ENVIRONMENTAL JUSTICE AUSTRALIA

Submission in response to

Environment Protection (Sea Dumping) Amendment (Using New Technologies to Fight Climate Change) Bill 2023

prepared by

Environmental Justice Australia

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About Environmental Justice Australia

Environmental Justice Australia ('EJA') is a national public interest legal centre. We use the law to empower communities, to protect and regenerate nature, to safeguard our climate and to achieve social and environmental justice.

We are proudly non-profit, non-government, and funded by donations from the community. Our legal team combines technical expertise and a practical understanding of the legal system to protect communities and our environment.

EJA has a long history in advocating for a just energy transition, and has worked closely with people, communities, and environmental organisations to encourage and compel governments to act, to transform industries, and to ensure justice for the people most affected is at the foundation of all climate solutions, today and tomorrow.

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Executive Summary

This submission relates to the Environment Protection (Sea Dumping) Amendment (Using New Technologies to Fight Climate Change) Bill 2023 ('the Bill') referred to the Committee on 22 June 2023.

The text and intent of the Bill raise several major issues which Environmental Justice Australia wishes to draw to the attention of the Committee.

- **Inadequate risk management:** The Bill includes almost no provision for addressing the potentially significant environmental, climate and health impacts associated with the long-distance transport and storage of CO_2.

- **Climate injustice:** The Bill would facilitate the export of CO_2 pollution from Australia, a wealthy country, to poorer neighbouring countries such as Timor-Leste. It is not clear why Timor-Leste, which has not benefited from Australia's resources industry, should incur the harms involved in managing its byproducts.

- **Avoided responsibility for greenhouse gas pollution:** The Bill would enable emissions-intensive entities to export greenhouse gas emissions in circumstances where the actual, permanent avoidance of those emissions is not guaranteed, undermining both the fair distribution of responsibility for greenhouse gas pollution and critical progress in emissions reduction.

- **Facilitating fossil fuel expansion:** The Bill provides no assurance that CCS projects permitted under its framework would result in the net prevention of CO_2 emissions, in circumstances where most proposed CCS developments would in fact perpetuate dangerous fossil fuel use.

This Bill fundamentally undermines two key frameworks designed to ensure the fair allocation of responsibility for greenhouse gas emissions: the international carbon accounting framework in relation to national responsibility for emissions, and the Safeguard Mechanism, relating to responsibility for corporate emissions. In doing so, it contravenes basic principles of climate justice and endangers critical progress in reducing greenhouse gas emissions.

Environmental Justice Australia is of the view this Bill should not be made into law, and that Australia should not ratify the amendments to the London Protocol which relate to the transboundary transport of CO_2 for sub-seabed sequestration.

However, we have identified improvements to the text of the Bill which we submit to the Committee would be critical in providing some safeguards in the implementation of the permitting framework, should it be passed into law despite these issues.

These improvements relate to increasing public transparency around the permitting scheme and operations carried out in accordance with it; providing assurance as to the effectiveness of environmental and CCS regulation in CO_2 export destination countries; clarifying how the export of CO_2 can fairly interact with domestic corporate emissions regulation; and ensuring that permitting decisions align with the achievement of the Paris Agreement goals and promote the net prevention of CO_2 emissions.

Introduction

1. This submission relates to the Environment Protection (Sea Dumping) Amendment (Using New Technologies to Fight Climate Change) Bill 2023 ('the Bill') referred to the Committee on 22 June 2023.

2. In essence, the Bill would introduce a permitting regime to facilitate the cross-border transport of carbon dioxide waste streams into and out of Australian waters for the purpose of sub-seabed storage. The Bill is said to give effect to Australia's 'international obligations' arising from amendments to the 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972 ('London Protocol').[1]

3. The relevant amendments are as follows:

    a. In 2009, an amendment was proposed to allow for the export of CO_2 to another country for the purpose of sub-seabed geological formations, provided an agreement is in place between the exporting and destination country.

    b. This amendment will not come into force unless ratified by at least two-thirds of the 53 Contracting Parties to the London Protocol. So far, ten Parties have ratified the amendment. The Australian Government intends to ratify the amendment; enacting the Bill is one step in that process.

    c. A second amendment was proposed in 2013 to allow for the placement of matter into the sea for the purpose of scientific research into marine geoengineering. To date, six Parties have ratified this amendment.

