cooperation towards carbon neutrality/net-zero emissions in the Asia region", with 11 partner countries: Australia, Brunei, Cambodia, Indonesia, Japan, Laos, Malaysia, Philippines, Singapore, Thailand and Vietnam.¹¹³ However, of the 158 current MoUs that have been signed as part of the initiative, 35% (56) involve fossil fuel technologies.¹¹⁴ Rather than working towards regional decarbonisation, AZEC forms part of the Gas Empire strategy to lock Southeast Asian countries into fossil fuels.

Table 2 provides an overview of the current MoUs under AZEC involving Australia. Only three of the twelve MoUs are focused on renewables, while eight involve fossil fuel technologies, including LNG, CCS, e-fuels, and hydrogen and ammonia not made by green power (in line with the aforementioned analysis of MoUs, hydrogen and ammonia projects that are not explicitly stated as being green are assumed to use fossil fuel feedstock). These technologies are an expensive, slow and ineffective path to decarbonisation; co-firing ammonia in coal plants, for example, will likely do more harm than good due to lifecycle emissions, while CCS is an unproven technology which has been shown to consistently underperform and overrun in costs.^{115, 116, 117}

During his speech at the Australian Embassy in Japan on Australia as a renewable energy superpower in July 2023, Minister for Climate Change and Energy Chris Bowen stated that Australia joined AZEC "to support its focus on emissions reduction in Asia while maintaining energy security and sustainable economic growth".¹¹⁸ The media release that accompanied former Assistant Minister for Climate Change and Energy Jenny McAllister's attendance at the first AZEC ministerial meeting a few months prior described how "Australia is capitalising on its renewable energy resources to develop new energy export industries" and that this can support emissions reduction in Asia. It then pointed out the increasing energy demand in Southeast Asia, and how "three-quarters of the increase in energy demand to 2030 is expected to be met by fossil fuels, leading to almost 35 per cent increase in CO₂ emissions".¹¹⁹ There was no explicit mention of the government supporting the development of renewable energy in Southeast Asia in order to decrease these emissions, and there is no publicly available information from the Department of Climate Change, Energy, the Environment and Water (DCCEEW), or the Department of Foreign Affairs and Trade (DFAT) and the Department of Industry, Science and Resources (DISR) which are also involved in AZEC, as to their position or advice to ministers regarding the promotion of fossil fuel technologies through this initiative.¹²⁰

As outlined in the previous section, the evidence is clear that enabling these technologies in Asia is not the way forward for reduced emissions, secure energy or economic growth. AZEC is attempting to prolong fossil fuel use across the region rather than focusing on renewable energy. By playing along with AZEC's greenwashing exercise, the Australian government is publicly backing fossil fuel expansion in Asia, and impeding our own energy transition.

Table 2: Current Asia Zero Emission Community Memorandums of Understanding involving Australia

MoU	Location	Stakeholders	Technology
MoU for the establishment of e-fuel/Sustainable Aviation Fuel value chain in Queensland, Australia	QLD	Japan: Toyo Engineering Corporation, Sojitz Corporation Australia: CS Energy	E-fuel
HyNQ North Queensland Clean Energy Project: IHI to Join Japanese and Australian Green Ammonia Production and Export Joint Venture	QLD	Japan: IHI Corporation, Idemitsu Australia: Energy Estate, CS Energy	Green ammonia
MoU with the Clean Energy Finance Corporation (CEFC) of Australia	n.s.	Japan: JBIC Australia: Clean Energy Finance Corporation	Hydrogen; renewable energy
MoU renewal to contribute to Japanese investments towards projects on hydrogen, ammonia and CCS in the State of New South Wales, Australia	NSW	Japan: JOGMEC Australia: NSW Government	Hydrogen; ammonia; CCS
MoU for Feasibility Study of Commercial-scale Hydrogen Supply in Gladstone	QLD	Japan: Sumitomo Corporation Australia: Rio Tinto	Hydrogen
MOU for Feasibility Study to Establish a Japan- Australia CCS Value Chain	n.s.	Japan: Sumitomo Corporation, Toho Gas, K Line Australia Australia: Woodside	CCS
MoU for Feasibility Study to Realize "Setouchi/ Shikoku $\rm CO_2$ Hub Concept"	n.s.	Japan: Sumitomo Corporation, K Line Australia, JFE Steel Corporation, Sumitomo Osaka Cement Australia: Woodside	CCS
APAC-wide GHG Accounting and Carbon Offsetting Collaboration Agreement	n.s.	Japan: ASUENE Australia: Tasman Environmental Markets	Carbon markets
Hitachi Energy's HVDC technology to power Marinus Link, toward Australia's Net Zero ambitions	TAS	Japan: Hitachi Energy Australia: Marinus Link	Renewable energy
MoU with Northern Territory focusing on Natural Gas, Hydrogen, Ammonia and CCS	NT	Japan: JOGMEC Australia: Northern Territory Government	LNG; hydrogen; ammonia; CCS
Heads of Agreement for investment and offtake from Murchison Green Hydrogen Project in Western Australia	WA	Japan: Sumitomo Corporation Australia: Murchison Hydrogen Renewables	Green ammonia
Joint Study Agreement for Pre-FEED Study on e-methane production in Cooper Basin	SA	Japan: Tokyo Gas, Toho Gas, Osaka Gas Australia: Santos	E-fuel

Fossil fuel technologies highlighted in orange, renewables in green. MoU, Memorandum of Understanding; n.s., not specified; QLD, Queensland; NSW, New South Wales; TAS, Tasmania; NT, Northern Territory; WA, Western Australia; SA, South Australia; CCS, carbon capture and storage; LNG, liquefied natural gas; APAC, Asia Pacific; GHG, greenhouse gas; HVDC, high-voltage direct current. Sources: <u>list of MOUs on March 2023</u> (First AZEC Ministerial Meeting); <u>list of MOUs on December 2023</u> (First AZEC Leaders Meeting); <u>list of MOUs on August 2024</u> (Second AZEC Ministerial Meeting).

