



Environmental
Defenders Office

**Submission regarding the Future Gas Strategy
consultation paper**

13 November 2023

About EDO

EDO is a community legal centre specialising in public interest environmental law. We help people who want to protect the environment through law. Our reputation is built on:

Successful environmental outcomes using the law. With over 30 years' experience in environmental law, EDO has a proven track record in achieving positive environmental outcomes for the community.

Broad environmental expertise. EDO is the acknowledged expert when it comes to the law and how it applies to the environment. We help the community to solve environmental issues by providing legal and scientific advice, community legal education and proposals for better laws.

Independent and accessible services. As a non-government and not-for-profit legal centre, our services are provided without fear or favour. Anyone can contact us to get free initial legal advice about an environmental problem, with many of our services targeted at rural and regional communities.

Environmental Defenders Office is a legal centre dedicated to protecting the environment.

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Acknowledgment of Country

The EDO recognises First Nations peoples as the Custodians of the land, seas and rivers of Australia. We pay our respects to Aboriginal and Torres Strait Islander Elders past, present and emerging, and aspire to learn from traditional knowledge and customs so that, together, we can protect our environment and cultural heritage through law.

In providing these submissions, we pay our respects to First Nations across Australia and recognise that their Countries were never ceded and express our remorse for the deep suffering that has been endured by the First Nations of this country since colonisation.

Submitted to:

Future Gas Strategy Taskforce
Department of Industry, Science and Resources

By email: GasOptions@industry.gov.au

Uploaded at: <https://consult.industry.gov.au/future-gas-strategy>

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Background

On 3 October 2023, the Department of Industry, Science and Resources (**DISR**) released a consultation paper relating to the Future Gas Strategy (**Consultation Paper**). The Future Gas Strategy will purportedly provide a medium (to 2035) and long term (to 2050) plan for gas production and consumption in Australia.

Environmental Defenders Office (**EDO**) welcomes the opportunity to comment on the consultation paper, and the Future Gas Strategy.

Urgent and rapid reductions in greenhouse gas (**GHG**) emissions from both direct and indirect sources are now required to meet the Paris Agreement goal of “holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit warming to 1.5°C”.¹ The longer emissions reductions are delayed, the more pronounced and severe the effects of climate change will become.

Gas is a potent GHG, with methane being 86 times more potent as a GHG than carbon dioxide over a 20-year period.² Therefore, in terms of mitigating GHG emissions, phasing out the production, transmission and use of gas is a very important tool in combating global heating. There are also human health benefits to doing so, with recent studies finding that the use of gas in the home for heating and cooking exposes the inhabitants to harmful carcinogens and lower air quality.³ These health risks and impacts disproportionately affect the most vulnerable in our community: for example, those living in social and rental housing and who cannot afford to make the switch to cleaner alternatives.⁴

As the Consultation Paper acknowledges, “151 countries, accounting for around 90% of global emissions, have committed to reach net zero”. Australia is one of these countries.⁵ It has a legislated net zero by 2050 GHG emission target.⁶ In EDO’s view, without real action to reduce GHG emissions across all sectors, including the energy and industrial sectors, it will not be possible to achieve this.

¹ In December 2015, over 190 nations affirmed a goal to reduce greenhouse gas emissions in order to limit average global warming to well below 2°C above preindustrial levels and to pursue efforts to limit warming to 1.5°C. United Nations Framework Convention on Climate Change Conference of the Parties 21, Adoption of the Paris Agreement, ‘Annex -Paris Agreement’, Article 2 (FCCC/CP/2015/L.9/Rev.1). The Paris Agreement builds on past international commitments in Cancun, Lima and elsewhere under the 1992 UN Framework Convention on Climate Change.

² G. Myhre, D. Shindell, F.-M. Bréon, W. Collins, J. Fuglestedt, J. Huang, D. Koch, J.-F. Lamarque, D. Lee, B. Mendoza, T. Nakajima, A. Robock, G. Stephens, T. Takemura and H. Zhang, in *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, ed. T. F. Stocker, D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley, Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 2013.

³ Belova, A., Dagli, R., Economu, N., Hartley, S., Holder, C., Hubbard, H., Justice, M.A., Lettes S., Raymer, P. and Silva, R. 2022. [Literature Review on the Impacts of Residential Combustion, Final Report](#). American Lung Association and ICF, July 2022.

