



10 October 2023

To: Decommissioning Roadmap Taskforce

**Re: Roadmap to establish an Australian decommissioning industry for offshore oil and gas:  
issues paper**

Thank for the opportunity for the Institute for Energy Economics and Financial Analysis (IEEFA) to present its submission to this inquiry.

Regards

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# Theme One: An opportunity for Australia

- 1. How can Australia best capture value from the decommissioning of offshore oil and gas infrastructure?**
- 2. What parts of a decommissioning industry already exist in Australia?**
  - a) Are there capabilities in Australia that could be deployed for decommissioning?**
  - b) Do these existing capabilities have sufficient scale to support offshore decommissioning activities?**
- 3. What parts of the decommissioning value chain could be developed in Australia?**
  - a) What parts of the value chain are most challenging to conduct in Australia?**
- 4. What key gaps or missing capabilities are there in Australia for decommissioning support services or maritime capabilities, such as, for example, offshore vessels and ports access?**
  - a) How could these gaps be addressed? Industry and state governments working together.**
  - b) How can industry help to address these gaps and maximise Australian industry participation?**
  - c) How can governments (federal, state, territory and local) help to address these gaps and maximise Australian industry participation?**
- 5. Under current arrangements, how is the industry planning to access the necessary infrastructure and expertise for decommissioning?**

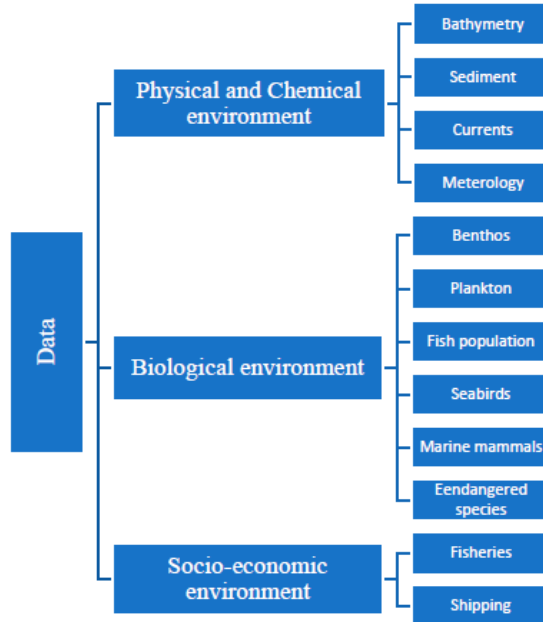
## Government must be clear on the desired decommissioning outcomes and approach as these are critical to capabilities and value chain requirements

For a services industry to develop for the decommissioning of oil and gas infrastructure, there must be a clear understanding of the work to be undertaken and how it will be achieved. There are many ways a decommissioning project may be executed, with varied environmental and financial outcomes.

Australian laws must be clear on the objectives of the decommissioning work – is it to pursue the optional environmental outcome, or will it be determined by financial budgets?

Figure 1 below provides an example of environmental and economic factors that are impacted by a decommissioning project.

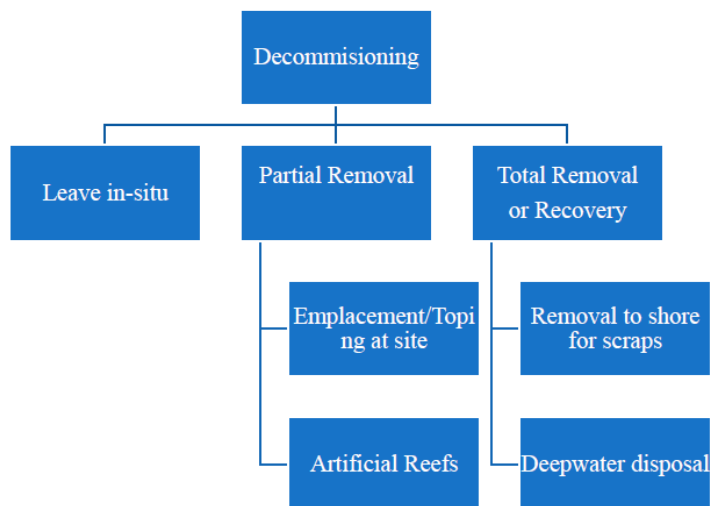
**Figure 1. Environmental and Economic Factors Impacted by Decommissioning Projects**



Source: *Environments*.<sup>1</sup>

The desired outcomes will then drive the decommissioning approach. Figures 2 and 3 provide example frameworks for the different types of work and skills required.