4. Notably, Australia is not under any obligation to ratify these amendments to the Protocol.

5. The text and intent of the Bill raise several major issues which Environmental Justice Australia wishes to draw to the attention of the Committee. In sum:

    a. The permitting regime created by the Bill includes almost no provision for addressing the potentially significant environmental, climate and health impacts associated with the long-distance transport and storage of CO_2.

[1] The Hon. Tanya Plibersek, Environment Protection (Sea Dumping) Amendment (Using New Technologies to Fight Climate Change) Bill 2023 – Second Reading (22 June 2023).

b. The Bill raises clear climate justice issues in facilitating the export of CO_2 pollution from Australia, a wealthy country, to neighbouring countries such as Timor-Leste. It is not clear why Timor-Leste, which has not benefited from Australia's resources industry, should incur the harms involved in managing its byproducts.

c. The Bill would enable fossil fuel producers, and other emissions-intensive entities, to export greenhouse gas emissions in circumstances where it is not guaranteed the release of such emissions to the atmosphere would ultimately be avoided, undermining both the fair distribution of responsibility for greenhouse gas pollution and critical progress in emissions reduction.

d. Almost all large-scale Carbon Capture and Storage ('CCS') projects currently operational or proposed in Australia are associated with the continued or anticipated exploitation of coal, oil and gas,[2] which must cease in order to address fossil fuel-driven climate change. The Bill provides no assurance that CCS projects permitted under its framework would not also serve to perpetuate dangerous fossil fuel extraction and combustion.

6. Given these significant and, to a certain degree, intractable problems in the form of the Bill and what it seeks to achieve, we submit that it should not be made into law.

7. However, there are amendments that could be made to the text of the Bill which would go some way towards addressing some of the issues raised above. These amendments are set out at the conclusion of this submission, and involve:

    a. Providing additional assurance about the effectiveness of CCS and environmental management regulation in CO_2 destination countries;

    b. Increasing the transparency and accountability of CO_2 transport permits;

    c. Clarifying how the Bill would interact with Australia's emissions reduction targets and entity obligations under the Safeguard Mechanism; and

[2] For example, the CCS project attached to Chevron's Gorgon LNG facility; Santos' Moomba CCS project which would attempt to capture and store CO_2 from the Moomba gas plant; a consortium led by Woodside exploring offshore CCS in relation to the Karratha Gas Plant and nearby oil and gas facilities; Glencore's CTSCo project attached to the Millmerran coal-fired power station.

d. Introducing a mechanism to ensure that entities responsible for generating and/or storing imported or exported CO_2 emissions are able to be held to account in the event of a CCS storage failure.

1 Status and risks of offshore CCS

8. The transport and injection of CO_2 for permanent underground storage remains a nascent technology at an early stage of development worldwide. It carries known and potentially serious direct environmental risks, as well as the fundamental risk of technical failure resulting in the release of captured emissions to the atmosphere, contributing to harmful climate change.

1.1 Carbon capture and storage remains a nascent technology

9. Of the 30 CCS projects worldwide operating as of late 2022, 21 entail 'Enhanced Oil Recovery' ('EOR'), where CO_2 is pumped into depleted oil reservoirs to extract more oil.[3] In these projects, the permanent storage of CO_2 is not the objective; no attempt is made to ensure the CO_2 remains underground long-term, nor is any systematic monitoring of storage volumes or duration undertaken. As a result, the pool of experiential knowledge about the effectiveness of CCS as a means of absolute emissions reduction is very small.