People crossing the lagoon in Tarawa, Kiribati. Credit: Nava Fedaeff/Shutterstock.com

AUSTRALIAN ENERGY POLICY, IN SERVICE TO THE GAS EMPIRE

Numerous Australian politicians have been convinced by the Gas Empire's false narratives around energy security and gas as a transition fuel. A joint Ministerial Statement by Minister for Trade and Tourism Don Farrell, Minister Bowen and Minister for Resources and Northern Australia Madeleine King and the Japanese Minister of Economy, Trade and Industry, Nishimura Yasutoshi, in 2023 reaffirmed that "Australia has committed to remaining a reliable supplier of resources and energy to Japan and the region now and into the future. This applies to traditional energy commodities such as coal and [LNG] as well as new energy supply [...] Ministers acknowledged the importance of following various pathways for energy transition while achieving economic growth, ensuring energy security, and addressing decarbonisation. They noted the *importance of LNG* along with renewables and energy storage technologies in the energy transition."¹²⁰ Minister King echoed this role of gas in decarbonisation speaking in an interview with the ABC last year: "part of their [Japan and Korea] pathway to net zero emissions [...] is centred on using gas instead of coal".¹²¹ She also reiterated that Australia supplying LNG "well into the future" was needed for "energy security in our region. Australia has an extraordinary role to play in peace and prosperity in the Indo-Pacific region, especially up through North Asia."¹²²

Australia's plan for gas production and consumption is laid out in the 'Future Gas Strategy', released in May 2024.²² Guiding principles in the strategy include the need for new sources of gas supply and for Australia to remain a reliable LNG supplier, while also being a 'responsible climate actor'. A consultation paper for the strategy was shared in October 2023 and received almost 300 written submissions. Analysis of these submissions by InfluenceMap found disproportionate engagement from the fossil fuel value chain, which is overwhelmingly advocating for a profitable, enduring fossil fuel future. In addition to Australian oil and gas corporate entities, **fossil fuel interests in Asia, particularly Japan, actively advocated for Australia to expand fossil gas exports.**¹²³

In January/February 2024, Minister King visited Japan and Korea to 'meet key investors and provide assurances about certainty in our investment environment'. This information was obtained from the ministerial briefing pack and meeting briefs accessed via freedom of information requests.¹²⁴ These documents state that 'there will be interest in the development of the Future Gas Strategy, and the long-term policy framework it will provide for LNG gas exports'. The visit included meetings with JOGMEC, INPEX, J-Power, Mitsubishi Corp., JBIC, Mitsui & Co., LNG Japan, Sumitomo Corp., Sojitz Corp., Tokyo Gas, JERA, KEXIM, KOGAS and SK E&S; the topics of these meetings were redacted. Talking points about the Future Gas Strategy included explicitly encouraging submissions to be provided to the consultation paper and thanking those who had already done so.



A 'Facts and Statistics Brief' for the Korea meetings mentions that Korea's LNG demand is forecasted to be relatively flat out to 2030; this contradicts Korea's Ministry of Trade, Industry, and Energy (MOTIE) estimates that gas demand will decrease during this time period, which has resulted in a number of LNG terminal projects being scrapped.²⁵ In April 2024, a stakeholder briefing on the Future Gas Strategy was conducted with MOTIE and the Korean Embassy; the comments from MOTIE officials were redacted.

During a Budget Estimates hearing in November 2024, Senator David Pocock (ACT) asked DISR about which foreign government officials provided input into the strategy. The question was answered on notice, revealing that DISR held meetings with the embassies of Japan, Korea, Malaysia, Singapore and China, and that three confidential submissions were received from Japan, Singapore and Taiwan.¹²⁵ A common thread between the aforementioned countries is that they all receive Australian gas exports, and as laid out in this report, Japan and Korea's supply chains stand to materially benefit from an expansion of Australian gas exports; therefore an Australian government policy promoting this expansion would best serve their vested corporate and political interests.

Sen. Pocock specifically inquired if any Pacific Island nations were involved in the consultation process. DISR did not provide a specific response indicating that Pacific Island nations were not involved, arguably because Pacific Island nations do not stand to profit from an expansion of Australian gas exports - quite the opposite.

This reveals a central problem with the Future Gas Strategy: it promotes gas as a trade commodity for others to profit from, rather than as a direct contribution to the climate crisis. Those who will be most acutely affected by this crisis are kept at arm's length from the policy development, lest their contributions to the consultation process reflect their consistent calls for Australia to end its proliferation of fossil fuels.

And according to current government policy, this proliferation is not ending any time soon.

For Australia's LNG export facilities to continue working at full capacity and even to expand production, as promoted by the strategy, the least ambitious global climate policy is required, which is associated with 2.4°C to 2.6°C of global warming.¹²⁶ This stands in direct contradiction to Australia's obligations under the Paris Agreement. This intensity of global warming, implicitly endorsed by Australian government policy, has been labelled by scientists as "an irreversible climate disaster".¹²⁷ It is a scenario in which cascading feedback loops in our weather systems push climate change beyond the point of control or mitigation. In this scenario, atoll nations such as Tuvalu and Kiribati would become uninhabitable, even as Australia continues to export fossil fuels under the Future Gas Strategy's projections.^{128, 129}

CONCLUSION AND RECOMMENDATIONS

Australia has become an enabler in Japan and Korea's Gas Empire. The question is, will we choose to continue supporting the expansion of the Empire, increasing their short-term profits as climate change wreaks havoc on people and the planet? Or will we take a stand, ensuring that energy demand and decarbonisation across our region is met by cheaper, cleaner renewable energy, keep global warming below 1.5°C and allow communities to flourish.

Recommendations for the Australian government

Given that existing Australian gas projects significantly exceed the energy security needs of Japan, Korea and Australia, and gas expansion only serves the profits of the Gas Empire at the expense of communities and a safe climate, no new gas is needed

1. Commit to a phase out of fossil fuel extraction, commencing with an immediate end to the approval of new or expanded gas projects

This should be included in Australia's upcoming nationally determined contribution (NDC) and reiterated at COP31, which would significantly improve Australia's credibility in international climate diplomacy, particularly if Co-President. Achieving the Paris agreement's goal of 1.5°C is only feasible with a near term phase out of fossil fuels.

2. Ensure that the Australian government's Commonwealth Gas Market Review considers opportunities to prohibit gas companies entering into future LNG contracts that would require the development of new or expanded gas projects

As current long-term LNG contracts are expiring in the first half of the 2030s, the recently commenced Commonwealth Gas Market Review¹³⁰ is an important opportunity for the Australian government to develop a pathway for LNG exporters to transition away from committing to new long-term LNG contracts that require new gas projects to be serviced, while still ensuring that Australia's dwindling domestic gas needs are met during the transition.