**Figure 2. Options or Actions for Decommissioning Activities**



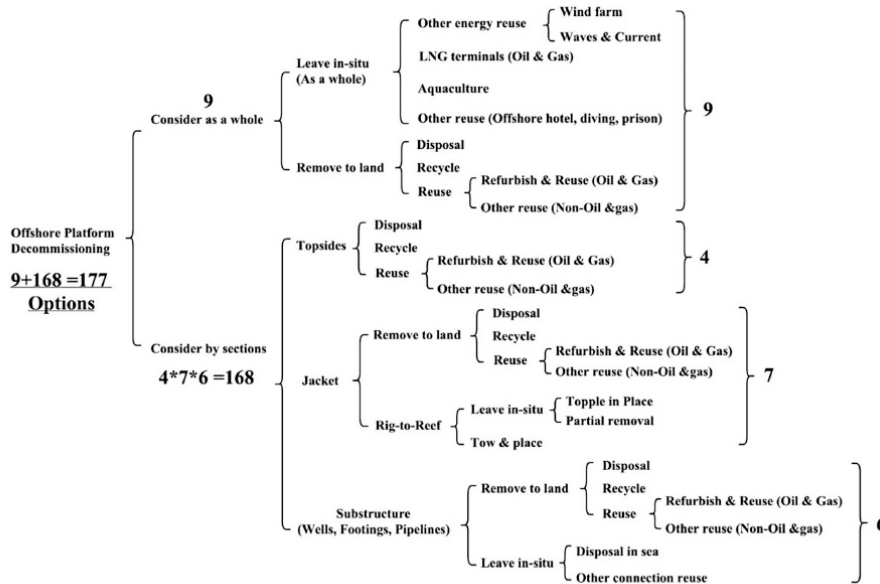
Source: *Environments*.<sup>2</sup>

<sup>1</sup> *Environments*. [An Assessment of Environmental Impact on Offshore Decommissioning of Oil and Gas Pipelines](#). 2023.

<sup>2</sup> *Ibid.*



Figure 3. Potential Options for Decommissioning.



Source: Visualization in Engineering.<sup>3</sup>

Decommissioning involves multiple different tasks, and guidelines on how the work can be carried out must be clear. An example of how such guidelines may apply is that the dismantling of pipelines cannot be undertaken if the pipelines contain residue of toxic substances and trace metals, where cleaning is found to be difficult and impossible. In addition, other wastes can have an adverse impact on the environment, such as hydrocarbons and industrial materials.<sup>4</sup>

Trade-offs will need to be addressed when desired outcomes are in conflict. For example, removing a whole offshore platform to land for dismantling for recycling will avoid emissions from metal production, but may produce amounts of air emissions and pollutants to the sea.<sup>5</sup>

### Careful consideration should be given to allowing infrastructure to stay in-situ

It appears that there is a degree of latitude that may allow firms to leave oil and gas infrastructure in-situ that may impact the marine environment. A significant difference in cost and environmental impact usually exists between two offshore oil and gas projects (OOGP) decommissioning options. If the OOGP is left in-situ, it will cost much less compared with removing the whole platform to land for further consideration.

In-situ decommissioning, where subsea components of infrastructure are left in the marine environment at the end of its productive life, has been proposed as an option that delivers net benefits, including: ecological benefits from establishment of artificial reefs; economic benefits for associated fisheries; reduced costs; and improved human safety outcomes for operators.

However, potential negative impacts, such as the ecological risk of residual contaminants, are unclear. Naturally occurring radioactive materials (NORM) are a class of contaminants found in

<sup>3</sup> Visualization in Engineering. [A semi-automated approach to generate 4D/5D BIM models for evaluating different offshore oil and gas platform decommissioning options](#). 2017.

<sup>4</sup> Environments. [An assessment of environmental impacts on offshore decommissioning of oil and gas pipelines](#). 2023. Page 8.

<sup>5</sup> Ibid. Page 4.



some oil and gas infrastructure such as pipelines and include traces of uranium, thorium, radium, radon, lead and polonium. NORM are ubiquitous in oil and gas reservoirs around the world and may form contamination products including scales and sludges in subsea infrastructure due to their chemistries and the physical processes of oil and gas extraction. The risk that NORM from these sources pose to marine ecosystems is not yet understood, meaning that decisions made about decommissioning may not deliver the best outcomes for the environment.<sup>6</sup>

### It is critical that decommissioning addresses potential methane and oil leakage

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.<sup>7</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>8</sup>

Australia joined the methane pledge in October 2022, which aims to reduce global methane emissions by at least 30% below 2020 levels by 2030.<sup>9</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.

Old oil and gas wells are likely to constitute a major source of methane in the North Sea. However, information on methane emissions from fossil fuel infrastructure almost always originates from the oil and gas industry itself. Independent estimates are scarce. In the U.S., for example, studies have shown numbers provided by the industry are too low. Further independent measurements are needed for development of guidelines and legally binding regulations.<sup>10</sup>

Recent notices from the National Offshore Petroleum Safety and Environmental Management Authority (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>11</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>12</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 Environmental Plan.<sup>13</sup>

<sup>6</sup> Journal of Environmental Radioactivity. [Current understanding and research needs for ecological risk assessments of naturally occurring radioactive materials \(NORM\) in subsea oil and gas pipelines](#). 2021.

