

**Submission  
No 45**

**MINERALS LEGISLATION AMENDMENT (OFFSHORE DRILLING AND  
ASSOCIATED INFRASTRUCTURE PROHIBITION) BILL 2023**

**Organisation:** Australian Marine Conservation Society

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Legislative Assembly Committee on Environment and Planning

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**8 September, 2023**

### **Australian Marine Conservation Society**

#### **Submission to the Inquiry into Minerals Legislation Amendment (Offshore Drilling and Associated Infrastructure Prohibition) Bill 2023**

#### **Introduction**

The Australian Marine Conservation Society (AMCS) is Australia's peak conservation organisation focused on our marine and coastal environment. For 58 years we have worked through scientific research, policy advocacy, communications and on-ground work to achieve our mission of protecting Australia's oceans for the sake of current and future generations. We work on behalf of the Australian public and our 300,000 supporters around the country.

AMCS welcomes the opportunity to provide a submission to the **Committee on Environment and Planning on the inquiry into the Minerals Legislation Amendment (Offshore Drilling and Associated Infrastructure Prohibition) Bill 2023**.

AMCS supports the intention of this bill to stop any new fossil fuel mining and associated infrastructure in state waters. We support the initial aims of this bill, and encourage the scope of consideration to include seismic blasting exploration, and the emerging threat of Carbon Capture and Storage (CCS) and associated infrastructure.

By safeguarding the state waters from any further oil and gas exploration and infrastructure, including CSS, the NSW parliament will be showing leadership in protecting coastal communities and the marine environments from the direct impacts of fossil fuels industrialisation.

## **Background**

On 29 June 2023, the Minerals Legislation Amendment (Offshore Drilling and Associated Infrastructure Prohibition) Bill 2023 (**MLA Bill**) was referred for inquiry to the Legislative Assembly Committee on Environment and Planning (**Committee**). The Committee is required to table a report setting out their findings by 21 November 2023. The MLA Bill proposes several amendments to the *Petroleum (Offshore) Act 1982* (NSW) (**PO Act**), *Offshore Minerals Act 1999* (NSW) (**OM Act**) and *Environmental Planning and Assessment Act 1979* (NSW) (**EP&A Act**) (collectively, **the Acts**) relating to, amongst other things, offshore mineral and petroleum exploration and recovery. The MLA Bill purports to prohibit the exploration and mining of petroleum and minerals in coastal waters off NSW.<sup>1</sup>

## **Summary of Recommendations**

- The MLA Bill is not the complete answer to prohibiting petroleum development off the coast of NSW, including in PEP11, and clarity on potential Constitutionality issues is needed
- The MLA Bill should be expanded to cover seismic blasting exploration for fossil fuels and CCS in state waters
- The MLA Bill should be expanded to cover CCS in NSW coastal waters
- AMCS recommends the inquiry examines whether this bill will also protect state marine parks from any potential CCS impacts, including (but not limited to) pipelines, shipping and potential storage under areas where marine parks exist.
- Broader legislative reforms are required in New South Wales to end new fossil fuel development, as part of the phase out of all existing fossil fuel development, to ensure a safe climate.<sup>2</sup>

## **Terms of Reference**

That the Committee on Environment and Planning inquire into and report on the Minerals Legislation Amendment (Offshore Drilling and Associated Infrastructure Prohibition) Bill 2023 (the bill), with particular reference to:

**(a) any constitutional issues or unintended consequences raised by the bill, and whether any amendments may address those;**

AMCS supports the points made by the Environmental Defenders Office (EDO) outlining why the MLA Bill, and that clarity on potential constitutionality issues is needed. Including that the bill is not the complete answer to prohibiting petroleum activities off the coast of NSW - including

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<sup>1</sup> Legislative Assembly Committee on Environment and Planning, *Media Release: Drilling into the details of the proposed offshore drilling ban* (website, 31 July 2023), <https://www.parliament.nsw.gov.au/ladocs/other/18332/Media%20release%20-%20Inquiry%20launch%20and%20call%20for%20submissions.pdf>

<sup>2</sup> See i.e., Environmental Defenders Office, 'Climate-ready planning laws for NSW: Rocky Hill and beyond' (March 2019) <<http://www.edo.org.au/wp-content/uploads/2019/11/EDO-CC-FINAL-full-report-double-spreads.pdf>>.

within PEP 11, and potential constitutionality issues that can and should be clarified. Noting that some petroleum activities in Federal waters don't require any ancillary development to proceed (i.e. seismic testing and exploration drilling). The effect of this is that the MLA Bill doesn't prohibit these activities, and does not assist in stopping the PEP-11 project in its current phase, as it is just in the exploration stage.

AMCS refers to the EDO submission for further articulation on any constitutional issues or unintended consequences raised by the MLA Bill, and what amendments have been recommended from a point of legal expertise.