3. Negotiate bilateral decarbonisation agreements with trading partners to support an orderly transition away from fossil fuels for mutual benefit

Proactive diplomacy with Japan and Korea would reaffirm our position as a trusted trading partner while we phase out fossil fuel exports and transition to renewable energy. This is a recommendation from the Climate Change Authority's 2024 Sector Pathways Review.¹³¹



With the Gas Empire derailing the transition to renewables in Asia, the cycle of creating artificial demand for gas by financing and building gas infrastructure across the supply chain must be broken

4. Work with Japan and Korea to honour their international commitments and shift public finance out of fossil fuels and into renewable energy

This includes the Paris Agreement, the COP28 Agreement to transition away from fossil fuels and Japan's G7 commitment to end direct public support for overseas fossil fuel projects. Australia can take an active role in advocating for Japan and Korea to join the Clean Energy Transition Partnership, given the government's ongoing commitment to this initiative. Taxpayer money, regardless of its origin, cannot continue underwriting fossil fuel expansion, and should be used to support the transition to renewable energy in the region.

5. Hold AZEC to account

Australia must play a stronger role within AZEC to champion renewable energy and reject false solutions, which prolong the use of fossil fuel technologies under the guise of decarbonisation.

Fossil fuel interests disproportionately influenced Australia's Future Gas Strategy and continue to impede meaningful climate action; this must be counteracted in the lead up to a COP₃₁ co-presidency with the Pacific

6. Exclude fossil fuel lobbyists from State Delegations and prohibit fossil fuel corporate sponsorships at COP₃₁

For Australia to successfully co-host COP31 in partnership with the Pacific, where fossil fuel phase-out is a key priority, the government must address the undue influence of the fossil fuel industry on climate negotiations. Australia should support public calls for the United Nations Framework Convention on Climate Change (UNFCCC) to establish an Accountability Framework that excludes fossil fuel lobbyists from State Delegations and the COP Presidency, and prohibits fossil fuel companies from sponsoring COP events.