<sup>7</sup> International Journal of Greenhouse Gas Control. [Greenhouse gas emissions from marine decommissioned hydrocarbon wells: leakage detection, monitoring and mitigation strategies](#). 2020. Page 1.

<sup>8</sup> Ibid. Page 2.

<sup>9</sup> Australian Minister for Climate Change and Energy Chris Bowen. [Australia joins Global Methane Pledge](#). 23 October 2023.

<sup>10</sup> International Journal of Greenhouse Gas Control. [Greenhouse gas emissions from marine decommissioned hydrocarbon wells: leakage detection, monitoring and mitigation strategies](#). Page 14.

<sup>11</sup> NOPSEMA. [Environmental Improvement Notice. Notice number: 761](#).

<sup>12</sup> NOPSEMA. [Environmental Improvement Notice. Notice number: 775](#)

<sup>13</sup> NOPSEMA. [Environmental Improvement Notice. Notice number: 738](#)



## Theme Five: The circular economy and managing waste

**22. How can a decommissioning industry maximise its contribution to a circular economy in Australia?**

**23. What are the barriers to recycling material from offshore in Australia, including steel?**

**24. What are the gaps in managing the waste streams associated with decommissioning offshore infrastructure?**

**25. How can companies protect worker safety and ensure their activities are nature-positive while undertaking decommissioning activities?**

There is a great opportunity to recover significant materials for reuse and recycling, especially steel

There is an increasing urgency for action to respond to a warming world, with average global temperatures on track to rise by more than the threshold of 1.5°C set by the Paris Agreement. Given that the burning of fossil fuels is a significant contributor to the rise in global temperatures, a large proportion of existing offshore oil and gas infrastructure will have to be decommissioned.<sup>14</sup>

The Bass Strait was Australia's first significant offshore oil and gas development, commencing production in 1969.<sup>15</sup> Significant investment led to the development of 23 offshore platforms and installations in the Bass Strait, and a network of 600km of underwater pipelines.<sup>16</sup> Oil and gas production in offshore Western Australia, the country's largest offshore hydrocarbon-producing basin, started in the 1980s.<sup>17</sup> These oil and gas fields are now becoming depleted, with installations in these areas earmarked for decommissioning.

The volume of subsea oil and gas infrastructure that will need to be decommissioned in the coming decades is significant when measured by the weight of material to be removed.

The oil and gas industry backed group the Centre of Decommissioning Australia (CODA) estimated there are around 5.7 million tonnes of decommissioning material that need to be removed from offshore oil and gas facilities and projects. Around 60% of this material is steel, with most of this able to be recycled. A further 25% is concrete. The majority (67%) of the total material, including steel and concrete, is related to pipeline infrastructure,<sup>18</sup> which unlike floating production facilities can't be towed to shipyards in other countries that specialise in dismantling ships.

<sup>14</sup> Columbia Law School. [Decommissioning liability at the end of offshore oil and gas: A review of international obligations, national laws, and contractual approaches in ten jurisdictions](#). Page i.

<sup>15</sup> Woodside Energy. [Bass Strait overview and history](#).

<sup>16</sup> Resources Victoria. [Oil and gas in Victoria](#).

<sup>17</sup> Mining and Energy WA. [Petroleum](#).

<sup>18</sup> CODA. [Global Review of Decommissioning Planning and Execution](#).

Potential OOGP decommissioning options are divided into three categories: reuse, recycling, and disposal. Reuse usually has the top priority as it is more sustainable compared with recycling and is more environmentally friendly than disposal.

There is a great advantage in both energy savings and lower emissions by recycling steel rather than producing it using the prevalent method of blast furnace and basic oxygen furnace (BF-BOF) technology. Scrap steel from subsea oil and gas infrastructure can be recycled through the electric arc furnace (EAF) process.

Energy consumption from BF-BOF processes is almost 10 times that of scrap-EAF. In addition, the direct carbon dioxide emissions from a BF-BOF process using iron ore and coal is 30 times higher than a scrap-based process. A scrap-EAF process powered by electricity from renewable energy reduces carbon emissions to almost zero. Thanks to the declining cost of renewable energy, scrap-EAF is also cost-competitive when powered 100% by renewables.<sup>19</sup>

Around 89% of the recyclable material is offshore Western Australia, with around 9% offshore Victoria. Hence, companies servicing the decommissioning sector will be largely based in Western Australia, where many of the engineering firms servicing the oil and gas sector are already located.

**Figure 4. The Scale of Today’s Decommissioning Challenge**



Source: NOPSEMA: Decommissioning<sup>20</sup>

<sup>19</sup> Institute for Energy Economics and Financial Analysis (IEEFA). [New from old: The global potential for more scrap steel recycling](#). Page 2.

