

ARTICLE 1 OVERVIEW OF THE CCUS ACT 2025 REGIME

This is the first article in a series by Zaid Ibrahim & Co. on Malaysia's new regulatory framework for carbon capture, utilization and storage. Stay tuned for more articles in this series as key developments unfold.

INTRODUCTION

A new chapter has begun for Malaysia's environmental and economic landscape with the coming into force of the Carbon Capture, Utilization and Storage Act 2025 (the "**CCUS Act**" or "**Act**") on 1 October 2025 [1]. The Act, which received royal assent on 22 July 2025 [2] represents a significant stride in the nation's commitment to mitigating climate change and achieving its net-zero emissions target by 2050. All parts of the Act except Part VII (Assessment and Permanent Storage in Onshore Areas) are in operation. On the same date, the Carbon Capture, Utilization and Storage (Offshore Permit and Licensing) Regulations 2025 ("**Offshore Regulations**") were also passed.

This article provides an overview of the CCUS Act's regulatory regime, focusing on the geographical scope of the Act, the establishment of the regulator and technical advisor, and the key differences between the light-touch regulation of capture, transportation and utilization of carbon dioxide ("**CO₂**") versus the stricter oversight on permanent storage of CO₂, for both onshore ("**onshore storage**") and offshore ("**offshore storage**") areas.



SCOPE OF THE CCUS ACT

The Act applies to both the onshore and offshore areas of Peninsular Malaysia and the Federal Territory of Labuan [3]. It does not apply to Sarawak and Sabah, which regulate CCUS activities under their own laws [4].

Under the Act, “onshore areas” refer to all State land which includes the foreshores up to three nautical miles from the baselines of each State (see *Diagram 1*) [5]. Notably, Part VII of the Act, which governs onshore storage, would only come into operation in a particular State after the Minister of Economy has consulted the relevant State Government on this matter [6]. This approach appears to be aimed at balancing the powers and jurisdiction between the State and Federal Government. Whilst land matters fall under the States’ jurisdiction [7], the Act falls within the Federal Government’s jurisdiction by virtue of it promoting uniformity of laws between States and advancing the purpose of implementing Malaysia’s decarbonization commitments under the United Nations Framework Convention on Climate Change and Paris Agreement [8].

“Offshore areas” on the other hand refer to the seabed and subsoil of seas of Malaysia beyond three nautical miles from the baselines of each State and extend to the exclusive economic zone and continental shelf of each State (see *Diagram 1*). This area falls under the jurisdiction of the Federal Government, as implicitly recognised under the Exclusive Economic Zone Act 1984 [10].