⁴ Australian Council of Social Service, Brotherhood of St Laurence, The Climate Institute, 2017, *Empowering disadvantaged households to access affordable, clean energy*, at pp 8, and 36-37, accessed at https://www.acoss.org.au/wp-content/uploads/2017/07/ACOSS_BSL_TCI_Empowering-households.pdf on 18 January 2023.

⁵ See *Climate Change Act 2022* (Cth).

⁶ *Climate Change Act 2022* (Cth), s 10(b).

EDO is of the view that the only way to reach net zero is to ultimately decarbonise Australia's gas sector. As stated in the Consultation Paper, "the role of gas will continue to change as the world decarbonises to address dangerous climate change and meet commitments under the Paris Agreement", and "[h]ow, and how fast, is uncertain". EDO agrees that it is really a question of how, and over what timeframe, Australia will move to decarbonise its gas sector.

Although EDO supports the Government's intent to create an "evidence-based, long-term strategy" which, amongst other things, "supports decarbonisation", and "supports and complements Australia's vision to be a renewable energy superpower", EDO is of the view that the Future Gas Strategy must be ambitious and provide a clear plan (and associated timeframes) for Australia's transition away from the use of natural gas and LPG.

In the following submission, EDO addresses:

1. The future of gas in Australia, including proposed decarbonisation pathways in the context of Australia's and the world's transition to net zero.
2. The issues with Carbon Capture and Storage (**CCS**) technology, which in EDO's view, is a false solution to the climate crisis.
3. The regulatory reforms that are necessary to support Australia's transition to net zero.

EDO's submission on the Future Gas Strategy is couched in the context of its [Roadmap for Climate Reform \(Roadmap\)](#). We advocate for law reform that is science-aligned, prudent and ambitious enough to meet the scale of the climate crisis.

Summary of recommendations

Recommendation 1: The Future Gas Strategy reflect the IEA's Net Zero by 2050 Roadmap.

Recommendation 2: The Future Gas Strategy support the rapid electrification of all energy demands where possible, and support the decarbonisation of other energy demands with fully renewable energy.

Recommendation 3: The interim use of gas should only be accommodated in the Future Gas Strategy with a clear plan to rapidly reduce its use by 2030, and completely phase out its use, along with all fossil fuels, by no later than 2035.

Recommendation 4: Carbon Capture and Storage not be included in the Future Gas Strategy as a proposed remedy to reduce GHG emissions.

Recommendation 5: Australia's environmental management regime for offshore petroleum and greenhouse gas storage activities be amended, with the effect that no new gas projects are to be approved.

Recommendation 6: The EPBC Act water trigger must be expanded to capture all forms of unconventional gas.

Recommendation 7: Australia's environmental management regime for onshore and offshore petroleum and greenhouse gas storage activities be underpinned by requirements for free, prior, informed consent (**FPIC**) for First Nations peoples, and the right of self-determination.

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I. The future of gas in Australia

Given the Government’s newly legislated net zero by 2050 GHG emission target,⁷ it is essential that all Government policies, strategies and decisions must reflect the need to actively reduce GHG emissions across all sectors of Australia’s economy.

A. The International Energy Agency’s (IEA) Net Zero by 2050 Roadmap

In EDO’s view, it is critical that the Future Gas Strategy reflect the IEA’s Net Zero by 2050 Roadmap.⁸ Australia has already fallen behind the timing proposed by the IEA in its Net Zero by 2050 Roadmap in a number of key areas, including by continuing to approve new oil and gas fields. Under the IEA’s Net Zero by 2050 Roadmap, the last date by which oil and gas fields are to be approved for development is 2021.⁹ There is only one solution to the climate crisis, and that is genuine and rapid emissions reductions.

Recommendation 1: The Future Gas Strategy reflect the IEA’s Net Zero by 2050 Roadmap.

B. Proposed decarbonisation pathways

In terms of how the transition away from gas should be facilitated, Australia should aim for electrification of all energy demand that it possibly can. Where that is not possible, Australia should look to decarbonise via other fully renewable energy resources that either generate no or very low GHG emissions.

Recommendation 2: The Future Gas Strategy support the rapid electrification of all energy demands where possible, and the decarbonisation of other energy demands with fully renewable energy.