<sup>20</sup> NOPSEMA. [Decommissioning](#). March 2023.





## Theme Six: Regulatory frameworks

**26. How are companies planning for offshore decommissioning activities within the current regulatory regime?**

**27. Do our regulatory frameworks for decommissioning provide sufficient safeguards for our marine environment?**

**28. Are there opportunities to enhance the efficiency of our existing regulatory frameworks to facilitate decommissioning activity in Australia?**

**29. Is there any duplication between regulatory requirements for decommissioning level between Commonwealth regulators and/or between Commonwealth, state, and territory requirements?**

**30. Are there examples from overseas decommissioning regulatory frameworks that might be applicable in Australia?**

**31. Are there regulatory barriers that prevent a decommissioning industry working with adjacent industries, including offshore renewables or the reuse of oil and gas infrastructure?**

### Companies should not avoid decommissioning liabilities via carbon capture and storage projects

It is important that the government and regulators scrutinise any activity to defer decommissioning activity, such as proposals to repurpose subsea oil and gas infrastructure for carbon capture and storage (CCS). Australian gas producer Santos previously submitted plans for decommissioning the Bayu-Undan to Darwin Gas Export Pipeline<sup>21</sup>, but the company has since withdrawn this proposal. It now proposes to turn the near-depleted Bayu-Undan gas field in the Timor Sea, which is in the maritime territory of Timor Leste, into a CCS facility that would handle 10 million tonnes (Mt) of carbon dioxide a year.<sup>22</sup> It is also proposing to move carbon dioxide from the Barossa gas field in the Bonaparte Basin off the Northern Territory to Bayu-Undan through a network of around 650km of pipelines. However, Santos has not provided any costs for turning Bayu-Undan into a CCS site, and it has not released any technical study to demonstrate that its plans are feasible.

### There needs to be clear methodologies to calculate decommissioning costs

National Energy Resources Australia (NERA) forecast decommissioning activity over the next 50 years for the nationwide offshore oil and gas industry to be worth USD\$40.5 billion (A\$56 billion), with almost half of this work due to occur in the North Carnarvon basin off the coast of Western Australia.<sup>23</sup>

<sup>21</sup> NOPSEMA. [Bayu-Undan to Darwin gas export pipeline commissioning and preservation.](#)

<sup>22</sup> Santos. [Carbon Capture and Storage.](#)

<sup>23</sup> Centre for Decommissioning Australia (Advisian study). [A Baseline Assessment of Australia's Offshore Oil and Gas Decommissioning Liability.](#) 2021.



These costs are significant. IEEFA is of the view that there should be clear methodology on how decommissioning costs are estimated, both to ensure appropriate provisioning, and to prevent tax rorts since asset owners can write off decommissioning costs against any tax liability under the petroleum resource rent tax (PRRT).<sup>24</sup>

Given that Australian law allows various approaches to decommissioning – ranging from full removal to leaving in-situ – costs and environmental outcomes will vary from project to project in terms of costs; these may also be influenced by location of the oil and gas infrastructure. Therefore, it is a priority that a clear methodology is applied to the costs of decommissioned projects.

A study undertaken by Australian and Chinese researchers found that current OOGP decommissioning databases are incomplete, leading to inaccurate and subjective decommissioning cost estimation and incomplete environmental impact estimation.<sup>25</sup> The study reviewed decommissioning-related factors in current estimation methodologies on both OOGP decommissioning cost and environmental impact, identified the shortcomings of the current estimation methods, and proposed some recommendations for the estimation improvement.<sup>26</sup>

Decommissioning costs in the UK and Gulf of Mexico have been higher than planned.<sup>27</sup> Recent analysis of selected offshore oil and gas platform decommissioning projects in the North Sea found that the average actual cost was about 76% more than the estimated cost.<sup>28</sup>

### Appropriate provisioning and legal responsibilities should be established for decommissioning costs

Australia's primary law regulating offshore decommissioning, the Offshore Petroleum and Greenhouse Gas Storage Act 2006, does not establish decommissioning financing structures, nor is there an industry or statutory fund to cover decommissioning.<sup>29</sup>

There should be firm regulations around the ownership of offshore oil and gas infrastructure prior to its move into the decommissioning phase to avoid episodes such as the Northern Endeavour case<sup>30</sup>, and the litigation between Australia's Cooper Energy and the Indonesia state-owned energy firm Pertamina over the ownership of Basker Manta Gummy (BMG) gas field in the Gippsland Basin.<sup>31</sup>

In 2016, Woodside Petroleum (now called Woodside Energy) and its partner Talisman Energy (which is now part of Spanish energy firm Repsol) sold its interests in the mature Laminaria and Corallina oil fields in the Timor Sea to the Northern Oil and Gas Australia Pty Limited (NOGA) group, which went into liquidation in 2020 and left the decommissioning costs to the federal government. In response, the government introduced an industry levy through the Offshore

<sup>24</sup> Australian Tax Office. [PRRT deductible expenditure](#).