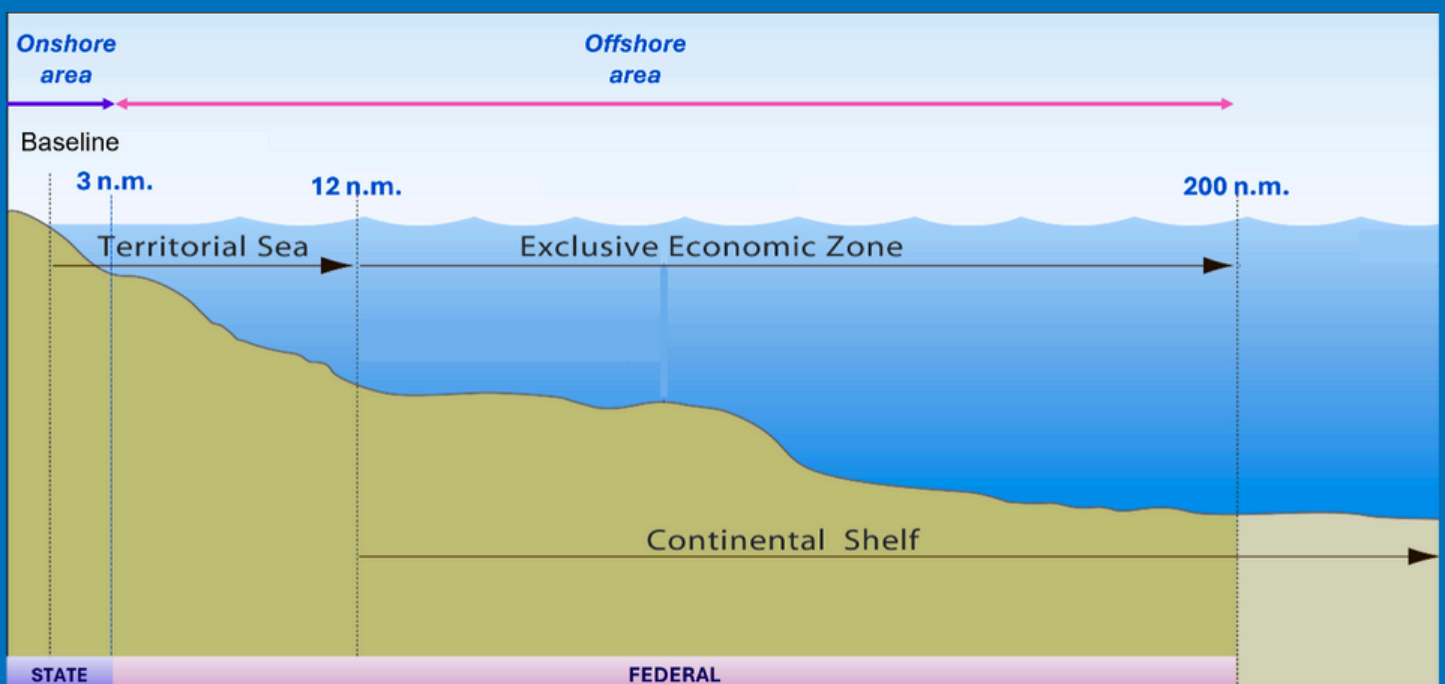


Diagram 1: Illustration of maritime zones, adapted from https://en.wikipedia.org/wiki/Territorial_waters

ESTABLISHMENT OF MyCCUS & COMPETENT TECHNICAL ENTITY

Part II of the CCUS Act establishes the Malaysia CCUS Agency ("**MyCCUS**"), the regulator whose functions are set out under section 8 of the Act. To contact or find more information on MyCCUS, you may visit its official website here:

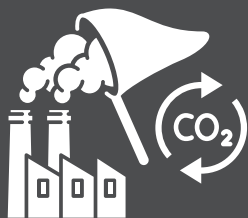
<https://myccus.ekonomi.gov.my/>



The Act also provides for the appointment of competent technical entities for each component of the CCUS value chain by the Minister of Economy. The role of the competent technical entities is to advise MyCCUS on technical and operational matters [11]. It is common to see advisory bodies other than the main regulators being established under other Malaysian legislation, such as the National Physical Planning Council under the Town and Country Planning Act 1976. Given the highly specialized and evolving nature of CCUS technologies, the CCUS Act wisely provides for the appointment of competent technical entities, enabling MyCCUS to tap on external expertise and ensure robust oversight without needing to develop this specialized knowledge in-house. This prevents the potential duplication of existing functions currently carried out by other authorities.

THE CCUS ACT 2025 REGIME

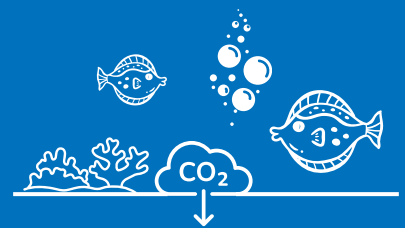
The CCUS Act regulates the main components of the CCUS value chain, namely the –



Capture of CO₂



Transportation,
Importation and Utilization
of captured CO₂



Permanent Storage
of captured CO₂

The extent to which these components are regulated under the Act differs between each component.

REGULATION OF CAPTURE, TRANSPORTATION AND UTILIZATION

A light-touch approach is used for the regulation of capture, transportation and utilization under Parts III, IV and V of the Act, which currently only impose general registration requirements. As of now, specific details of the registration regime are still unclear. However, we anticipate such details to be set out under regulations specific to these value chain components, seeing that the Act contains enabling provisions for the passing of such regulations [12].







It is not surprising that these components are lightly regulated under the Act's regime, given that they are already regulated, or would be more appropriately regulated, under other existing Malaysian laws. For example, the Act does not make carbon capture mandatory, as this would be more suitably addressed under a climate change legislation that mandates the reduction of carbon emissions. The Act also does not regulate the construction of a carbon capture installation as this is already regulated under existing construction related laws (e.g., the Town and Country Planning Act 1976 or the Street, Drainage and Building Act 1974).