C. The interim use of gas

In EDO’s view, the premise of the Consultation Paper – being that Australia should implement a net-zero pathway by constraining gas demand rather than gas supply – is misconceived. Rather, EDO considers that Australia needs to introduce an ambitious and clear strategy to transition industrial, commercial and domestic energy users away from gas. To this end, EDO disagrees with the assertion in the Consultation Paper that “[g]as is expected to play a key role as the electricity sector moves to renewable energy sources”, citing the Australian Energy Market Operator’s “2023 Gas Statement of Opportunities: for central and eastern Australia”.¹⁰ EDO’s position is that the interim use of gas should only be accommodated in the Future Gas Strategy with a clear plan to rapidly reduce its use by 2030, and completely phase out its use, along with all fossil fuels, by no later than 2035.

⁷ *Climate Change Act 2022* (Cth), s 10(b).

⁸ See: Net Zero by 2050: a Roadmap for the Global Energy Sector. Available at: https://iea.blob.core.windows.net/assets/deebef5d-0c34-4539-9d0c-10b13d840027/NetZeroby2050-ARoadmapfortheGlobalEnergySector_CORR.pdf.

⁹ *Ibid*, p 20.

¹⁰ Consultation Paper, p 7.

Recommendation 3: The Future Gas Strategy interim use of gas should only be accommodated in the Future Gas Strategy with a clear plan to rapidly reduce its use by 2030, and completely phase out its use, along with all fossil fuels, by no later than 2035.

II. Carbon Capture and Storage is a false solution to the climate crisis

The Consultation Paper states that CCS is a necessary component to ensure that “gas is produced and consumed in a way consistent with net zero by 2050”.¹¹ The Consultation Paper goes on to state that “[s]uccessful deployment of CCS and negative emissions technologies (NETs) can help decarbonise oil and gas operations and other hard-to-abate industries”,¹² and that “CCS will likely play an important role in helping the oil and gas and hard to abate industrial sectors to deliver their emissions obligations under the Safeguard Mechanism”.¹³ As set out below, the evidence does not support these assumptions and propositions.

CCS is commonly associated with offshore petroleum development. These two types of offshore development are now often proposed together given that the petroleum industry considers that CCS provides a potential solution to mitigate the significant GHG emissions resulting from petroleum production and processing. In theory, CCS involves the process of capturing of carbon dioxide (CO₂) emissions from fossil fuel production and combustion, and the storage of this CO₂ in underground geological formations.¹⁴

However, evidence shows that CCS is a false solution to the climate crisis. Globally there are no CCS developments that are operating at the scale required to materially contribute to reducing global GHG emissions. According to a report by the Center for International Environmental Law, the “28 CCS facilities currently operating globally have a capacity to capture only 0.1 percent of fossil fuel emissions, or 37 megatons of CO₂ annually.”¹⁵

Rather, the “promise” of CCS is often used by the petroleum industry to advocate for the expansion of the existing offshore petroleum industry in Australia. To this end, the Consultation Paper refers to “commercial CCS projects in Australia”, including “the world’s largest commercial CCS project, the Chevron Australia Gorgon LNG Project at Barrow Island in Western Australia”.¹⁶ In EDO’s view, the Gorgon LNG Project is illustrative of the issues with CCS. Specifically, the amount expected to be sequestered for the Project will be less than 6% of the total emissions from the project (including scope 3 emissions).¹⁷ This low sequestration rate demonstrates the inability of CCS technology to reduce emissions in-line with the commitments of the Paris Agreement.

¹¹ Consultation Paper, page 16.

¹² Consultation Paper, page 26.

¹³ Consultation Paper, page 28.

¹⁴ International Energy Agency, *Net Zero by 2050: A Roadmap for the Global Energy Sector* (October 2021) 206 <https://iea.blob.core.windows.net/assets/deebef5d-0c34-4539-9d0c-10b13d840027/NetZeroBy2050-ARoadmapfortheGlobalEnergySector_CORR.pdf>.

¹⁵ N. Mac Dowell et al., ‘The role of CO₂ capture and utilization in mitigating climate change’ (2017), 7 *Nature Climate Change*, 243.

¹⁶ Consultation Paper, page 26.

¹⁷ Chevron, Gorgon Gas Treatment Plant Greenhouse Gas Management Plan (17 Aug. 2022), <https://australia.chevron.com/-/media/australia/our-businesses/documents/gorgon-gas-treatment-plant-greenhouse-gas-management-plan.pdf>.