REFERENCES

- 1 World Meteorological Organization. WMO confirms 2024 as warmest year on record at about 1.55°C above pre-industrial level. 2025. Accessed June 3, 2025. https://wmo.int/news/media-centre/wmo-confirms-2024-warmest-year-record-about-155degc-above-pre-industrial-level
- 2 International Energy Agency. Net Zero by 2050.; 2021. <u>https://www.iea.org/reports/net-zero-by-2050</u>
- 3 Hannah Grant and Bill Hare. Australia's Global Fossil Fuel Carbon Footprint. Climate Analytics; 2023. Accessed June 9, 2025. <u>https://climateanalytics.org/</u> publications/australias-global-fossil-fuel-carbon-footprint
- 4 Gillian Moon. Escalation: The Destructive Force of Australia's Fossil Fuel Exports on Our Climate. UNSW Australian Human Rights Institute; 2024. Accessed May 14, 2025. <u>https://www.humanrights.unsw.edu.au/news/new-data-australias-fossil-fuel-exports-places-us-among-worlds-biggest-climate-polluters</u>
- 5 Fossil Fuel Non-Proliferation Treaty Initiative. *Exporting Harm: The Climate Toll of Australia's Fossil Fuel Expansion.*; 2025. Accessed May 14, 2025. https://fossilfueltreaty.org/australia-report-pr
- 6 International Energy Agency. Natural gas. Australia. Accessed May 9, 2025. https://www.iea.org/countries/australia/natural-gas
- 7 Department of Climate Change, Energy, the Environment and Water. Energy trade. 2024. Accessed May 9, 2025. <u>https://www.energy.gov.au/energy-data/australian-energy-statistics/energy-trade</u>
- 8 Australasian Centre for Corporate Responsibility. *Australia's LNG Growth Wave Did It Wash for Shareholders*?; 2023. <u>https://www.accr.org.au/research/australias-lng-growth-wave-did-it-wash-for-shareholders/</u>
- 9 Global Energy Monitor. Global Gas Infrastructure Tracker. 2024. Accessed May 9, 2025. <u>https://globalenergymonitor.org/projects/global-gas-infrastructure-tracker/ggit-terminals-dashboard/</u>
- 10 Geoscience Australia. Gas. Australia's Energy Commodity Resources 2024. 2024. Accessed May 9, 2025. https://www.ga.gov.au/aecr2024/gas
- 11 Oil Change International. G20 Government Finance Enabled 82% of LNG Export Infrastructure Expansion, Breaking Climate Promises.; 2023. <u>https://oilchange.org/</u> publications/briefing-g20-government-finance-enabled-82-of-lng-export-infrastructure-expansion-breaking-climate-promises/
- 12 Nithin Coca. China is eroding Japan's LNG dominance. How does that affect Japanese buyers? *The Japan Times*. <u>https://www.japantimes.co.jp/</u> <u>environment/2025/06/01/energy/china-lng-surge/</u>. 2025. Accessed June 9, 2025
- 13 Climate Council. Powering Past Gas: An Energy Strategy That Works.; 2024. Accessed June 9, 2025. <u>https://www.climatecouncil.org.au/resources/powering-past-gas-an-energy-strategy-that-works/</u>
- 14 International Energy Agency. World Energy Outlook 2024.; 2024. Accessed June 9, 2025. https://www.iea.org/reports/world-energy-outlook-2024
- 15 UNFCCC. COP28 Agreement Signals "Beginning of the End" of the Fossil Fuel Era. 2023. Accessed June 9, 2025. <u>https://unfccc.int/news/cop28-agreement-signals-beginning-of-the-end-of-the-fossil-fuel-era</u>
- 16 Climate Integrate. Japan Policy Briefing: 7th Strategic Energy Plan, Climate Plan/NDC, and GX 2040 Vision. 2025. Accessed June 9, 2025. <u>https://climateintegrate.org/archives/8108</u>
- 17 Michelle (Chaewon) Kim. South Korea's 11th power plan makes partial progress towards decarbonization. *Institute for Energy Economics and Financial Analysis*. https://ieefa.org/resources/south-koreas-11th-power-plan-makes-partial-progress-towards-decarbonization. 2025. Accessed June 9, 2025.
- 18 Charles Lee. South Korea to sharply cut LNG's share in power mix to 10.6% by 2038. S&P Global Commodity Insights. https://www.spglobal.com/commodityinsights/en/news-research/latest-news/lng/022125-south-korea-to-sharply-cut-lngs-share-in-power-mix-to-106-by-2038. 2025. Accessed June 9, 2025
- 19 UN Environment Programme. Facts about Methane. 2024. Accessed June 9, 2025. <u>https://www.unep.org//explore-topics/energy/facts-about-methane</u>
- 20 International Energy Agency. *Global Methane Tracker* 2025.; 2025. Accessed July 2, 2025. <u>https://www.iea.org/reports/global-methane-tracker-2025</u>
- 21 Howarth RW. The greenhouse gas footprint of liquefied natural gas (LNG) exported from the United States. Energy Sci Eng. 2024;12(11):4843-4859. doi:10.1002/esg3.1934
- 22 Department of Industry Science and Resources. Future Gas Strategy. 2024. Accessed May 13, 2025. <u>https://www.industry.gov.au/publications/future-gas-strategy</u>
- 23 Department of Industry Science and Resources. Future Gas Strategy Analytical Report. 2024. Accessed May 13, 2025. <u>https://www.industry.gov.au/publications/</u> <u>future-gas-strategy</u>
- 24 Sam Reynolds, Christopher Doleman. *Japan's Largest LNG Buyers Have a Surplus Problem*. Institute for Energy Economics and Financial Analysis; 2024. Accessed May 9, 2025. <u>https://ieefa.org/resources/japans-largest-lng-buyers-have-surplus-problem</u>
- 25 Michelle (Chaewon) Kim. South Korea scrapping mega-scale LNG terminal projects amid weakening demand, overinvestment risks. *Institute for Energy Economics* and Financial Analysis. https://ieefa.org/resources/south-korea-scrapping-mega-scale-lng-terminal-projects-amid-weakening-demand. 2024. Accessed May 13, 2025.
- 26 Kenji Shiraishi, Won Young Park, Nikit Abhyankar, Umed Paliwal, Nina Khanna, Toru Morotomi, Jiang Lin, Amol Phadke. *The 2035 Japan Report: Plummeting Costs of Solar, Wind, and Batteries Can Accelerate Japan's Clean and Independent Electricity Future*. Energy Markets & Policy, Berkeley Lab; 2023. Accessed May 13, 2025. https://emp.lbl.gov/publications/2035-japan-report-plummeting-costs
- 27 Lara Welder, Neil Grant, Tina Aboumhaboub, Jonas Hörsch, Victor Maxwell, Claire Fyson and Bill Hare. *Clean Power in South Korea*. Climate Analytics; 2023. Accessed May 13, 2025. <u>https://climateanalytics.org/publications/clean-power-in-south-korea</u>
- 28 Renewable Energy Institute. Proposal for the 2035 Energy Mix (First Edition): Toward Decarbonizing Electricity with Renewable Energy.; 2023. Accessed June 12, 2025. https://www.renewable-ei.org/en/activities/reports/20230411.php
- 29 Solutions for Our Climate. Billions Off Course: Japan's Oil and Gas Financing Fueling the Climate Crisis.; 2024. Accessed June 9, 2025. <u>https://forourclimate.org/</u> research/531
- 30 International Energy Agency. Southeast Asia Energy Outlook 2024.; 2024. Accessed May 9, 2025. https://www.iea.org/reports/southeast-asia-energy-outlook-2024.
- 31 Michiyo Miyamoto. Japan's fossil fuel self-development undermines energy security. *Institute for Energy Economics and Financial Analysis*. <u>https://ieefa.org/</u> resources/japans-fossil-fuel-self-development-undermines-energy-security. 2025. Accessed May 9, 2025.
- 32 Ministry of Economy, Trade and Industry. Japan's New International Resource Strategy for Enhancing LNG Security. Agency for Natural Resources and Energy. 2020. Accessed May 9, 2025. <u>https://www.enecho.meti.go.jp/en/category/special/article/detail_162.html</u>
- 33 Stephen Stapczynski, Spe Chen, Jin Wu. How Japan Ignored Climate Critics and Built a Global Natural Gas Empire. Bloomberg. <u>https://www.bloomberg.com/</u> graphics/2024-japan-natural-gas-lng-global-trade/. 2024. Accessed May 9, 2025.
- 34 InfluenceMap. *The Power Behind the Plan: Japan's Energy and Climate Policy.*; 2025. Accessed June 19, 2025. <u>https://influencemap.org/briefing/The-Power-Behind-the-Plan-Japan-s-Energy-and-Climate-Policy-32618</u>
- 35 Dina Hopstad Rui, Elizabeth Sullivan, Dongjae Oh. *Fossil Fuel Pushers*. Jubilee Australia Research Centre, the Australian Conservation Foundation, Solutions for Our Climate, Japan Centre for a Sustainable Environment and Society; 2021. <u>https://www.jubileeaustralia.org/resources/publications/fossil-fuel-pushers-2021</u>
- 36 Isabelle Gerretsen, Joe Lo. G7 pushes Japan to speed up clean energy transition at home and abroad. *Climate Home News*. <u>https://www.climatechangenews</u>. <u>com/2022/05/27/g7-pushes-japan-to-speed-up-clean-energy-transition-at-home-and-abroad/</u>. 2022. Accessed June 3, 2025.
- 37 G7 Ministers of Climate, Energy and the Environment. *G7 Climate, Energy and Environment Ministers' Communiqué*.; 2022. Accessed June 3, 2025. <u>https://www.bmwk.de/Redaktion/DE/Downloads/G/g7-konferenz-klima-energie-umweltminister-05-2022-abschlusskommunique.pdf?__blob=publicationFile&v=14</u>