10. Further, most of the flagship carbon capture projects - including those for Enhanced Oil Recovery - have experienced chronic technical difficulties:[4]

    a. **Chevron's Gorgon LNG plant, WA** – Approval of this project was conditional on the capture and storage of 80% of the waste CO_2 from gas processing, or about 12.3Mt over 2016-21. However, technical problems including leaks, corroded valves and issues with the storage pressure management system meant that the CO_2 injection only commenced three years after the site's first LNG shipment. The WA Government subsequently ordered Chevron to reduce CO_2 storage volumes due to safety issues. As a result, only 4.9Mt CO_2 in total was injected over the project's first five-year compliance period, missing the target by approximately 60%.

[3] See Global CCS Institute, *2022 Status Report* (2022), 53-54.
[4] For further detail, see Bruce Robertson, *The Carbon Crux: Lessons Learned* (September 2022) Institute for Energy Economics and Financial Analysis <https://ieefa.org/media/3007/download/>.

b. **Boundary Dam, Canada** – This project involved the retrofitting of carbon capture to a coal-fired power plant, with the captured CO_2 waste stream used to extract oil. The project cost US$1.5bn to construct and due to a series of problems with the capture equipment has never met its 90% capture target, averaging closer to 50%.

c. **Petra Nova, US** – This project was another carbon capture retrofit to a power plant, with the CO_2 to be used for EOR. The project operated for 3 years, during which time it experienced frequent outages and missed its target by 17%, before it shut down at an estimated cost to investors of US$150m.

d. **In Salah, Algeria** – This project was set up with an annual target capture and storage capacity of 1 to 1.2Mt CO_2. Injection commenced in 2004 but was suspended in 2011 due to concerns about the integrity of the cap rock seal. The project stored 3.8Mt CO_2 over its lifetime, missing its target by about 55%.

These examples demonstrate that CCS remains a complex and largely unknown engineering exercise and that CCS projects continue to have a high likelihood of implementation failure, with attendant environmental and social impacts.

1.2 CCS activities carry potentially significant environmental risks

11. The environmental footprint of CCS activities consists of unavoidable or inherent impacts, most notably adverse effects on marine wildlife from seismic surveying and the construction of CCS infrastructure, and a further set of potential impacts that may eventuate as a result of implementation failures, accidents, or other unintended events.

Unavoidable impacts

12. Seismic surveying is a necessary first step in assessing the suitability of a geological formation as a prospective CO_2 storage site. Used frequently in offshore petroleum exploration, the noise resulting from seismic surveying has well-documented adverse impacts on marine wildlife. Impacts can be direct, like interfering with marine animals' ability to use auditory senses and causing aural damage, or indirect impacts, like loss of habitat and resources due to displacement.[5] For example, seismic surveys conducted with air guns have been shown to slow the physical development of juvenile Southern Rock Lobsters, and to impair their ability to right themselves (after being flipped), which increases

[5] See, e.g., A.G. Carroll, 'A critical review of the potential impacts of marine seismic surveys on fish & invertebrates' (2017) 114(1) *Marine Pollution Bulletin* 9.

exposure to predators.[6] Whales and dolphins are considered to be particularly vulnerable to the adverse effects of seismic surveying, due to their dependence on acoustic communication for critical life functions like communication and hunting, and multiple studies have observed changes in the distribution and behaviour of cetaceans in the vicinity of seismic survey activity.[7]

13. Additional adverse effects are likely to arise from the construction of offshore CCS infrastructure such as injection wells, compression and pressure management facilities and CO_2 pipelines. Known environmental impacts of similar infrastructure in the oil and gas sector include disruption to migratory pathways, the degradation of seafloor habitats, waste products such as drilling muds and terminal effluence, noise and sound pollution, and introducing invasive species.[8]

14. Further, the potential increase in shipping traffic associated with the international transport of CO_2 streams carries foreseeable environmental impacts including significant greenhouse gas emissions (currently not accounted for under the international carbon accounting system), additional marine sound pollution, and further disruption to marine fauna and avian migration.