CCS comes with its own environmental concerns, many of which are similar to the environmental impacts associated with offshore petroleum and minerals exploration and recovery – for example:

- a. At the initial stages, CCS development utilises seismic testing surveys to explore for suitable sub-sea geological formations to store CO₂. Established CCS developments also use seismic testing to monitor whether injected CO₂ is properly stored and not leaking.¹⁸ Seismic exploration is a geophysical method that detects reflected or refracted seismic waves from subsurface media using artificial sources.¹⁹ Seismic exploration poses a significant threat to marine life,²⁰ and has been proven to damage the hearing of whales and keep them away from key feeding and breeding grounds.²¹ Seismic exploration also impacts other marine organisms, including zooplankton.²² For instance, a 2017 study found that a loud blast, softer than the sound of a seismic air gun, killed nearly two-thirds of the zooplankton in three-quarters of a mile on either side.²³
- b. CCS infrastructure is equally as damaging to the marine environment as the infrastructure required for offshore petroleum and mineral exploration and production. The implementation of CCS development requires “a massive buildout of pipelines and associated infrastructure”.²⁴ It follows that the impacts on marine ecosystems posed by the installation of CCS infrastructure in offshore locations are likely to be equally as damaging as the impacts on marine ecosystems posed by offshore petroleum and minerals infrastructure. In addition, the transport of captured CO₂ presents significant risks associated with pipeline failure which increase with the distance of travel required.²⁵
- c. The CCS process, whether it involves pre- or post-combustion capture of CO₂, requires significant energy use, and therefore may increase GHG emissions in Australia unless the energy required to power CCS operations is renewably sourced.²⁶ Post-combustion capture of CO₂ associated with energy production presents particular difficulties with efficiency and

¹⁸ Youngjae Shin et al, ‘4D Seismic Monitoring with Diffraction-Angle-Filtering for Carbon Capture and Storage (CCS) (2022) 11(57) *Journal of Marine Science and Engineering* 1, 1.

¹⁹ Ibid 2.

²⁰ Jonathan Gordon et al, ‘A Review of the Effects of Seismic Surveys on Marine Mammals’ (2003) 37(4) *Marine Technology Society Journal* 16, 16.

²¹ Ibid 16.

²² Robert McCauley et al, ‘Widely used marine seismic survey air gun operations negatively impact zooplankton’ (2017) *Nature ecology & evolution* 1, 1.

²³ Ibid.

²⁴ Center for International Environmental Law, ‘Carbon Capture and Storage (CCS); Frequently Asked Questions’ (Blog Post).

²⁵ A. Brown et al, ‘IMPACTS: Framework for Risk Assessment of CO₂ Transport and Storage Infrastructure’ (2017) 114 *Energy Procedia* 6501, 6503. See also, Dr. S Jansto, Risks and Potential Impacts from Carbon Steel Pipelines in Louisiana Transporting and Processing Variable Produced Gases such as Carbon Dioxide (CO₂), Hydrogen (H₂), Methane (CH₄) (Oct. 9, 2022).

²⁶ Leigh Collins, ‘The amount of energy required by direct air carbon capture proves it is an exercise in futility’, Recharge (online, 14 September 2021) (2021, < <https://www.rechargenews.com/energy-transition/the-amount-of-energy-required-by-direct-air-carbon-capture-proves-it-is-an-exercise-in-futility/2-1-1067588>>; see also IPCC, ‘Climate Change 2022: Mitigation of Climate Change, Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change’ (2022) IPCC, 642.

contaminants.²⁷ This, coupled with the significant potential for CCS developments to leak CO₂, means that, rather than providing a solution to the problem of climate change, there is a risk that CCS developments could in fact cause a net increase in global GHG emissions.

