



2 August 2024

**To: Department of Industry, Science and Resources.**

**Re: Removal of oil and gas property and sea dumping of infrastructure in Commonwealth waters: draft guidance.**

Thanks for the opportunity for the Institute for Energy Economics and Financial Analysis (IEEFA) to present its submission to the consultation *Removal of oil and gas property and sea dumping of infrastructure in Commonwealth waters: draft guidance*.

IEEFA is an energy finance think tank that examines issues related to energy markets, trends, and policies. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy.

Regards

Kevin Morrison – Energy Finance Analyst, Australian LNG/Gas Sector



## Key points

- IEEFA is concerned that the draft guidance proposal to create a classification for infrastructure that is 'proposed to be left' would be inconsistent with the Offshore Petroleum and Greenhouse Gas Storage Act (OPGGGS) Act. The creation of the 'proposed to be left' classification signals that full removal would no longer be the default position (as there is another option), despite full removal being required under the OPGGS Act (unless approval is given for in situ decommissioning).
- A full removal is also consistent with Australia's international obligations, including the United Nations Convention on the Law of the Sea (UNCLOS).
- These draft guidelines also leave the Australian government exposed to legal risks if decisions are made to allow oil and gas extractive infrastructure to remain in the marine environment that are inconsistent with international law.
- The draft guidelines, if implemented would also bring uncertainty to the decommissioning sector and could impede the development of the necessary skills and resources to enable the industry to execute the necessary decommissioning work.
- Creating an expectation that companies will be able to leave infrastructure in the marine environment will have an impact on the financial provisioning of future clean-up costs, and may lead to inadequate financial provisioning.
- The proposed draft changes may also affect the accuracy of decommissioning cost projections and reduce the quality of information available to investors on future costs.
- IEEFA considers that it would be more appropriate for regulators to focus on greater enforcement and financial penalties of any breaches of section 572 of the OPGGS Act.



## Not removing extractive property is inconsistent with international obligations

IEEFA is concerned that this draft guidance would create a classification for offshore oil and gas infrastructure that is ‘proposed to be left’, which would be inconsistent with the Offshore Petroleum and Greenhouse Gas Storage Act (OPGGGS) Act. The provisions under section 572 of the OPGGS Act state that the removal of all property and the plugging and abandonment of wells is the default decommissioning requirement, with infrastructure owners able to seek permission to leave infrastructure in place by exception.<sup>1</sup> Under section 572, titleholders are required to engage early to obtain advice on the content and level of detail required in an environmental plan (EP) that seeks a deviation from requirements to remove all equipment. This EP must “demonstrate that a deviation delivers equal or better environmental outcomes compared to complete property removal”.<sup>2</sup>

Full removal of relevant infrastructure is consistent with Australia’s international obligations, including the “United Nations Convention on the Law of the Sea (UNCLOS) and the 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 (the London Protocol), to remove disused installations and structures and to preserve and protect the marine environment”.<sup>3</sup> The current requirement for full removal as a default also acts to manage the risks associated with in situ decommissioning.

However, the creation of the ‘proposed to be left’ classification, outlined in the draft guidelines, signals that full removal would no longer be the default position for certain types of infrastructure (as there is another option). This may allow infrastructure owners to opt out of full removal at the latter stage of the production life of a project.

The draft guidelines may also signal to infrastructure owners that the relevant regulators – the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) and the Department of Climate Change, Energy, the Environment and Water (DCCEEW) – may be more willing to consider decommissioning plans predicated on oil and gas infrastructure remaining in the marine environment. To the extent this is the case, these guidelines may lead oil and gas companies to expect that leaving infrastructure in place is allowable and negotiable, rather than full removal being the default requirement. This in turn could impact on their financial preparedness to undertake full decommissioning.