<sup>25</sup> Environmental Impact Assessment Review. [Cost and environmental impact estimation methodology and potential impact factors in offshore oil and gas platform decommissioning: A review](#). March 2021. Page 1.

<sup>26</sup> Ibid Page 2.

<sup>27</sup> Environmental Impact Assessment Review. [Cost and Environmental Impact Estimation Methodology and Potential Impact Factors in Offshore Oil and Gas Platform Decommissioning](#). March 2021.

<sup>28</sup> Australasian Centre for Corporate Responsibility. [Offshore oil and gas asset decommissioning](#). January 2023.

<sup>29</sup> Wolters Kluwer. [The Regulation of Decommissioning, Abandonment and Reuse Initiatives in the Oil and Gas Industry: From Obligation to Opportunities](#). 2020. Page 251.

<sup>30</sup> The Guardian. [Chevron attacks rival Woodside for its 'failings' over sale of floating rig](#). 19 November 2021.

<sup>31</sup> Cooper Energy. [Annual report 2022-23](#). Page 47.



Petroleum (Laminaria and Corallina Decommissioning Cost Recovery Levy) Bill 2021 to cover the costs of the decommissioning, estimated at AU\$1 billion.<sup>32</sup>

In 2021 it also amended legislation, the Offshore Petroleum and Greenhouse Gas Storage Act 2006 (OPGGs Act)<sup>33</sup>, that exposed past, present and potential future titleholders to liability for decommissioning costs.<sup>34</sup> These costs, also known as ‘trailing liability’, ensure that the costs and liabilities associated with decommissioning will be borne by the petroleum industry and do not become the responsibility of government or the Australian community.<sup>35</sup>

The Northern Endeavour production ship was permanently moored at the Laminaria and Corallina oil field 550km north-west of Darwin.<sup>36</sup> Laminaria and Corallina are being decommissioned after the UK-listed engineering firm Petrofac won a tender for a A\$324.89 million contract for phase one of the decommissioning process, which is the disconnection of the Northern Endeavour from the subsea equipment.<sup>37</sup> Phase two is the permanent plugging and abandonment of wells, and phase three is the removal of subsea infrastructure.

The Northern Endeavour episode reflected a move by larger oil and gas companies to sell mature upstream assets to smaller firms that lack the financial capacity to fund decommissioning liabilities, in an effort to offload their decommissioning liability. The business model for late-life deals is companies like NOGA can make more money from a declining asset than a large company like Woodside could because they carry fewer overheads. At the time of the sale, Woodside’s projections suggested if the production rate was sustained, the project would generate sufficient cash flow to cover the cost of decommissioning, estimated at around A\$200 million. However, because the Northern Endeavour was not maintained to the standard required by NOPSEMA, production was unable to be maintained.<sup>38</sup>

There were also concerns by the Australian government in 2020 that ExxonMobil was looking to offload its interests in the Gippsland Basin joint venture, which may have ended up with a smaller company and the issue of financing decommissioning liabilities was open to debate. In late 2020 the Hon Keith Pitt MP wrote to the Chair of ExxonMobil to clarify the Australian Government’s ongoing expectations for the management and potential sale of Gippsland Basin assets, noting that the new owner/operator should have the appropriate financial and technical capacity and capabilities, and that the government intended to hold ExxonMobil liable for any trailing liabilities.<sup>39</sup>

However, there are legal cases involving former joint venture partners over decommissioning liabilities, such as the one between Cooper Energy and Pertamina over the BMG venture. From 2009 until 2014, Pertamina Australia, a wholly owned subsidiary of Pertamina, the Indonesian state-owned energy company, held a 10% interest in the BMG joint operating and production

<sup>32</sup> Parliament of Australia. [Offshore Petroleum \(Laminaria and Corallina Decommissioning Cost Recovery Levy\) Bill 2021](#).

<sup>33</sup> Parliament of Australia. [Offshore Petroleum and Greenhouse Gas Storage Amendment \(Titles Administration and Other Measures\) Bill 2021 \[and\] Offshore Petroleum and Greenhouse Gas Storage \(Regulatory Levies\) Amendment Bill 2021](#).

<sup>34</sup> Investor Group on Climate Change. [Emissions-intensive assets exits: A universal owner perspective on sales and managed closures](#). Page 6.

<sup>35</sup> Department of Industry, Science and Resources. [Trailing liability for decommissioning of offshore petroleum property: guidelines](#).

<sup>36</sup> NOPSEMA. [Activity – Northern Endeavour FPSO](#).