- d. CCS systems are also water-intensive because water is needed during the cooling process at the power-plant level and as part of the carbon capture process.²⁸ Consequently, broad adoption of CCS “could strongly affect local and global water resources” where they compete with municipal and industrial uses, irrigated agriculture, and agro-ecosystems.²⁹
- e. Injection and storage of CO₂ in subsea reservoirs create risks of reservoir failure and potential for contamination.³⁰

In addition, the potential for GHG leaks associated with CCS activities is significant. In addition to the obvious climate change impacts of CO₂ leaks, studies have found that the leakage of CO₂ emissions can impact the marine environment.³¹ One of the main impacts of CO₂ leakage in offshore CCS facilities is the acidification of seawater.³² A decrease of pH associated with the increase of CO₂ can “produce chemical changes in the sediment-seawater interface, leading to biogeochemical alteration in marine ecosystems”.³³ Rapid environmental changes associated with a decreased pH caused by CO₂ leakage can reduce the capacity of marine organisms to adapt to ecosystem stressors,³⁴ and have been found to cause high mortality in certain marine organisms.³⁵

²⁷ Ibid. See also Roger Sathre et al., ‘The role of Life Cycle Assessment in identifying and reducing environmental impacts of CCS’ (April 2011).

²⁸ Lorenzo Rosa et al., ‘The Water Footprint of Carbon Capture and Storage Technologies’ (2021) *Renewable and Sustainable Energy Reviews* 3; see also IPCC, *Climate Change 2022: Mitigation of Climate Change, Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (2022) 642, 643 (“CCS requires considerable increases in some resources and chemicals, most notably water. Power plants with CCS could shut down periodically due to water scarcity. In several cases, water withdrawals for CCS are 25–200% higher than plants without CCS (Rosa et al. 2020b; Yang et al. 2020) due to energy penalty and cooling duty. The increase is slightly lower for non-absorption technologies. In regions prone to water scarcity such as the Southwestern USA or Southeast Asia, this may limit deployment and result in power plant shutdowns during the summer months (Liu et al. 2019b; Wang et al. 2019c).”).

²⁹ Lorenzo Rosa et al. (n 18) 15, 17.

³⁰ See., e.g. The Royal Society, *Locked Away: Geological Carbon Storage Policy Briefing* (2022) 12, (“The overlying geological strata should be effectively impermeable to CO₂ to prevent it rising through the subsurface and either flowing into potable aquifers or returning to the surface.”); see also Minh Hà Dương and David W Keith, ‘Carbon storage: The economic efficiency of storing CO₂ in leaky reservoirs’ (2003) 5 *Clean Technologies and Environmental Policy* 181, 182.

³¹ MD Basallote et al, ‘Lethal Effects on Different Marine Organisms, Associated with Sediment-Seawater Acidification Deriving from CO₂ Leakage’ (2012) 19(7) *Environmental Science and Pollution Research* 2550, 2550; M Conradi et al, ‘Lethal and sublethal responses in the clam *Scrobicularia plana* exposed to different CO₂-acidic sediments’ (2016) 151 *Environmental Research* 642, 642.

³² Youngjae Shin et al, ‘4D Seismic Monitoring with Diffraction-Angle-Filtering for Carbon Capture and Storage (CCS)’ (2022) 11(57) *Journal of Marine Science and Engineering* 1, 2.

³³ MD Basallote et al, ‘Lethal Effects on Different Marine Organisms, Associated with Sediment-Seawater Acidification Deriving from CO₂ Leakage’ (2012) 19(7) *Environmental Science and Pollution Research* 2550, 2551.

³⁴ M Dolores Basallote et al, ‘CO₂ leakage simulation: effects of the pH decrease on fertilisation and larval development of *Paracentrotus lividus* and sediment metals toxicity’ (2018) 34(1) *Chemistry and Ecology* 1, 15.

³⁵ MD Basallote et al, ‘Lethal Effects on Different Marine Organisms, Associated with Sediment-Seawater Acidification Deriving from CO₂ Leakage’ (2012) 19(7) *Environmental Science and Pollution Research* 2550, 2550.

Lastly, CCS technologies are not designed to capture and store methane, a much more potent greenhouse gas emitted from oil and gas operations. Methane removal from the air presents technical challenges because “methane is 200 times less abundant in the atmosphere than CO₂,” and “[c]apturing methane would require processing a lot of air, which would require an unfeasibly large amount of energy.”³⁶

On the basis of the above, the EDO **recommends** that CCS not be included in the Future Gas Strategy as a proposed remedy to reduce GHG emissions.

RECOMMENDATION 4: CCS not be included in the Future Gas Strategy as a proposed remedy to reduce GHG emissions.