At present, under section 572 (3) of the OPGGS Act, NOPSEMA requires titleholders to remove property when it is “neither used, nor to be used, in connection with the operations”.<sup>4</sup> Based on the principles that complete removal of all property is the base case; that all property is to be designed, installed and operated to ensure it can be removed when it is neither used, nor to be used; and that where titleholders engage contractors to operate facilities, titleholders remain

<sup>1</sup> Department Of Industry, Science, Energy and Resources. [Guideline: Offshore petroleum decommissioning, in relation to the Offshore Petroleum and Greenhouse Gas Storage Act 2006](#). Page 5.

<sup>2</sup> NOPSEMA. [Section 572 maintenance and removal of property](#). Page 9.

<sup>3</sup> Department Of Industry, Science, Energy and Resources. [Guideline: Offshore petroleum decommissioning, in relation to the Offshore Petroleum and Greenhouse Gas Storage Act 2006](#). Page 5.

<sup>4</sup> NOPSEMA. [Section 572 maintenance and removal of property](#). Page 7.



ultimately responsible for ensuring that adequate provisions including assurance and oversight are in place to meet the property removal requirements on titleholders.<sup>5</sup>

NOPSEMA is also very clear that oil and gas extractive infrastructure that is no longer in use or in a state of suspension must be preserved, inspected and maintained in good condition and repair in accordance with section 572 (2) of the OPGGS Act to enable decommissioning in the future.<sup>6</sup>

These expectations make it clear to infrastructure owners that they are expected to allow for provisioning to cover the costs of full decommissioning unless they otherwise have an agreed plan in place to allow for in-situ decommissioning. The proposed changes to the guidelines, however, would reduce clarity and introduce greater uncertainty about the required decommissioning for oil and gas companies. This, in turn, will impact on the clarity available to investors on the likely future costs faced by individual oil and gas producers.

Titleholders undertaking decommissioning work must also comply with: the Environmental Protection and Biodiversity Conservation Act 1999; the Biosecurity Act 2015; and the Hazardous Waste (Regulation of Exports and Imports) Act 1989.<sup>7</sup> Therefore, any measures to avoid, delay or defer decommissioning work can affect all the issues associated with the risks that all these laws govern.

## International obligations require full removal of extractive infrastructure

There are several international frameworks that create obligations for Australia with respect to legislated decommissioning requirements.

Article 60 of the United Nations Convention on the Law of the Sea states that “... any installations or structures which are abandoned or disused shall be removed to ensure safety of navigation, taking into account any generally accepted international standards established in this regard by the competent International organization and that such removal shall also have due regard to fishing, the protection of the marine environment and the rights and duties of other States.”<sup>8</sup>

Under the London Protocol (annex 2), “A permit for disposal at sea for a platform or other man-made structures shall be refused if the regulator determines that appropriate opportunities exist to reuse, recycle or dispose of the platform/man-made structure on land without undue risks to human health or the environment, or disproportionate costs.”<sup>9,10</sup>

In addition, under the London Protocol, applications to dump wastes and other matter, including the disposal of platforms or other man-made structures at sea, are required to demonstrate appropriate consideration of factors including:

<sup>5</sup> NOPSEMA. [Section 572 maintenance and removal of property](#). Page 4.

<sup>6</sup> Ibid. Page 1.

<sup>7</sup> Department of Industry, Science and Resources. [Unique challenges and opportunities in decommissioning the Northern Endeavour](#). 23 July 2024.

<sup>8</sup> International Maritime Organization (IMO). [RESOLUTION A.672\(16\) Adopted on 19 October 1989](#). 6 December 1989.

<sup>9</sup> London Convention. [Annex 8. Revised specific guidelines for assessment of platforms or other man-made structures at sea](#). Page 5.

<sup>10</sup> IMO. [The 1996 Protocol to the convention on the prevention of marine pollution by dumping wastes and other matter, 1972](#). (as amended in 2006). Page 19.