- 38 INPEX Coorporation. Ichthys LNG Project. Accessed May 9, 2025. https://www.inpex.com/english/ichthys/highlight.html
- 39 Michael Pooler. Ichthys LNG, Australia. IJGlobal. 2013. Accessed May 9, 2025. https://www.ijglobal.com/articles/81726/ichthys-lng-australia
- 40 Peter Milne. Ichthys LNG cost blows out another \$US5 billion. *The West Australian*. <u>https://thewest.com.au/business/energy/inpexs-ichthys-lng-cost-blows-out-another-us5-billion-ng-b881050751z</u>. 2018. Accessed June 10, 2025
- 41 Koki Izumi. Japan's Inpex to boost oil and natural gas output 30% by 2035 Nikkei Asia. *Nikkei Asia*. <u>https://web.archive.org/web/20250608033128/https://asia</u>. <u>nikkei.com/Business/Energy/Japan-s-Inpex-to-boost-oil-and-natural-gas-output-30-by-2035</u>. 2025. Accessed June 10, 2025.
- 42 Rachel Eunbi Shin and Elina Aibek Kyzy. No Room for More: *Why LNG Carriers Are a Climate and Financial Risk*. Solutions for Our Climate; 2025. Accessed May 14, 2025. <u>https://forourclimate.org/research/581</u>
- 43 Thomas Houlie and Victor Maxwell. Still Adrift: Updated Assessment of the Global Energy Transition's Impact on the LNG Shipbuilding Industry. Solutions for Our Climate; 2024. Accessed May 14, 2025. <u>https://forourclimate.org/research/541</u>
- 44 Sam Reynolds, Christopher Doleman. Japan's LNG resales into overseas markets hit record high in FY2023 as domestic demand plummeted. *Institute for Energy Economics and Financial Analysis*. <u>https://ieefa.org/resources/japans-lng-resales-overseas-markets-hit-record-high-fy2023-domestic-demand-plummeted</u>. 2024. Accessed May 9, 2025.
- 45 Amandine Denis-Ryan, Joshua Runciman. Japan does not need Australian gas to keep the lights on in Tokyo. *RenewEconomy*. <u>https://reneweconomy.com.au/</u> japan-does-not-need-australian-gas-to-keep-the-lights-on-in-tokyo/. 2024. Accessed May 9, 2025.
- 46 Amandine Denis-Ryan, Josh Runciman. *How Japan Cashes in on Resales of Australian LNG at the Expense of Australian Gas Users*. Institute for Energy Economics and Financial Analysis; 2025. Accessed May 20, 2025. <u>https://ieefa.org/resources/how-japan-cashes-resales-australian-lng-expense-australian-gas-users</u>
- 47 Data Desk. Japanese Re-Selling of Australian LNG.; 2024. Accessed May 9, 2025. https://docs.datadesk.eco/public/australia-japan-lng/
- 48 Piers Verstegen, Mark Ogge, Rod Campbell. Australia's Great Gas Giveaway. The Australia Institute; 2024. <u>https://australiainstitute.org.au/report/australias-great-gas-giveaway/</u>
- 49 Mark Ogge, Matt Saunders, Rod Campbell. Giving Away Gas to 2030. The Australia Institute; 2025. https://australiainstitute.org.au/report/giving-away-gas-to-2030/
- 50 Mark Ogge. Appointing the former INPEX general manager as the NT interim Territory Coordinator is a terrible move. *The Australia Institute*. <u>https://australiainstitute.org.au/post/appointing-the-former-inpex-general-manager-as-the-nt-interim-territory-coordinator-is-a-terrible-move/</u>. 2024. Accessed May 9, 2025.
- 51 Matt Grudnoff. Teachers pay more tax than the oil and gas industry. The Australia Institute. 2024. Accessed June 10, 2025. <u>https://australiainstitute.org.au/post/</u> teachers-pay-more-tax-than-the-oil-and-gas-industry/
- 52 Josh Runciman. Australian Gas Users Pay Price as LNG Exporters Prioritise Spot Market Windfalls. Institute for Energy Economics and Financial Analysis; 2025. Accessed June 10, 2025. <u>https://ieefa.org/resources/australian-gas-users-pay-price-lng-exporters-prioritise-spot-market-windfalls</u>
- 53 Kevin Morrison and Amandine Denis-Ryan. LNG Exports Prompt Fall in Eastern Australia's Gas Demand. Institute for Energy Economics and Financial Analysis; 2024. Accessed June 12, 2025. <u>https://ieefa.org/resources/lng-exports-prompt-fall-eastern-australias-gas-demand</u>
- 54 Ian Verrender. Instead of developing more gas, expert argues Australia should limit exports. ABC News. <u>https://www.abc.net.au/news/2025-02-20/australia-gas-supply-shortages-could-be-solved-by-lesser-exports/104957918</u>. 2025. Accessed June 10, 2025.
- 55 Takeo Kumagai and Surabhi Sahu. Japan concerned Australian gas security policy change could threaten LNG trade: official. *S&P Global Commodity Insights*. https://www.spglobal.com/commodity-insights/en/news-research/latest-news/lng/022223-japan-concerned-australian-gas-security-policy-change-could-threatenlng-trade-official. 2023. Accessed June 10, 2025.