<sup>37</sup> Department of Industry, Science and Resources. [Petrofac Facilities Management Limited to lead phase 1 of decommissioning the Northern Endeavour](#). 1 April 2022.

<sup>38</sup> Australian Financial Review. [‘Big oil shaken by \\$200m Laminaria void’](#). 25 November 2019.

<sup>39</sup> The Australian Senate. Economics References Committee. [Australia’s oil and gas reserves](#). Page 114.



agreement. In October 2013, Pertamina Australia withdrew from the venture. In December 2022, Cooper Energy filed a claim in the Supreme Court of Victoria against Pertamina, seeking payment of an amount equal to 10% of the costs and expenses of the abandonment operations incurred and to be incurred, through the obligations under the provisions of the joint venture agreement.<sup>40</sup> There are seven wells and related subsea infrastructure of the BMG oil project to be decommissioned.<sup>41</sup>

The move by the federal government to pass legislation to ensure that companies that operated or had an equity interest in the oil or gas field for most of its productive life are liable for the decommissioning costs was a reaction to the Northern Endeavour episode and the concern about ExxonMobil selling on its Gippsland Basin interests to smaller and less financially capable firms to finance and execute decommissioning activities.

The legislative move was also an attempt to ensure that the asset sale would not result in a poorer environmental outcome. The Environmental Defense Fund analysed recent oil and gas transaction data. It found a troubling trend of assets moving from owners with stronger climate commitments and disclosures to those with weaker standards. In a series of case studies, it found evidence that sales involving reduced environmental commitments can correspond with increases in greenhouse gas emissions.<sup>42</sup>

IEEFA recommends measures to ensure that the trailing liability requirements are implemented as they will be critical to prevent poor environmental outcomes when an asset is sold to a small company unable to cope with the decommissioning liabilities.

Declining oil and gas assets are often sold off to smaller companies with worse environmental and climate credentials. Those companies can also lack sufficient capital to cover decommissioning, rehabilitation and just transition costs. It will be important for the government to ensure that any asset sale does not result in worse environmental outcomes, and in inappropriate provisioning for decommissioning. Ensuring that the trailing liability requirements are implemented will be critical to prevent such issues.

## Government should take steps to ensure appropriate decommissioning in a rapid phase-out scenario

These issues could be particularly critical under a rapid phase-out scenario. Accelerated climate action could lead to a rapid decline of the oil and gas industry, which would dramatically change the financial situation of companies and reduce the industry's ability to meet its decommissioning liabilities. A recent study by the Sabin Center for Climate Change Law recommended four key steps governments should take to protect themselves from bearing future decommission costs.<sup>43</sup>

The study states:

*The potential rapid decline in offshore oil and gas is a matter of public concern because governments often sit as the 'decommissioner of last resort.' Most countries with significant offshore oil and gas resources have laws, regulations, and contracts that*

<sup>40</sup> Cooper Energy. [Annual Report 2022/23](#), Page 111.

<sup>41</sup> Cooper Energy. [Annual Report 2022/23](#), Page 47.

<sup>42</sup> Environmental Defense Fund. [Transferred Emissions: How risks in oil and gas M&A could hamper the energy transition](#).

<sup>43</sup> Columbia Law School. Sabin Center for Climate Change Law. [Decommissioning Liability at the End of Offshore Oil and Gas: A Review of International Obligations, National Laws, and Contractual Approaches in Ten Jurisdictions](#).



require private offshore oil and gas companies, contractors, or investors to bear the cost of decommissioning their facilities. A formal assignment of legal liability, however, does not guarantee that decommissioning will occur or that funds will be available when decommissioning obligations arise. Even jurisdictions with extensive decommissioning experience and well-tested decommissioning regulations may be unprepared for the industry-wide decline associated with a rapid phase-out of offshore oil and gas production.<sup>44</sup>

To protect the public in a rapid phase-out scenario, and to ensure that fossil fuel companies meet their decommissioning obligations, governments, policymakers, and industry participants must take four key steps:

**1. Create and regularly update comprehensive decommissioning plans.** Some jurisdictions prepare decommissioning plans only when an installation or field is approaching the end of its usable life. This approach may create bottlenecks and unnecessary delays in a rapid phase-out scenario, where offshore facilities may need to be quickly decommissioned long before the ends of their previously anticipated lifespans. To prepare for a rapid phase-out, governments should require the operators of all offshore oil and gas facilities to create and regularly update comprehensive decommissioning plans.