Potential impacts

15. A complete CCS project consists of several interrelated yet discrete engineering processes: capture, compression, transport, injection, storage, and monitoring. While the compression and injection components of this system have been used by the petroleum industry in Enhanced Oil Recovery for decades with varying degrees of success, the other technologies are even less well-developed.

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[6] See Ryan D. Day et al, 'The impact of seismic survey exposure on the righting reflex and moult cycle of Southern Rock Lobster (*Jasus edwardsii*) puerulus larvae and juveniles' (2022) 309 *Environmental Pollution* 119699. An overview of the relevant research program can be found at University of Tasmania, 'Scientist find seismic surveys impact reflexes and moulting in young rock lobsters' (13 September 2021) <https://www.imas.utas.edu.au/news/news-items/scientists-find-seismic-surveys-impact-righting-reflex-and-moulting-in-young-rock-lobsters>.

[7] See the research synthesis and overview in A.S. Kavanagh et al, 'Seismic surveys reduce cetacean sightings across a large marine ecosystem' (2019) 9 *Nature: Scientific Reports* 19164 <https://www.nature.com/articles/s41598-019-55500-4>. See also Lucia Di Iorio and Christopher W. Clark, 'Exposure to seismic survey alters blue whale acoustic communication' (2010) 6(1) *Biology Letters* 51 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2817268/>; Natural Resources Defence Council, 'Boom, Baby, Boom: The Environmental Impacts of Seismic Surveys' (2010) <https://www.nrdc.org/sites/default/files/seismic.pdf>.

[8] See the list provided in Dianne L. McLean et al, 'Influence of offshore oil and gas structures on seascape ecological connectivity' (2022) 28(11) *Global Change Biology* 3515.

16. Industry's relative lack of experience in deploying offshore CCS at commercial scale heightens the probability of accidental impacts occurring. Such impacts include the unplanned release of CO_2 (or another greenhouse gas substance) from a storage facility (including during transport), compression facility, pipeline, injection well or storage formation, whether chronic or acute, and whether in the short-term or long-term, after injection has ceased.

17. Some research has been undertaken in Europe to explore the potential effects of an underwater CO_2 leak on marine ecosystems, but this remains a very new field of study. There is evidence that changes to marine water chemistry from a CO_2 leak are likely to impact enzyme activity on the seafloor, affecting organic matter cycling and ecosystem function. [9] Large-scale CO_2 leaks would result in localised but significant ocean acidification, with a flow-on impacts including to fisheries and the ability of marine animals to build shells.

2 Operative provisions in the Bill

18. The Bill provides that the Minister may grant a permit for the export of controlled material if the Minister is satisfied:[10]

    a. That the controlled material is CO_2 streams from CO_2 capture processes for sub-seabed sequestration;

    b. Of the matters in paragraphs 4.1, 4.2 and 4.3 of Annex 1 to the London Protocol;

    c. That there is an agreement in force between Australia and the destination country that includes the matters covered by paragraphs 2.1 and 2.2 in the Annex to Resolution LP.3(4) adopted in 2009 by the Contracting Parties to the Protocol;

    d. That the grant of the permit would be in accordance with Annex 2 to the Protocol; and

    e. Of any other matters the Minister considers relevant.

19. Relevantly, paragraphs 4.1, 4.2 and 4.3 of Annex 1 to the Protocol clarify that CO2 streams can only be considered for dumping if disposal is into a sub-sea geological formation, that

[9] E. Rastelli et al, 'CO_2 leakage from carbon dioxide capture and storage (CCS) systems affects organic matter cycling in surface marine sediments' (2016) 122 *Marine Environmental Research* 158.
[10] See proposed new section 19(7B) at clause 3 to Schedule 1 of the Bill.

the streams consist overwhelmingly of CO2, and that no other wastes or matters are dumped alongside the CO2.