- Reuse of the platform, other man-made structures or components such as power generators, motors, process equipment, cranes and storage or fuel tanks.
- Offsite recycling, such as use of scrap of ferrous or non-ferrous metals at appropriate facilities.
- The disposal of hazardous constituents, such as oils, sludges and other materials, can be managed in an environmentally sound manner; and disposal on land after removal, and disposal into water.<sup>11</sup>

The International Maritime Organization (IMO) resolution A.672 states that “abandoned or disused offshore installations or structures on any continental shelf or any exclusive economic zone are required to be removed”, except if they follow strict guidelines.<sup>12</sup>

In practice, these international frameworks create obligations for Australia in its regulation of offshore oil and gas infrastructure. However, the draft guidelines may create legal risks for the Australian government if decisions are made to allow oil and gas extractive infrastructure to remain in the marine environment that are inconsistent with international law.

## Keeping extraction infrastructure in marine environments create risks for other industries

Some oil and gas companies have argued for in-situ decommissioning approaches to allow them to repurpose infrastructure for carbon capture and storage (CCS) projects or as artificial reefs.<sup>13,14</sup> However, both of these alternative arguments create risks for marine environments that are likely to outweigh the risks of full removal of the infrastructure.

IEEFA is concerned that full decommissioning of oil and gas infrastructure may not occur if companies seek approval for keeping equipment in situ or repurposing for CCS.

Australian oil and gas producer Santos has said that CCS is a way to defer decommissioning liabilities. Santos chairman Keith Spence said: “Our access to depleted gas reservoirs in a number of our core assets not only provides the opportunity to develop CCS at scale, but also provides the opportunity to defer decommissioning expenditure at mature assets.”<sup>15</sup>

Santos filed a plan in August 2020 to decommission the production infrastructure for the Bayu Undan gas and liquids project, which included the removal of pipelines and the capping of wells with work to start between early 2021 or late 2023. This did not happen as more than a year after the decommissioning plans were filed, Santos unveiled plans to convert Bayu Undan into a CCS facility.<sup>16</sup>

Arguments for offshore oil and gas infrastructure to be repurposed as artificial reefs ignore that there are insufficient studies on the issue and on the risks in an Australian context. A meta review found that there are limited studies exploring the ecological impacts of decommissioned oil and gas structures, particularly in relation to naturally occurring radioactive material (NORM)

<sup>11</sup> Ibid. Page 19.

<sup>12</sup> IMO. [RESOLUTION A.672\(16\) Adopted on 19 October 1989](#). 6 December 1989. Page 3.

<sup>13</sup> Upstream. [World's largest CCS project set for sanction in 2023](#). 21 June 2022.

<sup>14</sup> ABC. [Woodside's plans to convert old offshore oil facility into artificial reef could set precedent for industry](#). 23 July 2021.

<sup>15</sup> Santos. [Oil Search and Santos merger update: Court approves distribution of Scheme Booklet and convening of Scheme Meeting](#). 11 November 2021.

<sup>16</sup> NOPSEMA. [Bayu-Undan to Darwin Gas Export Pipeline Decommissioning & Preservation](#). Submission date 10 August 2020.



contaminants.<sup>17</sup> There are also studies highlighting the link between offshore seismic surveys for oil and gas exploration, as well as for CCS, having an impact on the local fisheries.<sup>18</sup>

Experts at the CSIRO and Tasmania’s Centre for Marine Socioecology argue that: “The ecological value of decommissioned oil and gas infrastructure from other well studied regions may manifest differently in Australian waters.”<sup>19</sup>

In a 2023 report, the Australasian Centre for Corporate Responsibility (ACCR) further highlighted that the environmental costs and benefits of decommissioning are understudied, particularly in the Australian context. The report stated: “*The Australian continent is home to a significant number of different temperate and tropical marine habitats. ... Australia is also home to species assemblages which are distinct from those in northern hemisphere regions which have been the subject of decommissioning research. ... There is a relatively low rate of sedimentation in the Australian marine environment, which ‘may affect the persistence of environmental contaminants around offshore infrastructure’.*”<sup>20</sup>

## Idle extractive infrastructure could impact Australia’s carbon budget

Decommissioned oil and wells are an underreported source of greenhouse gas emissions that may partly counteract efforts to mitigate greenhouse gas emissions from fossil fuel infrastructure and therefore impact on Australia reaching its international emissions commitments.<sup>21</sup> Leakage of greenhouse gases from offshore wells may occur because of faulty, damaged or corroded well casings, sometimes referred to “well integrity issues”. The leakages may also occur due to fluids migrating outside of the well.<sup>22</sup>

NOPSEMA has issued a number of notices to operators about methane and hydrocarbon leakages from their idle infrastructure in the marine infrastructure.