Having said that, these components may still be further regulated in the future through standards, guidelines, specifications, etc. issued by the Minister of Economy or subsidiary legislation created pursuant to sections 53 and 52 of the Act respectively. This may be the case where gaps exist in existing laws, or where it would be more appropriate to regulate components based on the specific characteristics of each project.

For example, in regulating the design and operation of CO₂ pipelines, industry experts emphasize that standards should be tailored to the specific characteristics of each project and developed in close collaboration with industry. Pipeline systems must account for the varying impurities present in CO₂ streams, as these can differ widely between projects. Each impurity affects performance in distinct ways, influencing a pipeline's resistance to fatigue, fracture, and corrosion [13].

DID YOU KNOW

Most jurisdictions' CCUS-specific legislation focuses solely on permanent storage and transportation via pipelines.

						
Indonesia						
South Korea						
UK						
Norway						
Australia						
Canada						
Areas regulated under CCUS related legislation						
Carbon Capture	✓	✓				
Construction				✓	✓	
Transportation via Pipelines	✓	✓	✓	✓	✓	
Utilisation	✓					
Permanent Storage	✓	✓	✓	✓	✓	✓

REGULATION OF OFFSHORE STORAGE

Although the Act seeks to regulate both onshore storage and offshore storage, Malaysia's current focus is on offshore storage and the development of 3 associated CCUS hubs [14].

Malaysia has significant offshore CO₂ storage capacity, estimated at 13.3 gigatonnes in major depleted oil and gas fields [15] — a figure that's well-established and widely recognized. In contrast, the feasibility and capacity of onshore storage remain largely unexplored. This has resulted in Malaysia attracting significant interest from other countries such as Singapore [16], Japan [17] and Korea [18] for cross-border offshore storage in Malaysia, especially when coupled with Malaysia's strategic geographic position within the region. For instance, compared to Australia, the distance to Malaysia's offshore storage sites is significantly closer, making it potentially more cost effective and attractive to these regional emitters. However, there are other key factors that must be considered, such as whether that country has the right international agreements in place - like the London Protocol [19] - which ensures the process is legally approved, environmentally safe, and internationally recognized.

Given the focus on offshore storage, we do not foresee regulations for onshore storage being passed in the near to medium term future. However, onshore storage potentially offers opportunities for future innovation and expansion in the country's CCUS strategy.

Part VII of the Act and the Offshore Regulations establish a two-step or "gated" permitting and licensing regime for offshore storage. Any person who intends to carry out offshore storage is required to obtain an offshore assessment permit, followed by an offshore storage licence. This gated approach is the norm under CO₂ storage legislation in other jurisdictions, such as the UK, Norway and Australia.

Section 20 of the Act also imposes an additional requirement to obtain an import permit from MyCCUS for the importation of CO₂ captured outside of Malaysia.

In contrast with the light-touch approach used for the other value chain components, offshore storage is much more heavily regulated, and for good reasons.

Firstly, there are novel legal issues specific to offshore storage which are currently not dealt with under other existing laws, such as the issue of long-term liability. A clear and robust regulatory framework which addresses such issues and sets out the rights and responsibilities of relevant stakeholders provides investors with the certainty and predictability they require to assess the financial feasibility of investing in a project.

Secondly, comprehensive regulation is essential for ensuring safe and environmentally sound permanent storage. This is done through the regulation of, amongst other things, -

- **Site Selection:** Requiring potential project proponents to prove that the geological formations they have identified are suitable for permanent storage.
- **Operational Standards:** Requiring offshore operators to design and comply with plans for the injection, monitoring and verification of CO₂ and dealing with leakages and emergencies.
- **Closure and Post-Closure:** Defining the legal and financial obligations for a site after injection has ceased, including long-term monitoring and verification to ensure the CO₂ remains securely stored.

CLOSING THOUGHTS

The CCUS Act regime marks a significant and welcome stride in Malaysia's journey toward a sustainable future. However, it has faced criticism, with some groups arguing that the regime may, in a way, legitimize continued pollution by the oil and gas industry and that CCUS alone isn't a silver bullet for climate change.