III. Coordinated regulatory reform is necessary

A number of regulatory reforms are needed to ensure the Future Gas Strategy is part of a coordinated framework that effectively addresses the climate crisis by rapidly reducing GHG emissions and facilitating the renewable energy transition. These include prohibiting approvals of new gas developments, expanding the EPBC Act water trigger to cover all unconventional gas, requiring free, prior, informed consent of First Nations peoples, and establishing duties.

A. No new gas projects should be approved

Australia is a signatory to the Paris Agreement, which entered into force on 4 November 2016. The Paris Agreement aims to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty. This is by “holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change”.³⁷

EDO notes the stark differences, in terms of climate change risks and impacts, between a 1.5°C warming scenario and a 2°C warming scenario were highlighted in the IPCC’s Special Report on the Impacts of Global Warming of 1.5°C (**SR15**).³⁸ SR15 states that in order to avoid the most severe impacts of climate change, global temperature increase must be limited to 1.5°C above pre-industrial levels. The IPCC has made clear that emissions from existing fossil fuel infrastructure will push the world beyond 1.5°C of warming, and that “[g]lobal warming is more likely than not to reach 1.5°C between 2021 and 2040 even under the very low GHG emission scenarios.”³⁹ It goes on to say “[p]athways consistent with 1.5°C and 2°C carbon budgets imply rapid, deep, and in most cases immediate GHG emission reductions in all sectors (high confidence).”⁴⁰

The International Energy Agency has concluded that the scientifically credible pathway to limiting warming to 1.5°C requires that **no new gas and oilfields be approved for development after**

³⁶ Camille Bond, ‘Why Capturing Methane Is So Difficult’, E&E News (17 Jan. 2023), <<https://www.scientificamerican.com/article/why-capturing-methane-is-so-difficult/#:~:text=But%20methane%20is%20200%20times,unfeasibly%20large%20amount%20of%20energy>>.

³⁷ Paris Agreement 2015, article 2.

³⁸ Available at <https://www.ipcc.ch/sr15/chapter/spm/>.

³⁹ IPCC Sixth Assessment Report, Figure 3.5, 56.

⁴⁰ Ibid 46.

2021.⁴¹ The United Nations Secretary-General has warned that “[i]nvesting in new fossil fuel infrastructure is moral and economic madness.”⁴²

Recommendation 5: Australia’s environmental management regime for offshore petroleum and greenhouse gas storage activities be amended, with the effect that no new gas projects are to be approved.

B. The ‘water trigger’ should be expanded

Reforms to implement the commitment to expand the ‘water trigger’ under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (**EPBC Act**) are critical.

The EPBC Act currently requires Federal assessment and approval of coal seam gas developments and large coal mining developments, if those developments have, will, or are likely to have, a significant impact on a water resource.⁴³ This means any project of this type which impacts water resources must be referred to the Federal Minister for the Environment to be assessed on the basis of its impacts on that water resource. This is known as the ‘water trigger’ and was implemented as a Matter of National Environmental Significance in 2013. Importantly, as it currently operates, the water trigger will not capture, and thus require federal assessment of, other forms of unconventional gas, even where those projects may have a significant impact on water resources.

In 2018 the Pepper Inquiry recommended that “the Australian Government amends the EPBC Act to apply the ‘water trigger’ to onshore shale gas development”.⁴⁴ The Federal Government’s Nature Positive Plan, released in late 2022, outlines the priorities for reform of the EPBC Act and commits the Government to amending the water trigger to:

[E]nsure the appropriate management and protection of water resources from all forms of unconventional gas (e.g. shale and tight gas), in addition to coal seam gas and large coal mining developments, to include new forms of gas extraction that had not been contemplated when the water trigger was initially developed.⁴⁵

In light of the large number of potential negative environmental and social impacts arising from gas extraction that were identified by the Pepper Inquiry, and the lack of scientific certainty in relation to the extent of potential harm to the environment particularly in relation to water take and contamination, it is clear that the water trigger must be expanded to include all unconventional gas production.

Recommendation 6: The EPBC Act water trigger must be expanded to capture all forms of unconventional gas.

⁴¹ International Energy Agency, ‘Net Zero by 2050: A Roadmap for the Global Energy Sector – Summary for Policymakers’ (May 2021), 11.