Australia joined the Global Methane Pledge in October 2022, which aims to reduce global methane emissions by at least 30% below 2020 levels by 2030.<sup>23</sup> Plugging leaking offshore oil and gas infrastructure would be one way of helping to meet Australia’s methane pledge target. IEEFA is of the view that each decommissioned project should be monitored for methane leakages, followed up with the plugging of any leaking pipeline and infrastructure.

Ensuring decommissioned wells are not leading to fugitive emissions will also ensure that Australia’s carbon budget can be ‘spent’ in other ways that provide a higher economic and social return.

<sup>17</sup> Critical Reviews in Environmental Science and Technology. [Ecotoxicological effects of decommissioning offshore petroleum infrastructure: A systematic review](#). 2022. Pages 3,283-3,321.

<sup>18</sup> Environmental Pollution. [The impact of seismic survey exposure on the righting reflex and moult cycle of Southern Rock Lobster \(\*Jasus edwardsii\*\) puerulus larvae and juveniles](#). 15 September 2022.

<sup>19</sup> Frontiers in Marine Science. [Decommissioning Research Needs for Offshore Oil and Gas Infrastructure in Australia](#). 2021.

<sup>20</sup> ACCR. [Offshore oil and gas asset decommissioning](#). 19 January 2023. Page 6.

<sup>21</sup> International Journal of Greenhouse Gas Control. [Greenhouse gas emissions from marine decommissioned hydrocarbon wells: leakage detection, monitoring and mitigation strategies](#). September 2020. Page 1.

<sup>22</sup> Ibid. Page 2.

<sup>23</sup> Minister for Climate Change and Energy. [Australia joins Global Methane Pledge](#). 23 October 2022.



## Environmental risks are also financial risks

Notices in recent years from NOPSEMA indicate some offshore Australian operations are leaking hydrocarbons and methane. The offshore regulator issued a notice to Beach Energy and its partners in the Yolla facility in the Gippsland basin off Victoria for consistently exceeding hydrocarbon concentration limits in produced water discharges, posing unacceptable risks to marine life.<sup>24</sup>

Another notice was issued to Woodside for its continual failure to preserve and then remove infrastructure, leading to navigation hazards, vehicle collision, and hydrocarbon leakage that may have a widespread and long-term impact.<sup>25</sup> Exxon Mobil's Australian subsidiary Esso Australia was issued with a notice from NOPSEMA for repeatedly failing to properly prepare for an 'oiled wildlife' incident, as promised in its EP.<sup>26</sup>

In August 2021, BHP Petroleum (now part of Woodside Energy) was ordered by NOPSEMA to clean up three offshore fields within five years or less: Griffin<sup>27</sup>, Stybarrow<sup>28</sup> and Minerva.<sup>29</sup> The Griffin field ceased production in 2009. Woodside has since filed a staged decommissioning plan for its Griffin and Stybarrow fields with NOPSEMA.<sup>30,31</sup> Woodside was allowed to leave certain equipment at the Griffin field, arguing that: "The equipment proposed to be left in situ would require extensive seabed intervention to remove due to their burial status or substantial weight. None of the equipment proposed to be left in situ was exposed to hydrocarbons during production. The equipment consists almost entirely of steel and concrete."<sup>32</sup> Woodside filed a decommissioning plan for Minerva in March 2024.<sup>33</sup>