These points are valid, and the concerns understandable. However, in the face of a climate crisis of this scale, we believe that an all-hands-on-deck approach is necessary, and CCUS should be viewed as a *part* of the solution to reduce carbon emissions, not the only solution, while we transition to a cleaner energy future.

As an energy producing country, Malaysia needs CCUS to balance economic interests, energy security and environmental sustainability [20]. As Malaysia shifts away from oil and gas, CCUS ensures that communities whose livelihoods depend on the oil and gas industry are not left behind through the creation of new employment opportunities requiring similar skillsets. CCUS also helps our hard-to-abate industries such as cement and steel production, which are fundamental to nation-building, to continue growing without producing significant CO₂ emissions.

The technology is also needed for Malaysian industries to remain globally competitive, as it helps them avoid potential carbon tariffs like those under the EU's Carbon Border Adjustment Mechanism.

The path to a greener future is complex and requires bold, pragmatic solutions. By embracing CCUS as a key part of an "all-hands-on-deck" approach, Malaysia is strategically positioning itself to meet its climate goals while ensuring a just transition and prosperous future.

Prepared by:



KHOO YU LIN

Partner | Head of Practice
Infrastructure, Energy & Utilities



Cheng Yen

Associate
Infrastructure, Energy & Utilities



REFERENCES

[1] Order for the Appointment of Date of Coming Into Operation (P.U.(B) 355/2025)

[2] “King consents to Carbon Capture, Utilisation and Storage Act 2025”, The Edge Malaysia at <https://theedgemaalaysia.com/node/763547>

[3] Section 2 of the Act

[4] This includes the Land (Carbon Storage) Rules 2022 and Natural Resources and Environment (Control of Conveyance of Scheduled Gases) Rules 2024 of Sarawak, and Land Ordinance of Sabah (as amended on 19 June 2023) and Sabah’s Climate Change and Carbon Governance Enactment 2025 (which, as of the time of writing, has not yet come into effect)

[5] This definition aligns with the definition of “State land” under section 5 of the National Land Code, read together with subsection 3(3) the Territorial Seas Act 2012, whereby “State land” refers to all the land in the State including the bed of the foreshore and bed of the sea as within the territories of the State or limits of territorial waters (i.e., “such part of the sea adjacent to the coast thereof not exceeding 3 nautical miles measured from the low-water line”)

[6] Subsection 1(3) of the Act

[7] Under Article 74(2) and the State list of the Federal Constitution of Malaysia

[8] This is consistent with Article 76(1) of the Federal Constitution of Malaysia

[9] Subsection 4(2) of the Act

[10] Section 4 of the Exclusive Economic Zone Act 1984

[11] Section 14 of the Act

[12] Paragraphs 52(2)(a), (b) and (c) of the Act

[13] “Industry guidelines for Setting the CO₂ specification in CCUS Chains; Work Package 8: Pipeline Transport” published by Wood PLC at <https://www.woodplc.com/insights/reports/Industry-Guidelines-for-Setting-the-CO2-Specification-in-CCUS-Chains>

[14] See Malaysia’s National Energy Transition Roadmap, page 50 at <https://ekonomi.gov.my/sites/default/files/2023-08/National%20Energy%20Transition%20Roadmap.pdf>

[15] See “Why Is Malaysia championing CCUS?”, MyCCUS’ official website at <https://myccus.ekonomi.gov.my/faq/>

[16] See “Collaboration on Transboundary CCUS between Malaysia and Singapore”, MyCCUS’ official website at <https://myccus.ekonomi.gov.my/collaboration-on-transboundary-ccus-between-malaysia-and-singapore/>

[17] See “Japan to Ship CO₂ Emissions to Malaysia for Underground Storage”, published by Chemanalyst.News at <https://www.chemanalyst.com/NewsAndDeals/NewsDetails/japan-to-ship-co2-emissions-to-malaysia-for-underground-storage-36187>

[18] See “Korea and Malaysia unite at the Shepherd CCS Summit 2024 for the carbon capture future: Unlocking Transboundary CCS to Decarbonize the Region”, published by Samsung E&A at <https://www.samsungena.com/en/newsroom/news/view?idx=15599>

[19] The official name of the London Protocol is the “1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972”

[20] As set out in Malaysia’s National Energy Transition Roadmap, page 50 at <https://ekonomi.gov.my/sites/default/files/2023-08/National%20Energy%20Transition%20Roadmap.pdf>