***(d) environmental impacts of offshore drilling;***

The impacts of the fossil fuel industry on our oceans, marine life and habitats are understudied in terms of long term harm. What's known is that when things go wrong in the shape of oil spills, drilling leaks, wellhead fires, pipeline ruptures and transport shipping incidents the scale of devastation is vast, and the impacts to marine life, fisheries and coastal communities are devastating. Leaving a toxic legacy in our oceans, seafood and coastal ecosystems.

The environmental impacts of offshore fossil fuel exploration, drilling and associated infrastructure needs to consider seismic blasting surveys and emerging issues of the impacts of CCS as part of a holistic consideration of the environmental impacts of the MLA Bill.

Seismic exploration

The process of exploring for new oil and gas fields to facilitate offshore drilling and CCS starts with seismic blasting surveys. Seismic exploration for fossil fuels is one of the most systemically damaging to marine ecosystems and the foundations of the ocean's food web, plankton. This legislation does not directly address seismic blasting exploration phases for offshore drilling and fossil fuel projects.

Seismic vessels tow an array of airguns and audio receivers (hydrophones) behind them. These powerful airguns fire loud blasts of compressed air every 10 to 15 seconds. The sound waves produced penetrate deep into the seabed, and those that bounce back to the sea surface are detected by the audio receivers. From the sound patterns detected, geologists can work out the most likely place to find oil and gas reserves trapped in the ocean bedrock. The next step is exploratory drilling for oil and gas deposits, or CCS potential.

Seismic blasting surveys involve multiple air guns firing every 10 to 15 seconds, all day, every day, for weeks to months on end. The noise generated by seismic airguns under water reaches a massive 250 decibels – it needs to penetrate through rock.

It's hard to make a meaningful comparison of the impact of extremely loud noises above and below water. For a start, decibels are measured differently in air than in water – 100 decibels in the air is not the same as 100 decibels underwater. To add complexity, the scale used to measure decibels is not linear, it's logarithmic. This means that 20 decibels is 10 times the intensity of 10 decibels. 30 decibels is 100 times more intense than 10 decibels. The loudest underwater sounds made by whales measure in the range of 140–190 decibels<sup>3</sup>. A 250 decibel seismic blast is 1,000,000 times more intense than the loudest whale sounds!

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<sup>3</sup> <https://dosits.org/science/sounds-in-the-sea/what-are-common-underwater-sounds/>

Evidence that seismic blasting harms marine life is growing. The sound travels under water faster than it does through air, and can travel for hundreds to thousands of kilometres. It can kill or injure marine animals close by – even tiny zooplankton more than a kilometre away.

Seismic blasts can damage the hearing of whales and keep them away from key feeding and breeding grounds.<sup>4</sup> Other large animals like dolphins, sea turtles, and sea lions could suffer similar effects.

Seismic blasting has some of the greatest impacts on those species that can't escape the blast area like resident reef and fish species, shellfish and zooplankton

Zooplankton, the very basis of ocean food chains, is at risk from seismic blasting<sup>5</sup>. These tiny floating or weakly swimming animals rely on water currents to move large distances. Zooplankton includes a range of tiny crustaceans, like krill and copepods, as well the larvae of many larger animals like crabs, lobsters, octopuses and fishes. After seismic blasts, many zooplankton are found dead<sup>6</sup>, even as far away as 1.2 kilometres from the blast site. This has disastrous impacts on the ocean food web, and fishing industries reliant on a functioning marine ecosystem.

The behaviour of scallops changes during and after exposure to blasts.<sup>7</sup> It damages their hemolymph (the scallop's equivalent of blood), and their immune systems, and ultimately weakens them so they're more likely to die early. Similar impacts have been shown in spiny lobsters.<sup>8</sup>

Scallops and lobsters are both important seafood species, so seismic blasting also impacts current and future catch rates for our commercial fisheries.

### Carbon Capture and Storage

To ensure that the marine parks, marine life and environment in NSW state waters are safeguarded from fossil fuel threats we note that CCS has not been addressed in the MLA Bill. CCS is commonly associated with offshore petroleum development. Offshore drilling and CCS are now often proposed together given that the petroleum industry is promoting CCS as a solution to mitigate the significant GHG emissions resulting from petroleum production and processing. In theory, CCS involves the process of capturing carbon dioxide (CO<sub>2</sub>) emissions from fossil fuel production and combustion, and the storage of this CO<sub>2</sub> in underground geological formations.<sup>9</sup> CCS has been shown to be financially unviable, unreliable and unsuitable to address the climate crisis, with no CCS developments globally operating at the scale required to reduce greenhouse gas emissions. Furthermore the CCS is often used by the petroleum industry to advocate for the expansion of the existing offshore petroleum industry in Australia.