The Australian government has also recently highlighted the difficulty of the decommissioning process after the experience of Australia's first deepwater decommissioning project, the Northern Endeavour: "*The Northern Endeavour was in a state of disrepair when the Commonwealth took over responsibility for the facility in 2020. Excessive corrosion was causing structural integrity issues and much of the operating equipment on the FPSO [floating production storage and offtake (FPSO) facility] had become unreliable.*"<sup>34</sup>

Describing some of the further challenges, the government added: "*Many of the systems and equipment on board were well past their useful life, needing extensive repairs and maintenance, or complete replacement. However, the facility's age meant that spare parts or replacements were no longer manufactured and were difficult to find.*"<sup>35</sup> These included parts for plumbing, sewerage treatment, fire and gas detection, power generation, and fresh water on the FPSO.

Furthermore, "*The FPSO's overall poor condition makes towing complicated. The FPSO needs more maintenance and safety improvement work to prepare it for towing to a recycling location.*

<sup>24</sup> NOPSEMA. [Environmental Improvement Notice. Notice number: 761](#).

<sup>25</sup> NOPSEMA. [Environmental Improvement Notice. Notice number: 775](#).

<sup>26</sup> NOPSEMA. [Environmental Improvement Notice. Notice number: 738](#).

<sup>27</sup> NOPSEMA. [General Direction](#). 30 August 2021.

<sup>28</sup> NOPSEMA. [General Direction](#). 30 August 2021.

<sup>29</sup> NOPSEMA. [General Direction](#). 30 August 2021.

<sup>30</sup> NOPSEMA. [Griffin decommissioning and field management](#). Acceptance date 21 November 2023.

<sup>31</sup> NOPSEMA. [Stybarrow decommissioning and field management](#).

<sup>32</sup> Offshore Energy. [Woodside in the clear to leave certain subsea oil & gas equipment in situ during decom](#). 11 April 2024.

<sup>33</sup> NOPSEMA. [Minerva decommissioning and field management](#). 25 March 2024.

<sup>34</sup> Department of Industry, Science and Resources. [Unique challenges and opportunities in decommissioning the Northern Endeavour](#). 23 July 2024.

<sup>35</sup> Ibid.



*Depending on where this happens, we may need to apply for hazardous waste permits and manage biosecurity issues.”<sup>36</sup>*

Loss or damage in the marine environment has an impact on other industries. Economists have written about the ‘blue economy’, also known as the ocean economy. The ocean is a key source of food, energy (including offshore wind farms), minerals, health, leisure and transport that hundreds of millions of people depend on a living. However, there are risks facing this blue economy, including pollution, rising sea temperatures and sea levels, ocean acidification and loss of biodiversity.<sup>37</sup> Leaking methane or/and hydrocarbons will impact the marine environment, and therefore the blue economy.

## Draft guidelines would set back the emerging decommissioning sector

Australia’s oil and gas decommissioning industry is in its early stages and well behind other regions that have done far more decommissioning work, such as the UK in the North Sea. Given Australia’s relative lack of expertise in decommissioning, we could benefit from companies with international expertise setting up businesses here and creating jobs and new economic opportunities, including recycling.

However, regulatory uncertainty about the future status of decommissioning work may deter investment and business opportunities that should emerge in the decommissioning industry. This uncertainty may have a lingering impact as the services of experienced decommissioning companies are required in many other oil and gas producing jurisdictions besides Australia, which could mean that widespread expertise will be absent. In other words, regulatory certainty will be required to attract decommissioning expertise in a global market in which there is likely to be significant competition for such expertise.

A report for the Centre of Decommissioning Australia (CODA) highlighted the prevailing challenges for the domestic decommissioning sector: *“The oil and gas industry grapples with attracting and retaining talent, due to several factors such as shifting perspectives on climate change and evolving workforce values. Skill shortages are further exacerbated by a significant proportion of the workforce nearing retirement and a lack of suitably qualified candidates from educational institutions.”<sup>38</sup>*

The report also stated: *“Australia is projected to require around 500 specialists for decommissioning projects, prompting companies to consider reskilling and upskilling strategies.”<sup>39</sup>*

The Australian decommissioning sector is potentially a significant sector, therefore offering job opportunities, investment and skills development. CODA estimates that decommissioning in Australia is expected to cost up to U\$40.5 billion over the next 50 years, with approximately 136 fixed facilities anticipated to enter the decommissioning phase in the next decade.<sup>40</sup>

<sup>36</sup> Department of Industry, Science and Resources. [Unique challenges and opportunities in decommissioning the Northern Endeavour](#). 23 July 2024.