⁴² UN Secretary-General Antonio Guterres, ‘Secretary-General Warns of Climate Emergency, Calling Intergovernmental Panel’s Report ‘a File of Shame’, While Saying Leaders ‘Are Lying’, Fuelling Flames’ (Media Release SG/SM/21228, 4 April 2022)’ (2022) United Nations.

⁴³ EPBC Act s 24D(1)(b)(i) and (ii).

⁴⁴ Pepper Inquiry (2018) r 7.3.

⁴⁵ DCCEEW, Nature Positive Plan: better for the environment, better for business (December 2022) 15.

C. Free, prior and informed consent of First Nations communities is essential

The principle of FPIC, enshrined in articles 19 and 32 of the United Nations Declaration on the Rights of Indigenous People (**UNDRIP**) is of critical importance in the context of environmental regulation and decision-making. FPIC is the right of Indigenous Peoples to give or withhold consent to any project that may affect them or their lands, and to negotiate conditions for the design, implementation and monitoring of projects.⁴⁶

FPIC is also interrelated with the right of self-determination, which is expressed in article 4 of UNDRIP as the right to “autonomy or self-government in matters relating to their internal and local affairs”.⁴⁷ Self-determination is particularly important for First Nations peoples in Australia, who are still overcoming the impacts of colonisation and dispossession.

EDO is of the view that environmental legislation in Australia must be underpinned by FPIC and the right of self-determination, particularly in the context of development assessment and approval, and in ongoing management and rectification of environmental harm on their lands. First Nations peoples must be involved in these decision-making processes, and ultimately must be able to withhold consent for development activities that will significantly affect their cultural interests.

EDO would be pleased to provide the Taskforce with further resources which outline how best practice elements of FPIC – relating to scope, manner, information, assurances and timing of consultation – should be implemented, and are reflected in international law.

Recommendation 7: Australia’s environmental management regime for onshore and offshore petroleum and greenhouse gas storage activities be underpinned by FPIC and the right of self-determination.

D. Duty to take action to reduce the risks of climate change posed by gas production

Climate change poses the greatest existential threat to the world’s collective environment and health. While the main focus of Australia’s environmental management regime for offshore petroleum and greenhouse gas storage activities is on regulating activities relating to petroleum, this issue is inseparable from climate change, which is a phenomenon caused by a diverse range of environmentally harmful activities, including gas production. GHG emissions are a major contributor to climate change, and are emissions to the air from industrial processes, including gas production and gas fired generators. They are a form of air pollution. While, historically the regulation of air pollutants by some environmental management regimes has been silent on GHG emissions, others such as the Victorian *Environment Protection Act 2017* (Vic) have regulated GHG emissions. It is beyond doubt that GHG emissions have the character of a pollutant and should be regulated by Australia’s environmental management regime for offshore and greenhouse gas storage activities and the EPBC Act.⁴⁸ For example, in Victoria the EPA has regulated GHG emissions

⁴⁶ Joint Standing Committee on Northern Australia, Parliament of Australia, *A Way Forward: Final report into the destruction of Indigenous heritage sites at Juukan Gorge* (Final Report, October 2021) 178-179.

⁴⁷ United Nations Declaration on the Rights of Indigenous Peoples, GA Res 61/295, UN Doc A/Res/61/295 (2 October 2007, adopted 13 September 2007) art 4.

⁴⁸ Environmental Defenders Office, *Empowering the EPA to prevent climate pollution* (Report, November 2020) 18.

as pollution, with the *Environment Protection Act 2017* (Vic) expressly including “a greenhouse gas substance emitted or discharged into the environment” in the definition of waste.⁴⁹

The EPBC Act and Australia’s environmental management regime for offshore greenhouse gas storage activities should therefore have a duty to take action to reduce the risks of climate change, particularly those posed by gas production. As a result of this interrelation between pollution, environmental destruction, waste, and climate change, reducing the risks of climate change through mitigation and adaptation is a natural part of the mandate of the EPBC Act. This duty must specifically include ensuring mitigation of scope 1, 2 and 3 emissions, being emissions directly from and related to the gas industry and as a result of downstream outcomes of the gas industry. Scope 3 emissions must be included in emissions reductions efforts, to ensure that we are taking responsibility for the emissions from products that we are profiting from exploiting and to ensure we are not promoting their continued use. Such a duty should apply to regulation of gas industry activities.

⁴⁹ *Environment Protection Act 2017* (Vic), s 3.