- 56 Daniel Mercer. Japanese oil giant warns world peace at stake amid fears Australia "quietly quitting" LNG. *ABC News*. <u>https://www.abc.net.au/news/2023-03-30/japan-warns-world-peace-at-stake-in-australian-gas-exit/102167908</u>. 2023. Accessed June 23, 2025.
- 57 Brad Thompson and Perry Williams. Crisis looms as Japanese LNG buyer threatens to ditch Australia. *The Australian*. <u>https://www.theaustralian.com.au/business/</u> mining-energy/lng-buyer-warns-of-significant-australian-job-losses-as-us-gas-supply-surges/news-story/6f6e1795227cf6c75dd4f6559d97a012. 2025. Accessed June 23, 2025.
- 58 Jessica Sier. Japan warns on Dutton's gas reservation policy. *Australian Financial Review*. <u>https://www.afr.com/world/asia/japan-warns-on-dutton-s-gas-reservation-policy-20250407-p5lptk</u>. 2025. Accessed June 12, 2025.
- 59 Rick Wilkinson. Inpex chooses Darwin, 850-km pipeline for Ichthys. *Oil & Gas Journal*. <u>https://www.ogj.com/exploration-development/article/17268190/inpex-chooses-darwin-850-km-pipeline-for-ichthys</u>. 2008. Accessed June 3, 2025.
- 60 Dinita Setyawati, Shabrina Nadhila. ASEAN's Clean Power Pathways: 2024 Insights. Ember; 2024.
- 61 Dinita Setyawati. Beyond Tripling: Keeping ASEAN's Solar & Wind Momentum. Ember; 2023. Accessed May 9, 2025. <u>https://ember-energy.org/latest-insights/beyond-tripling-asean</u>
- 62 Global Energy Monitor. Making the case for Asia's energy transition. Asia Gas Tracker. 2023. Accessed May 9, 2025. <u>https://globalenergymonitor.org/projects/asia-gas-tracker/making-the-case-for-asias-energy-transition/</u>
- 63 Koustav Samanta, Roslan Khasawneh. Cheaper solar power gains ground in southeast Asia. *Reuters*. <u>https://www.reuters.com/article/business/environment/</u> <u>cheaper-solar-power-gains-ground-in-southeast-asia-idUSKBN1XA1KI/</u>. 2019. Accessed May 9, 2025.
- 64 BloombergNEF. Solar Shines the Path for the Philippines to Reduce Reliance on Fossil Fuel Imports.; 2025. Accessed June 10, 2025. <u>https://about.bnef.com/insights/</u> clean-energy/solar-shines-the-path-for-the-philippines-to-reduce-reliance-on-fossil-fuel-imports/
- 65 Emran Hossain. Japan-influenced Strategies Trap Asian Nations in Fossil Fuels. Energy Tracker Asia. 2025. Accessed June 10, 2025. <u>https://energytracker.asia/japan-influenced-strategies-trap-asian-nations-in-fossil-fuels/</u>
- 66 InfluenceMap. Japanese and South Korean LNG Industries and Vietnam's Energy Transition.; 2022. Accessed June 10, 2025. <u>https://influencemap.org/report/</u> Japanese-and-South-Korean-LNG-Industries-and-Vietnam-s-Energy-Transition-19089
- 67 Chermaine Lee. Japan invests big in LNG despite climate-friendly promises. *DW*. <u>https://www.dw.com/en/japan-invests-big-in-lng-despite-climate-friendly-promises/a-72623597</u>. 2025. Accessed June 10, 2025.
- 68 Gürsan C, De Gooyert V. The systemic impact of a transition fuel: Does natural gas help or hinder the energy transition? *Renew Sustain Energy Rev.* 2021;138:110552. doi:10.1016/j.rser.2020.110552
- 69 Mita Bhattacharya, Sudharshan Reddy Paramati, Ilhan Ozturk, Sankar Bhattacharya. The effect of renewable energy consumption on economic growth: Evidence from top 38 countries. *Appl Energy*. 2016;162:733-741. doi:10.1016/j.apenergy.2015.10.104
- 70 Nithin Coca. JBIC-backed Verde Island Passage LNG Faces Growing Public Outcry. Climate Impacts Tracker Asia. 2024. Accessed June 10, 2025. <u>https://www.climateimpactstracker.com/jbic-backed-verde-island-passage-lng-faces-growing-public-outcry/</u>
- 71 Oil Change International. Japan's Toxic Energy Strategy for Asia.; 2023. Accessed May 9, 2025. <u>https://oilchange.org/publications/briefing-japans-toxic-energy-strategy-for-asia/</u>
- 72 Fossil Free Japan. Joint statement: Japan must stop derailing Southeast Asia's energy transition. 2025. Accessed May 9, 2025. <u>https://fossilfreejapan.org/joint-statement-japan-must-stop-derailing-southeast-asias-energy-transition/</u>
- 73 Geoscience Australia. *Regional Geology of the Browse Basin.*; 2022. Accessed May 13, 2025. <u>https://www.ga.gov.au/scientific-topics/energy/province-sedimentary-basin-geology/petroleum/acreagerelease/browse</u>