The state of NSW has extensive fossil fuel industries that in future could attempt to use claims of net neutrality and offsets being promised by CCS proponents. This would involve developing transport and processing infrastructure to move CO<sub>2</sub> from onshore to offshore locations that would be part of any commonwealth acreage releases for CCS. This would require permits for CCS

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<sup>4</sup><http://www.pelagosinstitute.gr/gr/pelagos/pdfs/Gordon%20et%20al.%202004,%20Review%20of%20Seismic%20Surveys%20Effects.pdf>

<sup>5</sup> <https://australian.museum/learn/animals/plankton/zooplankton/>

<sup>6</sup> <https://www.nature.com/articles/s41559-017-0195>

<sup>7</sup> <https://www.pnas.org/content/pnas/114/40/E8537.full.pdf>

<sup>8</sup> <https://www.sciencedirect.com/science/article/abs/pii/S0025326X17306744?via%3Di>

<sup>9</sup> 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>>.

infrastructure development, construction of a pipeline within coastal waters, ongoing maintenance, repair, provisioning of equipment, and the unloading or transportation of CO2 from burning of fossil fuels from relevant developments.

On 30 June 2023 AMCS made a submission to the federal government's proposal for acreage release for CCS in commonwealth waters in collaboration with the Environmental Defenders Office. In the introduction we stated:

*'The release of greenhouse gas storage acreage for bidding and any subsequent exploration titles granted have the potential to cause significant negative impacts on the offshore environment and marine life in Australia, through exploration processes such as seismic blasting and test drilling. The release of greenhouse gas storage acreage for bidding and any subsequent exploration titles granted also pose a significant risk in relation to climate change, as they may provide perverse incentives to engage expired well enhancement efforts in depleted fields and prolong the use of oil and gas fields through the unproven and unsafe technology of carbon capture and storage (CCS), which will inevitably lead the release of further greenhouse gas emissions.'*

*This Submission sets out issues for the government to consider in the decision to release greenhouse gas storage acreage for bidding, including matters related to specific listed title areas. This Submission also sets out matters the government and companies need to be aware of in terms of climate change impacts and other environmental impacts, when considering or preparing bids for any subsequent release of greenhouse gas storage titles for exploration.'*

AMCS can supply the full copy of our submission to the Committee upon request, and a copy of our submission regarding the **Environment Protection (Sea Dumping) Amendment (Using New Technologies to Fight Climate Change) Bill 2023**, which is relevant to issues relating to CCS and fossil fuel projects and infrastructure in our oceans.

AMCS recommends the MLA Bill be amended to prohibit CCS activities in NSW coastal waters.

#### Marine Parks threatened by oil and gas

Marine parks are areas of the ocean identified as important for the protection of biodiversity and habitats, and have significant social and ecological benefits. Highly protected areas in marine parks can increase the abundance of species of fish that are of commercial and recreational interest that are then caught in other areas of the ocean.

The oil and gas industry is able to conduct seismic blasting and drilling in many of our state and commonwealth marine parks. This Bill would have significant benefits for the long-term protection of the NSW marine estate, including marine parks, in stopping destructive seismic blasting and drilling that damages the marine environment and wildlife.

AMCS recommends the inquiry examines whether this bill will also protect state marine parks from any potential CCS impacts, including (but not limited to) pipelines, shipping and potential storage under areas where marine parks exist.

#### Global Warming

Rapidly heating waters as a result of global warming are not only a threat to the health of NSW ocean estate, but to the marine economies the oceans support, including commercial fishing. Any new fossil fuel development will prevent keeping to a 1.5 degree pathway, a temperature that is critical for species such as corals, which are particularly vulnerable to temperature increases

To achieve Australia's climate commitments, we must end all new fossil fuel use and development as part of a rapid phase out of fossil fuel use. industrialisation in Australia's south-east seas, where marine life is already being hit by the double threats of overfishing and climate change, with the waters in our south east warming 3-4 times the global average. To hold any chance of keeping climate change to within 1.5 C all fossil fuel use and production should be phased out to ensure a safe climate.

AMCS supports the intention of the MLA Bill, as a starting step for further action for NSW to play its part in ensuring global warming is limited to 1.5 degrees. This requires stronger and more ambitious legislative reform to end all new fossil fuel development and the rapid phase out of existing fossil fuel use.

### **Conclusion**

AMCS commends the MLA Bill intent to prohibit the granting of a permit for exploration and granting of a licence for the recovery of any new fossil fuel mining and related infrastructure in state waters. Furthermore, we recommend that the scope of this bill be expanded to include seismic blasting in the granting of exploration permits and licences, to ensure the whole system of fossil fuel expansion and infrastructure development is addressed. There is a need to consider exploration and infrastructure for potential transport of carbon pollution as part of any CCS projects that would traverse through state water, or proposed storage basins that may target depleted oil and gas fields that fall under the ocean within state waters.

### **For further information on this submission please contact**

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