**2. Reexamine decommissioning security mechanisms.** Legal mechanisms like collateral packages, guarantees, and funding structures are often predicated on assumptions that oil and gas assets will remain valuable and that oil companies will remain solvent. In the face of the transition away from fossil fuels, these assumptions may be incorrect. Policymakers and industry participants should examine these mechanisms to ensure that they are compatible with a rapid phase-out scenario, paying particular attention to three security mechanisms:

a. Guarantees, insurance, self-insurance, and third-party pledges provided by entities that are heavily exposed to the oil and gas industry may be particularly vulnerable to the systemic devaluation of oil and gas assets.

b. Collateral packages that depend on the value of concession agreements or unextracted fossil fuel assets may lose value in a field-wide rapid phase-out.

c. Decommissioning funds that are funded gradually over the course of an asset's anticipated life may be underfunded if assets are decommissioned early.

**3. Evaluate and plan for the tax consequences of industry-wide decommissioning.** Offshore decommissioning is an expensive obligation that occurs at the end of a facility's economic life and may significantly affect the economics of decommissioning a particular facility. Policymakers and industry participants who are planning for decommissioning expenditures should ensure that they are aware of, and prepared for, the tax implications of a rapid phase-out affecting the entire oil and gas industry.

**4. Evaluate and modify stabilization clauses to accommodate a rapid phase-out.** In evaluating their policies, governments should be aware that stabilization clauses in

<sup>44</sup> Ibid. Page ii



*investor-state oil and gas contracts may shift or create additional burdens around early offshore decommissioning. Governments should consider modifying stabilization clauses in line with international best practices to allow them to mandate early decommissioning if offshore assets become legally impaired or otherwise “stranded” by the transition away from fossil fuels.<sup>45</sup>*

## High transparency standards will need to be implemented

IEEFA is of the view that there should be full transparency with the decommissioning process from tenders of the work. Clarity of the work contract will ensure there is a full understanding of the work carried and the method of decommissioning.

For a decommissioning services industry to prosper, clarity and transparency are required from the asset owners. IEEFA notes the concerns raised by NOPSEMA, which has warned that “recent experience indicates that some titleholders do not develop appropriate or timely decommissioning plans which has potential to increase risk to people and the environment.”<sup>46</sup>

A look at the disclosure by Australian energy companies listed on the Australian Securities Exchange (ASX) – Woodside Energy, Santos, Beach Energy and Cooper Energy – shows some of the decommissioning activity that has been undertaken. NOPSEMA also allows for searches on its website for decommissioning in the Gippsland Basin, offshore Victoria, for instance. The Gippsland Basin is where much of the decommissioning in Australia is to take place this decade.<sup>47</sup>

## Governance

The rules and regulation of offshore oil and gas infrastructure are subject to both Australian legislation and international treaties and protocols. These could allow for different outcomes for decommissioning processes, which in turn could result in a weaker or stronger environmental outcome depending on what path the operator chooses to take. Hence, to provide some consistency, there needs to be some robust framework on what decommissioning option is pursued.

At the international level, the exploration of oil and gas offshore is regulated globally by the United Nations Convention on the Law of the Sea (UNCLOS), which has 168 signatories.<sup>48</sup> However, the U.S., a significant offshore oil and gas producer, has not ratified UNCLOS and remains subject to the Geneva Convention.<sup>49</sup>

UNCLOS also covers decommissioning under Article 60(3), which requires that, if states build or allow offshore facilities, “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”.<sup>50</sup>

<sup>45</sup> Columbia Law School. Sabin Center for Climate Change Law. [Decommissioning Liability at the End of Offshore Oil and Gas: A Review of International Obligations, National Laws, and Contractual Approaches in Ten Jurisdictions.](#) Page iii

<sup>46</sup> NOPSEMA. [Planning for proactive decommissioning.](#)

<sup>47</sup> Department of Industry, Science and Resources. [Roadmap to establish an Australian decommissioning industry.](#) Page 6.

<sup>48</sup> House of Lords. International Relations and Defence Committee. [UNCLOS: The law of the sea in the 21st century.](#) Page 3.

<sup>49</sup> International Law Studies, Volume 97. [U.S. position on the UN Convention on the Law of the Sea.](#) 2021.

<sup>50</sup> United Nations. [United Nations Convention on the Law of the Sea article 60\(3\).](#) Page 45.