20. Paragraphs 2.1 and 2.2 of the Annex to the 2009 Resolution state that an agreement between countries must confirm and allocate permitting responsibilities consistent with the Protocol, and that in the case of export to non-contracting parties, the agreement must include provisions at a minimum equivalent to those within the Protocol.

21. Annex 2 to the Protocol contains general, normative statements about the assessment of wastes that could be considered for dumping.

22. Notably, other provisions in the Bill exempt persons acting 'in accordance with a permit' (granted in Australia or by another party to the Protocol) from offence provisions otherwise prohibiting marine dumping.[11]

3 Major issues in the text and intent of the Bill

23. The Bill as currently drafted raises multiple serious issues relating to environmental risk management and climate justice which, we submit, should be of concern to the Committee.

3.1 Inadequate management of CCS environmental risks

24. The permitting regime created by the Bill includes almost no provision for addressing the potentially significant environmental, climate and health impacts associated with the transport or injection of CO_2.

25. The matters required to be considered by the Minister prior to granting a permit under the Bill are not proportionate to the degree of risk posed by offshore CCS projects, and do not ensure that such risks are minimised.

Lack of environmental impact assessment

26. There is no requirement for an environmental impact assessment to be undertaken for the import or export of CO_2 streams, nor any express requirement for the Minister to consider the environmental impacts of proposed import or export activities.

27. The only relevant requirement is that the grant of the permit would be in accordance with Annex 2 to the Protocol, but the contents of this Annex are too broad, vague and normative

[11] See, e.g., clauses 1, 16 and 18 to Schedule 1 of the Bill.

to translate into any concrete risk reduction or management standards against which the granting of a permit could be measured. The most definite relevant statement in the Annex is that '[t]he provisions of [a] permit shall ensure, as far as practicable, that environmental disturbance and detriment are minimized and the benefits maximized'.[12] As there is no requirement for an environmental impact assessment, there is no assurance provided that there would be sufficient information before the Minister to determine that environmental disturbance and detriment have been minimised, and there is also no guidance provided as to how the comparative detriment and benefits of a CCS export/import proposal would appropriately be weighed. Further, there are no objectives within the Bill against which CCS export/import proposals could be evaluated.

28. The Contracting Parties to the London Protocol (and its amendments) have developed a 'Risk Assessment and Management Framework for CO_2 Sequestration in Sub-seabed Geological Structures' and 'Specific Guidelines on Assessment of CO_2 Streams for Disposal into Sub-seabed Geological Formations'. Despite the dearth of specific guidance in Annex 2, the Bill neither requires consideration of, nor compliance with, these supplementary documents.

Lack of assurance about environmental protection and CCS regimes in destination country

29. The Bill provides no assurance that CO_2 exported from Australian waters for sequestration elsewhere would be regulated to an acceptable standard, at least equivalent to the reporting, rehabilitation and other activities required under the *Offshore Petroleum and Greenhouse Gas Storage Act* framework, in the destination country.

30. The Minister is not expressly required to consider the provisions or governance of environmental impact legislation, or CCS regulation, in the destination country when granting a permit for the export of CO_2 pollution produced in Australia.

31. Notably, one of the key projects that appears likely to make use of permits granted under the Bill should it be made into law is the proposal by Santos Pty Ltd to inject waste CO_2 from its Barossa offshore gas development into the depleted Bayu Undan field in Timor-Leste. Timor-Leste is one of the world's poorest economies,[13] and its capacity to undertake

[12] 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972, Annex 2, [17].
[13] CIA World Factbook, 'Timor-Leste' (last updated 20 June 2023) <https://www.cia.gov/the-world-factbook/countries/timor-leste/>.

– or enforce compliance with – the rigorous environmental monitoring requirements required to manage the risks associated with large-scale offshore CCS is questionable.

32. Further, there is no guarantee under the provisions proposed in the Bill that conditions on a permit granted in another country for importing CO_2 into Australia would ensure sufficient environmental risk identification and management during the transport of the CO_2.