- 74 Woodside Energy. Browse. 2025. Accessed May 13, 2025. https://www.woodside.com/what-we-do/developments-and-exploration/browse
- 75 Australian Conservation Foundation. Why Woodside's Browse gas project is bad for Australia. 2024. Accessed May 13, 2025. <u>https://www.acf.org.au/why-woodsides-browse-gas-project-is-bad-for-australia</u>
- 76 Oceanwise Australia. Scott Reef Review of Environmental Values and Proposed Browse to North West Shelf Project Environmental Impact Statement/Environmental Review Document.; 2024. Accessed June 24, 2025. <u>https://www.gobeyondgas.com.au/resources</u>
- 77 JBIC finances Japan Australia LNG acquisition. Offshore Energy. 2015. Accessed May 13, 2025. <u>https://www.offshore-energy.biz/jbic-finances-japan-australia-lng-acquisition/</u>
- 78 Yuka Obayashi and Miho Uranaka. Inpex to accelerate expansion of LNG production and sales CEO. *Reuters*. <u>https://www.reuters.com/business/energy/inpex-accelerate-expansion-lng-production-sales-ceo-2023-01-12/</u>. 2023. Accessed May 13, 2025.
- 79 Damon Evans. Inpex eyes upstream acquisitions for Ichthys LNG expansion. *Energy News Bulletin*. <u>https://www.energynewsbulletin.net/markets/news-articles/1463648/inpex-eyes-upstream-acquisitions-ichthys-lng-expansion</u>. 2024. Accessed May 13, 2025.
- 80 TotalEnergies. Australia: TotalEnergies acquires a 26% interest in the Cash-Maple gas discoveries for the long-term supply of Ichthys LNG. 2023. Accessed May 13, 2025. <u>https://totalenergies.com/media/news/press-releases/australia-totalenergies-acquires-26-interest-cash-maple-gas-discoveries</u>
- 81 Ichthys LNG partners plan tie-ins of Cash, Maple gas discoveries. *Offshore*. <u>https://www.offshore-mag.com/regional-reports/australia-new-zealand/</u> article/14297949/ichthys-lng-partners-plan-tie-ins-of-cash-maple-gas-discoveries. 2023. Accessed May 13, 2025.
- 82 Sonali Paul. Japan's Inpex eyes Australia expansion, including via acquisitions. *Reuters*. <u>https://www.reuters.com/article/business/japans-inpex-eyes-australia-expansion-including-via-acquisitions-idUSKCN1VYoNK/</u>. 2019. Accessed May 13, 2025
- 83 Kevin Morrison and Christina Ng. Eni's Verus Not so True on Net Zero. Institute for Energy Economics and Financial Analysis; 2023. Accessed May 13, 2025. https://ieefa.org/resources/enis-verus-not-so-true-net-zero
- 84 Daniel Fitzgerald. Eni to review plans for carbon-intensive Verus gas field to minimise "environmental footprint." *ABC News*. <u>https://www.abc.net.au/news/</u> <u>rural/2024-03-28/eni-to-review-development-plans-for-verus-gas-field/103636352</u>. 2024. Accessed May 13, 2025.
- 85 INPEX Coorporation. Bonaparte CCS. Accessed May 13, 2025. https://www.inpex.com/english/business/project/bonaparte.html
- 86 Jeremy Beckman. Bonaparte CCS scheme moves into pre-FEED phase. Offshore. <u>https://www.offshore-mag.com/regional-reports/australia-new-zealand/news/55284118/inpex-bonaparte-ccs-scheme-moves-into-pre-feed-phase</u>. 2025. Accessed May 13, 2025.
- 87 Ariel Le Bourdonnec. Ichthys LNG Risky Support from the Insurance Industry. Reclaim Finance; 2022. Accessed May 13, 2025. <u>https://reclaimfinance.org/site/en/2022/10/05/ichthys-lng-risky-support-from-the-insurance-industry/</u>
- 88 Department of Climate Change, Energy, the Environment and Water. National Greenhouse Gas Inventory Quarterly Update: December 2024. 2025. Accessed July 2, 2025. <u>https://www.dcceew.gov.au/climate-change/publications/national-greenhouse-gas-inventory-quarterly-update-december-2024</u>
- 89 Northern Territory Government. Middle Arm Sustainable Development Precinct. Infrastructure NT. 2025. Accessed May 13, 2025. <u>https://infrastructure.nt.gov.au/</u> project/middle-arm-sustainable-development-precinct
- 90 Northern Territory Government. The Precinct. Middle Arm Sustainable Development Precinct. 2025. Accessed May 13, 2025. <u>https://middlearmprecinct.nt.gov.au/about-the-precinct</u>
- 91 Lisa Cox. Darwin's 'sustainable' Middle Arm development is key to huge fossil fuel projects, documents show. *The Guardian*. <u>https://www.theguardian.com/</u> environment/2023/may/18/darwins-sustainable-middle-arm-development-is-key-to-huge-fossil-fuel-projects-documents-show. 2023. Accessed May 13, 2025.
- 92 Tom Sanzillo, Abhishek Sinha, Suzanne Mattei and Bruce Robertson. Middle Arm Gas and Petrochemicals Hub: Combination of Problems Makes It Unprofitable for Business and a Red Flag to the Public. Institute for Energy Economics and Financial Analysis; 2023. Accessed May 13, 2025. <u>https://ieefa.org/resources/middle-arm-gas-and-petrochemicals-hub-combination-problems-makes-it-unprofitable-business</u>
- 93 Melissa Haswell, Jacob Hegedus, David Shearman. The Risks of Oil and Gas Development for Human Health and Wellbeing: A Synthesis of Evidence and Implications for Australia. University of Sydney; 2023. Accessed May 13, 2025. <u>https://apo.org.au/node/324169</u>
- 94 Olivana Lathouris. Contaminated water pumped onto vegetation at Beetaloo Basin fracking site. *ABC News*. <u>https://www.abc.net.au/news/2025-01-15/nt-beetaloo-basin-incident-experts-concerned/104816526</u>. 2025. Accessed May 13, 2025.
- 95 Significant progress in Beetaloo Basin operations. Petroleum Australia. 2025. Accessed May 13, 2025. <u>https://petroleumaustralia.com.au/news_article/tamboran-resources-reports-significant-progress-in-beetaloo-basin-operations/</u>
- 96 Bruce Mountain. Review of the Northern Territory Government's Stage 2 Submission to Infrastructure Australia on the Middle Arm Sustainable Development Project, with Specific Regard to Economic Risks. Environment Centre NT; 2025. Accessed May 13, 2025. <u>https://www.ecnt.org.au/middlearm_businesscase</u>
- 97 Japan Bank for International Cooperation. JBIC Signs MOU with Northern Territory of Australia. 2024. Accessed May 13, 2025. <u>https://www.jbic.go.jp/en/information/press/press-2023/press-00169.html</u>
- 98 Japan Organization for Metals and Energy Security. Memorandum of Understanding signed by JOGMEC and Northern Territory Government. 2024. Accessed May 13, 2025. https://www.jogmec.go.jp/english/news/release/news_10_00071.html
- 99 Thomas Houlie and Bill Hare. Emissions Impossible: Unpacking CSIRO GISERA Beetaloo Middle Arm Fossil Gas Emission Estimates. Climate Analytics; 2023. Accessed May 13, 2025. <u>https://climateanalytics.org/publications/emissions-impossible</u>
- 100 Papua LNG. Defund TotalEnergies. 2023. Accessed May 13, 2025. <u>https://defundtotalenergies.org/en/papualng-2</u>
- 101 Shona Hawkes. *Building On What Works*. Centre for Environmental Law and Community Rights, Jubilee Australia Research Centre; 2023. Accessed May 13, 2025. https://www.jubileeaustralia.org/resources/publications/building-on-what-works
- 102 Papua LNG. Banktrack. 2025. Accessed May 13, 2025. https://www.banktrack.org/project/papua_lng
- 103 Petroleum Minister meets with Japanese delegation. Papua New Guinea Post-Courier. <u>https://www.postcourier.com.pg/petroleum-minister-meets-with-japanese-delegation/</u>. 2024. Accessed May 13, 2025
- 104 Japan Bank for International Cooperation potential investor in Papua LNG. *Papua New Guinea Post-Courier*. <u>https://www.postcourier.com.pg/japan-bank-for-international-cooperation-potential-investor-in-papua-lng/</u>. 2025. Accessed May 13, 2025.
- 105 More banks rule out support for TotalEnergies' Papua LNG project. Reclaim Finance. 2025. Accessed May 13, 2025. <u>https://reclaimfinance.org/site/en/2025/02/13/</u> more-banks-rule-out-support-for-totalenergies-papua-lng-project/
- 106 Kim McGrath. Crossing the Line: Australia's Secret History in the Timor Sea. Black Inc.; 2017. https://books.google.com.au/books?id=fAwwDwAAOBAJ
- 107 Department of Foreign Affairs and Trade. Australia's maritime arrangements with Timor-Leste. Accessed May 13, 2025. <u>https://www.dfat.gov.au/geo/timor-leste/</u> australias-maritime-arrangements-with-timor-leste
- 108 Woodside Energy. Greater Sunrise. 2025. Accessed May 13, 2025. https://www.woodside.com/what-we-do/developments-and-exploration/greater-sunrise
- 109 Colin Sandell-Hay. INPEX currying favour with Timor-Leste over Greater Sunrise development. *Energy News Bulletin*. <u>https://www.energynewsbulletin.net/</u> operations/news-analysis/4409798/inpex-currying-favour-timor-leste-sunrise-development. 2025. Accessed May 13, 2025.
- 110 Joint statement. Prime Minister of Australia. 2024. Accessed May 13, 2025. https://www.pm.gov.au/media/joint-statement-2
- 111 La'o Hamutuk. The Timor-Leste-Australia Maritime Boundary Treaty. 2018. Accessed May 13, 2025. <u>https://www.laohamutuk.org/Oil/Boundary/</u> <u>Treaty/18TreatyArticleEn.htm</u>