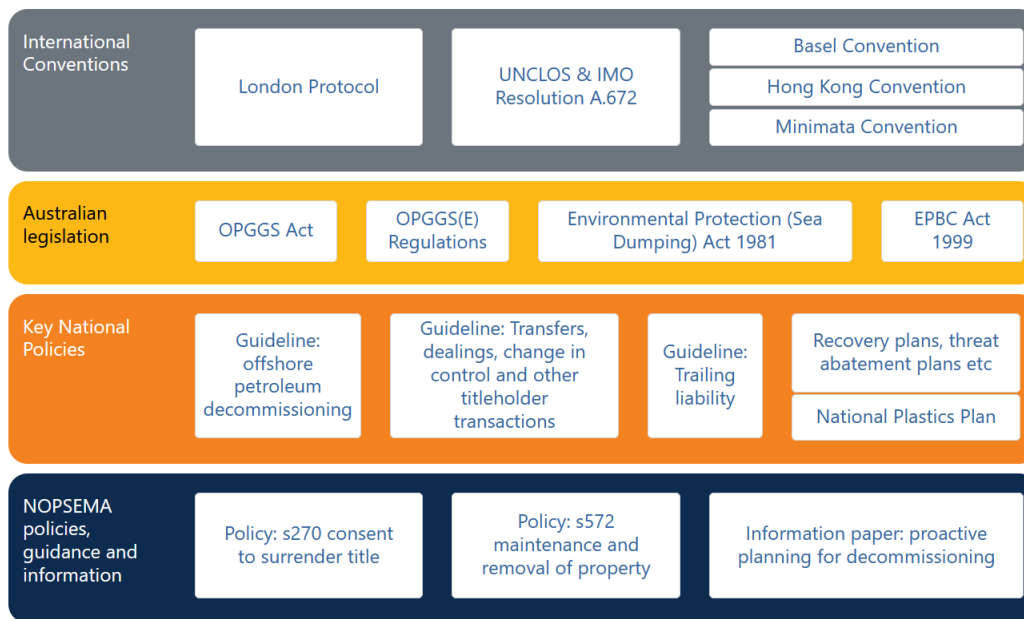


The UNCLOS decommissioning rule abandons the Geneva Convention requirement of complete removal. This concession has been credited to the fact that, by the 1980s, “the oil and gas industry was operating in deeper waters and harsher and more remote environments, using heavy structures that were more difficult and expensive to remove”.<sup>51</sup>

Instead, Article 60(3) allows the partial removal of offshore facilities, so long as states ensure that: “Appropriate publicity shall be given to the depth, position and dimensions of any installations or structures not entirely removed.”<sup>52</sup> So far it is not clear in Australia what depth would be deemed too deep for the subsea infrastructure to be removed.

Article 60(3) also includes environmental protection as a goal of decommissioning,<sup>53</sup> but must “have due regard to fishing, the protection of the marine environment and the rights and duties of other States”<sup>54</sup>. This would mean that the Australian fisheries sector would have to be consulted on any decommissioning work, particularly if a company chooses to leave the infrastructure in-situ. Figure 5 shows the local and international rules presiding over decommissioning.

**Figure 5. Local and International Rules on Decommissioning.**



Source: NOPSEMA.<sup>55</sup>

Australia’s Offshore Petroleum and Greenhouse Gas Storage (OPGGs) Act requires titleholders to remove all property, equipment, and structures that are “neither used nor to be used in connection with” authorised oil and gas operations.<sup>56</sup>

<sup>51</sup> Columbia Law School. Sabin Center for Climate Change Law. [Decommissioning Liability at the End of Offshore Oil and Gas: A Review of International Obligations, National Laws, and Contractual Approaches in Ten Jurisdictions](#). Page 8.

<sup>52</sup> United Nations. [United Nations Convention on the Law of the Sea article 60\(3\)](#). Page 45.

<sup>53</sup> Columbia Law School. Sabin Center for Climate Change Law. [Decommissioning Liability at the End of Offshore Oil and Gas: A Review of International Obligations, National Laws, and Contractual Approaches in Ten Jurisdictions](#). Page 8.

<sup>54</sup> United Nations. [United Nations Convention on the Law of the Sea article 60\(3\)](#). Page 45.

<sup>55</sup> NOPSEMA. [Expectations](#).

<sup>56</sup> Federal Register of Legislation. [Offshore Petroleum and Greenhouse Gas Storage Act 2006](#). Section 572 (3). Page 118.



The OPGGS Act also means the relevant federal government minister and NOPSEMA have the power to issue remedial directions on the subsea oil and gas infrastructure, stating: “Remedial directions can compel a person to undertake remedial works, including decommissioning. They can be issued to various persons who are, or who have been, involved in or benefited from a petroleum activity and are the mechanism through which trailing liability is implemented.”<sup>57</sup>

However, oil and gas companies have alternative options and can apply to keep the property and equipment in-situ under Australia’s international obligations under UNCLOS and the London Protocol.<sup>58</sup> Titleholders can be subject to civil and criminal liability for breaching the obligations of the OPGGS Act or the international protocols.<sup>59</sup>

IEEFA is of the view that the Australian law must take precedence, and that companies can only adopt a work programme based on international law in exception circumstances.

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<sup>57</sup> Department of Industry, Science, Energy and Resources. [Guideline: Offshore petroleum decommissioning](#). March 2022. Page 16.

<sup>58</sup> Department of Industry, Science, Energy and Resources. [Guideline: Offshore petroleum decommissioning](#). March 2022. Page 5.

<sup>59</sup> Federal Register of Legislation. [Offshore Petroleum and Greenhouse Gas Storage Act 2006](#). Section 572 (5A). Page 119.