3.2 Clear risk of climate injustice

33. From publicly available information and the submissions provided to the House Standing Committee on Climate Change, Energy, Environment and Water in relation to its inquiry into the Bill, it appears that the most-progressed project likely to require permits under the framework if it was introduced is Santos' multi-user Bayu-Undan CCS project.

34. Under this project, waste CO_2 from various Australian projects, predominantly new fossil gas developments alongside some gas-based manufacturing, would be transported to the depleted Bayu-Undan gas field in East Timorese waters.[14]

35. The Bill raises clear climate justice issues in facilitating the export of CO_2 pollution from Australia, a wealthy country, to neighbouring, poorer countries such as Timor-Leste.

36. As has been well-documented, the exploitation of cheap fossil fuels has driven both the economic development of rich countries like Australia and the climate crisis.[15] Due to the use of its coal and gas resources, Australia is both one of the highest emitters per capita and relatively well-resourced to protect its people from the adverse impacts of climate change. Conversely, poorer countries which have made a much smaller contribution to climate change are much more exposed to the harms it is already causing.

37. This Bill would enable emissions generated in Australia, most likely from activities upon which royalties were payable to the Australian Government, to be exported to other countries. It appears that the destination countries would then incur the potentially

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[14] See Reuters and Sonali Paul, 'Santos, Italy's Eni weigh Australia gas projects, Timor Sea carbon capture' (3 May 2021) Reuters <https://www.reuters.com/business/energy/santos-italys-eni-weigh-australia-gas-projects-timor-sea-carbon-capture-2021-05-03/>; Santos, 'Globally significant carbon capture and storage project a step closer' (Media Release, 9 March 2022) <https://www.santos.com/news/globally-significant-carbon-capture-and-storage-project-a-step-closer/>.

[15] Simon Evans, 'Analysis: Which countries are historically responsible for climate change?' (5 October 2021) *Carbon Brief* <https://www.carbonbrief.org/analysis-which-countries-are-historically-responsible-for-climate-change/>; Hannah Ritchie, 'Who has contributed the most to global CO_2 emissions?' (1 October 2019) Our World in Data <https://ourworldindata.org/contributed-most-global-co2>.

significant liabilities associated with monitoring the stored CO_2, and, critically, with remediating any leaks or other incidents which – given the poor track record of CCS worldwide – are more likely than not to occur.

38. Further, under the 2006 IPCC Guidelines for National Greenhouse Gas inventories, where CO_2 is transported to another country for storage, that destination country becomes responsible under international carbon accounting rules for any emissions associated with the transport, injection and storage of the CO_2.[16]

39. In circumstances where the most likely destination countries have far fewer resources than Australia, and have made a much smaller contribution to global climate change, transferring responsibility for Australian emissions to other countries appears manifestly unjust.

40. CCS remains an unproven and risky way of managing emissions, but putting these issues aside, there is no lack of suitable CCS storage reservoirs in Australia and within Australian waters.[17] CCS has received considerable public funding for several decades, and continues to receive policy support from the Australian Government. In these circumstances, it is unclear why the export of CO_2 emissions for storage in other countries is necessary or justified.

3.3 Responsibility for greenhouse gas pollution could be evaded

41. Greenhouse gas emissions from Australia's largest polluters are managed through the Safeguard Mechanism. Entities responsible for Safeguard facilities will be required to keep emissions below a 'baseline' which, from 1 July 2023, will be lowered each year, or to pay a fee for noncompliance.

42. The Safeguard Mechanism is the principal means by which corporate emissions are regulated in Australia, and by which corporate entities whose activities – pursued in the course of generating profits – have created greenhouse gas pollution are held responsible for that pollution.

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[16] Intergovernmental Panel on Climate Change, *2006 IPCC – Guidelines for National Greenhouse Gas Inventories* (2006).
[17] A report by the Australian Government-auspiced Carbon Storage Taskforce concluded that Australia possessed potential storage capacity of 15,591Mt CO_2 offshore and 938Mt onshore: *National Carbon Mapping and Infrastructure Plan – Australia* (September 2009), p 28.