<sup>37</sup> Organisation for Economic Co-operation and Development (OECD). [The Ocean Economy in 2030](#). 27 April 2016. Page 3.

<sup>38</sup> CODA. [Skills review for the Australian oil and gas decommissioning industry](#). March 2024. Page 6.

<sup>39</sup> Ibid. Page 8.

<sup>40</sup> Ibid. Page 8.





The report adds: *“An estimated 100 offshore development wells have been permanently abandoned out of the 890 drilled in Australia before 2015. This number is projected to rise to over 440 by 2026, presenting complex, costly and substantial environmental, safety and well-integrity risks.”*<sup>41</sup>

The scale of the decommissioning challenge means Australia must have certainty over the rules governing the sector. The draft guidelines, and the resulting change in regulatory approach, risk creating uncertainty and ambiguity around Australia’s decommissioning regulations without a clear rationale for the change (given that the existing framework already allows for exceptions to the default approach of full decommissioning).

## Financial provisioning

Creating an expectation that companies will be able to leave infrastructure in the marine environment will impact financial provisioning of future clean-up costs. At present, the Australian government requires oil and gas firms to adequately provision for future decommissioning costs. So far there has been a record of failing to do this.<sup>42</sup> The Northern Endeavour is a case in point, which ultimately brought about a tightening in the rules on financial provisioning for decommissioning.<sup>43</sup> As previously argued by IEEFA, however, current rules may still see liability for decommissioning fall to taxpayers in the event of a rapid oil and gas phase-out.<sup>44</sup>

One case of a company contesting its responsibility for decommissioning liabilities has been the litigation between Australia’s Cooper Energy and Indonesian state-owned energy firm Pertamina, over the latter’s share of decommissioning costs for the former Basker Manta Gummy (BMG) gas field in the Gippsland Basin. Cooper said that Pertamina, via an Australian subsidiary, participated in the BMG oil project during its production life. Cooper’s claim arose regarding Pertamina’s obligations under withdrawal and abandonment provisions in the joint operating and production agreement for the BMG project.<sup>45</sup>

NOPSEMA has acknowledged that some companies do not develop appropriate decommissioning plans in a timely manner, potentially increasing the risk exposure to people and the environment.<sup>46</sup>

An effective provisioning system is the financial safeguard against companies reaching the end of the profitable stage of operations, running out of money and having no funds to finance the clean-up operations. This will decrease the likelihood that companies fail to set aside sufficient finances, and therefore fail to deliver any decommissioning.

IEEFA questions the rationale for the proposed changes given that oil and gas producers are currently able to submit decommissioning plans for approval that involve leaving infrastructure in place. Rather than proceeding with further regulatory changes, IEEFA considers it would be more appropriate for regulators to ensure that oil and gas companies are complying with their existing regulatory obligations.

<sup>41</sup> CODA. [Skills review for the Australian oil and gas decommissioning industry](#). March 2024. Page 8.

<sup>42</sup> ACCR. [Offshore oil and gas asset decommissioning](#). 19 January 2023. Pages 19-22.

<sup>43</sup> Parliament of Australia. [Offshore Petroleum \(Laminaria and Corallina Decommissioning Cost Recovery Levy\) Bill 2021](#).

<sup>44</sup> IEEFA. [Australia’s decommissioning challenge raises financial risks for governments and shareholders](#). December 2023.

<sup>45</sup> Cooper Energy. [Quarterly report for the three months ended 30 June 2024](#). Page 7.

<sup>46</sup> NOPSEMA. [Planning for proactive decommissioning](#). 10 January 2024. Page 1.