- 112 Hiroki Osada, Hozue Hatae, Makiko Arima, Jonathan Moylan, Sadia Rowshon Adhora, Eva Garofalo, Muandao Kongwanarat, Rehana Dada, Eliana Lorenzo, Angelica Dacanay, Joshua Lopez. Faces of Impact: JBIC and Japan's LNG Financing Harms Communities and the Planet. Friends of the Earth Japan; 2024. Accessed May 13, 2025. https://foejapan.org/en/issue/20241017/20776/
- 113 Ministry of Economy, Trade and Industry. Asia Zero Emission Community. 2024. Accessed May 9, 2025. <u>https://www.meti.go.jp/policy/energy_environment/global_warming/azec/azec_en.html</u>
- 114 Zero Carbon Analytics. Zero Emissions or Fossil Fuels? Tracking Japan's AZEC Projects.; 2024. Accessed May 9, 2025. <u>https://zerocarbon-analytics.org/archives/</u> energy/zero-emissions-or-fossil-fuels-tracking-japans-azec-projects
- 115 Seb Kennedy, Jacqueline Tao, Joo Yeow Lee. Japan's toxic narrative on ammonia. TransitionZero. 2023. Accessed May 9, 2025. <u>https://www.transitionzero.org/</u> insights/japans-toxic-narrative-on-ammonia-cofiring
- 116 Institute for Energy Economics and Financial Analysis. Carbon Capture and Storage. 2025. Accessed May 9, 2025. https://ieefa.org/ccs
- 117 Amandine Denis-Ryan, Kevin Morrison. Gorgon CCS underperformance hits new low in 2023-24. *Institute for Energy Economics and Financial Analysis*. <u>https://ieefa.org/resources/gorgon-ccs-underperformance-hits-new-low-2023-24</u>. 2024. Accessed May 9, 2025
- 118 Department of Climate Change, Energy, the Environment and Water. Speech on Australia as a Renewable Energy Superpower, Australian Embassy, Japan. 2023. Accessed May 9, 2025. <u>https://minister.dcceew.gov.au/bowen/speeches/speech-australia-renewable-energy-superpower-australian-embassy-japan</u>
- 119 Department of Climate Change, Energy, the Environment and Water. Australia supporting Asian cooperation on climate action and energy. 2023. Accessed May 9, 2025. <u>https://minister.dcceew.gov.au/mcallister/media-releases/australia-supporting-asian-cooperation-climate-action-and-energy</u>
- 120 Minister for Trade and Tourism. Australia-Japan Ministerial Economic Dialogue Joint Ministerial Statement. 2023. Accessed May 9, 2025. <u>https://www.trademinister.gov.au/minister/don-farrell/statements/australia-japan-ministerial-economic-dialogue-joint-ministerial-statement</u>
- 121 Resources Minister Madeleine King talks up Australia's gas industry, as climate advocates push for cleaner energy message. *AM*. Published online 2024. Accessed June 10, 2025. <u>https://www.abc.net.au/listen/programs/am/madeleine-king-talks-up-australia-s-gas-industry/103407660</u>
- 122 Tom Lowrey. How long will Australia remain a major gas exporter? It depends who you ask. *ABC News*. <u>https://www.abc.net.au/news/2024-01-31/future-gas-australia-madeleine-king/103406682</u>. 2024. Accessed June 10, 2025.
- 123 InfluenceMap. Australia's Future Gas Strategy: Corporate Advocacy and Industry Narratives.; 2024. Accessed May 13, 2025. <u>https://influencemap.org/briefing/</u> Australia-Future-Gas-Strategy-26628
- 124 Department of Industry Science and Resources. Freedom of information disclosure log 2024. 2024. Accessed May 13, 2025. <u>https://www.industry.gov.au/accessing-information/freedom-information-disclosure/2024</u>
- 125 2024-25 Supplementary budget estimates. Parliament of Australia. 2025. Accessed May 13, 2025. <u>https://www.aph.gov.au/Parliamentary_Business/Senate_estimates/Economics/2024-25_Supplementary_Budget_estimates</u>
- 126 Matt Saunders and Richard Denniss. What Is the Case for More Gas? The Australia Institute; 2024. Accessed May 13, 2025. <u>https://australiainstitute.org.au/report/</u>what-is-the-case-for-more-gas/
- 127 William J Ripple, Christopher Wolf, Jillian W Gregg, et al. The 2024 state of the climate report: Perilous times on planet Earth. BioScience. 2024;74(12):812-824. doi:10.1093/biosci/biae087
- 128 Samir S. Patel. A sinking feeling. Nature. 2006;440(7085):734-736. doi:10.1038/440734a
- 129 IPCC. Sea Level Rise and Implications for Low-Lying Islands, Coasts and Communities. In: *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate*. 1st ed. Cambridge University Press; 2022. doi:10.1017/9781009157964
- 130 Department of Climate Change, Energy, the Environment and Water. Gas Market Review Consultation. 2025. Accessed July 2, 2025. <u>https://consult.dcceew.gov.au/gas-market-review-consultation</u>
- 131 Climate Change Authority. Sector Pathways Review.; 2024. Accessed June 4, 2025. https://www.climatechangeauthority.gov.au/sector-pathways-review





ALIAN | Nature RVATION | needs us, ATION | now A U S T R A L I A RESEARCH CENTRE