43. The Bill would enable such entities to avoid this responsibility by facilitating the export of their CO_2 emissions outside Australian borders. This would occur in circumstances where there is no guarantee that exported CO_2 would be successfully and permanently stored, as is required for CCS to qualify as an effective means to slow climate change, because of the poor track record of CCS in permanent CO_2 storage, the lack of any assurance as to the effectiveness of destination countries' regulatory frameworks and governance, and the fact that Australia's willingness and capacity, from a legal, diplomatic and resourcing perspective, to monitor the transport and management of exported CO_2 is unclear.

44. As a result, there is a real risk that exported CO_2 will not be permanently stored underground, and therefore that the actual objective of the Safeguard Mechanism – to avoid the release of greenhouse gas emissions and the exacerbation of climate change – will be significantly undermined.

3.4 Exporting CO_2 is likely to facilitate further fossil fuel expansion

45. As noted above, the most-progressed project likely to require permits under the framework if it was introduced is the Bayu-Undan CCS project.

46. In this project, some portion of waste CO_2 from the carbon-intensive Barossa gas field (which Santos is seeking to develop) and the Evans Shoal/Verus gas field (tenements held by Eni) would be transported for injection into the depleted Bayu-Undan gas facility in East Timorese waters.[18] Other potential sources of CO_2 for the Bayu-Undan storage facility include waste CO_2 from onshore gas from the Beetaloo Sub-basin in the Northern Territory, via a proposed LNG and CO_2 processing hub at the Middle Arm precinct.[19]

47. The CCS components of these new fossil fuel developments would not avoid all – or even most – of the greenhouse gas emissions attributable to the projects. Even if the carbon capture element of these projects was successful in achieving an ambitious 80-90% of waste CO_2 from the gas reservoirs, the CCS system would have no impact at all on the other fugitive CO_2 and methane emissions from the fossil gas extraction and transport

[18] See Reuters and Sonali Paul, 'Santos, Italy's Eni weigh Australia gas projects, Timor Sea carbon capture' (3 May 2021) Reuters <https://www.reuters.com/business/energy/santos-italys-eni-weigh-australia-gas-projects-timor-sea-carbon-capture-2021-05-03/>; Santos, 'Globally significant carbon capture and storage project a step closer' (Media Release, 9 March 2022) <https://www.santos.com/news/globally-significant-carbon-capture-and-storage-project-a-step-closer/>.
[19] Northern Territory Government, 'Carbon Capture Utilisation and storage' (last updated 7 June 2023) <https://territorygas.nt.gov.au/projects/carbon-capture-utilisation-and-storage>.

infrastructure, or on the ultimate emissions from combusting the gas, both during processing and by the end-user.

48. The International Energy Agency and the International Institute for Sustainable Development have both found conclusively that there can be no new fossil fuel developments under pathways aligned with limiting global warming to 1.5°C, and existing fossil fuel use must be phased out as soon as possible.[20]

49. In order to be considered an effective tool in the effort to slow climate change, CCS must not perpetuate fossil fuel use which could otherwise be avoided or phased out, but rather contribute to the net reduction of CO_2 emissions – for example, in the context of capturing extant atmospheric CO_2 for underground storage.

50. The Bill does not require the Minister to be satisfied that the import or export of CO_2 under prospective CO_2 transport permits would achieve a net reduction in CO_2 emissions. There are no objectives within the Bill to this end, nor is there any overarching framework for the use of CCS within Australian law or policy which would otherwise ensure that permitting decisions genuinely progress the goal of eliminating greenhouse gas emissions.[21]

51. In this context, there is an obvious risk that the Bill would ultimately serve not to prevent greenhouse gas emissions, but rather to enable additional pollution.

4 Recommendations

52. Environmental Justice Australia is of the view that the issues raised above mean that this Bill should not be made into law, and that Australia should not ratify the amendments to the London Protocol which relate to the transboundary transport of CO_2 for sub-seabed sequestration.

53. However, although we do not support the intent of the Bill, we have identified improvements to the text of the Bill which we consider are critical to providing some safeguards in the implementation of the permitting framework.

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[20] Olivier Bois von Kursk et al, International Institute for Sustainable Development, *Navigating Energy Transitions: Mapping the road to 1.5°* (2022); International Energy Agency, *Net zero by 2050: a roadmap for the global energy sector* (2021).

[21] This lack of a guiding framework for CCS was identified as a key issue by the Climate Change Authority in its report *Reduce, remove and store: The role of carbon sequestration in accelerating Australia's decarbonisation* (April 2023) <www.climatechangeauthority.gov.au/sites/default/files/2023-04/Sequestration%20Insights%20Paper%20-%20Publication%20Report_0.pdf>.

Transparency

54. CCS remains a contested technology and the subject of public and scientific debate. The transport of CO_2 through Australian waters for the purposes of underground storage also raises significant environmental and climate risks. In these circumstances, it is vital that transparency around permitting decisions and the conduct of CO_2 transport operations is ensured, to inform public debate and decisions around the degree to which such activities should be supported.

55. There are currently no provisions for fundamental transparency measures common to industrial permitting schemes within the Bill. We submit that permit applications should be exhibited for public comment, and that the Minister should be required to consider any comments received in their permitting decision.

56. We submit that broad third-party merits review rights should attach to permitting decisions, to allow members of the public to contest problematic permits. We also submit that there should be clear guidance made public about the information and risk assessment requirements to be carried out as part of permit applications.

57. Finally, we submit that entities holding CO_2 transport permits should be subject to a strict reporting regime relating to the conduct of their operations, especially in the event of any unplanned releases of CO_2, and that the contents of these reports should be made public.

Environmental regulation in the destination country

58. The Bill should be amended to ensure that permits to allow the export of CO_2 to other countries are only granted in circumstances where the regulatory landscape provides as much, or additional, assurance that CO_2 injection and storage will be comprehensively monitored and any issues swiftly addressed, as is given by Australia's domestic offshore CCS laws.

59. The Minister should be required to consider independent information about the regulatory framework and governance capacity of the destination country, and to be reasonably satisfied that CO_2 from Australian projects sent overseas for storage will be successfully and permanently stored underground.

Ensuring CCS is addressing climate change

60. Whether within the Bill or as part of a broader regulatory endeavour, there must be legally binding guidance developed to ensure that statutory decisions which facilitate CCS –

including transboundary CO_2 transportation permitting decisions – align with the overall objective of eliminating, then reducing, greenhouse gas emissions. In the immediate term, we submit that the Minister should be required to be satisfied that any grant of a permit under the scheme would result in the net prevention of CO_2 emissions, and/or make a genuine contribution to achieving the goals of the Paris Agreement.

Accountability

61. Consideration must be given to how permits granted under the scheme interact with domestic measures to hold polluting entities accountable for their emissions, most notably the Safeguard Mechanism.

62. Safeguard facilities should not be permitted to meet their obligations under the Mechanism by exporting emissions, given that there is – and can never be – a complete guarantee that overseas storage of the emissions would be permanent and complete.

63. This could be achieved through amendments to the National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015 to require that covered entities are not able to achieve compliance with emissions baselines by exporting emissions.

5 Conclusion

64. This Bill fundamentally undermines two key frameworks designed to ensure the fair allocation of responsibility for greenhouse gas emissions: the international carbon accounting framework in relation to national responsibility for emissions, and the Safeguard Mechanism, relating to responsibility for corporate emissions. In doing so, it contravenes basic principles of climate justice and endangers critical progress in reducing greenhouse gas emissions.

65. For this reason, we submit that the objective of this Bill – to facilitate the import and export of CO_2 for the purposes of sub-seabed sequestration – is not one which Australian law should seek to further.

66. We thank the Committee for its consideration of our submission.