

ASEAN CCS UPDATES 2025

Vol. 2

March – June 2025



ASEAN Centre for Energy
One Community for Sustainable Energy

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Highlights – Indonesia



Government Regulation No. 19/2025: Expanding Non-Tax State Revenue from Carbon Storage [\[ID\]](#)

 11/04/2025

Summary

Indonesia considers the practice of Carbon Capture and Storage (CCS) as part of Non-Tax State Revenue (PNBP) and regulate it through Government Regulation 19/2025 that includes licensing issuance and royalties, financial obligations, and the termination of exploration permits for injection target zones.



Indonesia Strengthens Legal Framework for CCS Activities with Government Regulations 28/2025 [\[ID\]](#)

 05/06/2025

Summary

Indonesia's Government now classifies and regulates new risk-based business licenses, including CCS within the oil and gas sector, under Government Regulation 28/2025.



Indonesia Secures USD 38 Billion for CCS Projects Starting in 2030 [\[ID\]](#) [\[EN\]](#)

 22/04/2025

Summary

Indonesia's CCS is gaining momentum with investments projected to reach up to IDR 640 trillion (approximately USD 38 billion). The proposal is currently being evaluated for the development of CCS technology in the Java Sea region.



Indonesia and Singapore Signed Deals on Carbon Capture and Power Trade [\[EN\]](#) [\[EN\]](#)

 13/06/2025

Summary

Indonesia and Singapore signed three Memorandum of Understanding (MoU), including a commitment to draw up a partnership for developing CCS facilities that would allow cross-border projects.

Highlights – Malaysia



Malaysia to enact the Carbon Capture, Utilization and Storage Bill 2025 or the "CCUS Act" Following Parliamentary Approval [\[MY\]](#)[\[EN\]](#)

25/03/2025

Summary

Passed by the Parliaments, the CCUS Act (CCUS Bill) is planned to be a comprehensive legal framework governing CO₂ capture, transport, utilization, and storage, supporting Malaysia's goal of achieving Net Zero by 2050.



Partnering with Petronas, Malaysia's government plans to expand Kasawari CCS Project [\[EN\]](#)

04/06/2025

Summary

Malaysia's government is partnering with Petronas to expand the Kasawari CCS project aligned with the country's energy transition goals outlined in the National Energy Transition Roadmap and supported by the recently passed Carbon Capture, Utilisation, and Storage (CCUS) Bill regulating CO₂ storage and transport.



Malaysia highlights international collaboration on CCS in Energy Asia [\[EN\]](#)

16/06/2025

Summary

Malaysia's Prime Minister, Datuk Seri Anwar Ibrahim, highlighted the country's effort involving over 10 international partners to advance CCS.



Petronas targets 80M tonnes CCS capacity and is eyeing 7 potential cites for establishing new CCS in Malaysia [\[EN\]](#) [\[EN\]](#)

17/06/2025

Summary

Petronas aims to provide up to 80 million tonnes of CCS capacity annually by 2030 and is seeking for potential sites for new CCS projects, as part of its efforts to position Malaysia as a leading regional hub for cross-border carbon storage services.

Highlights – Thailand



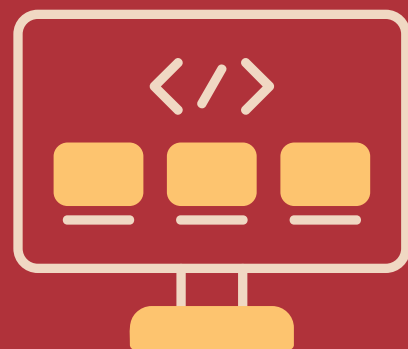
PTT Exploration and Production Public Company Limited (PTTEP)'s Progress on Thailand's CCS Project, Eyeing Final Investment Decision (FID) in 2025

[EN] [EN]

 01/04/2024

Summary

Having finished the Front-End Engineering Design (FEED) for Thailand's first CCS project study at the Arthit Field in 2021, PTTEP is eyeing a final investment decision (FID) for this project as well as other potential new sites.



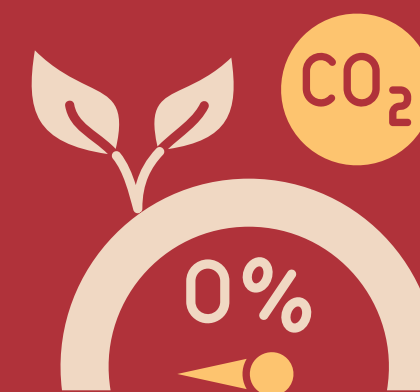
Thailand is set to achieve Net Zero 2050 by advancing CCUS technology promoted by TCMA

[EN]

 03/04/2024

Summary

The Thai Cement Manufacturers Association (TCMA), in collaboration with The National Science and Technology Development Agency (NSTDA) and various government, industry, and academic partners, has launched the Thailand Carbon Capture, Utilisation, and Storage Alliance (TCCA) to advance CCUS technology.



News Details

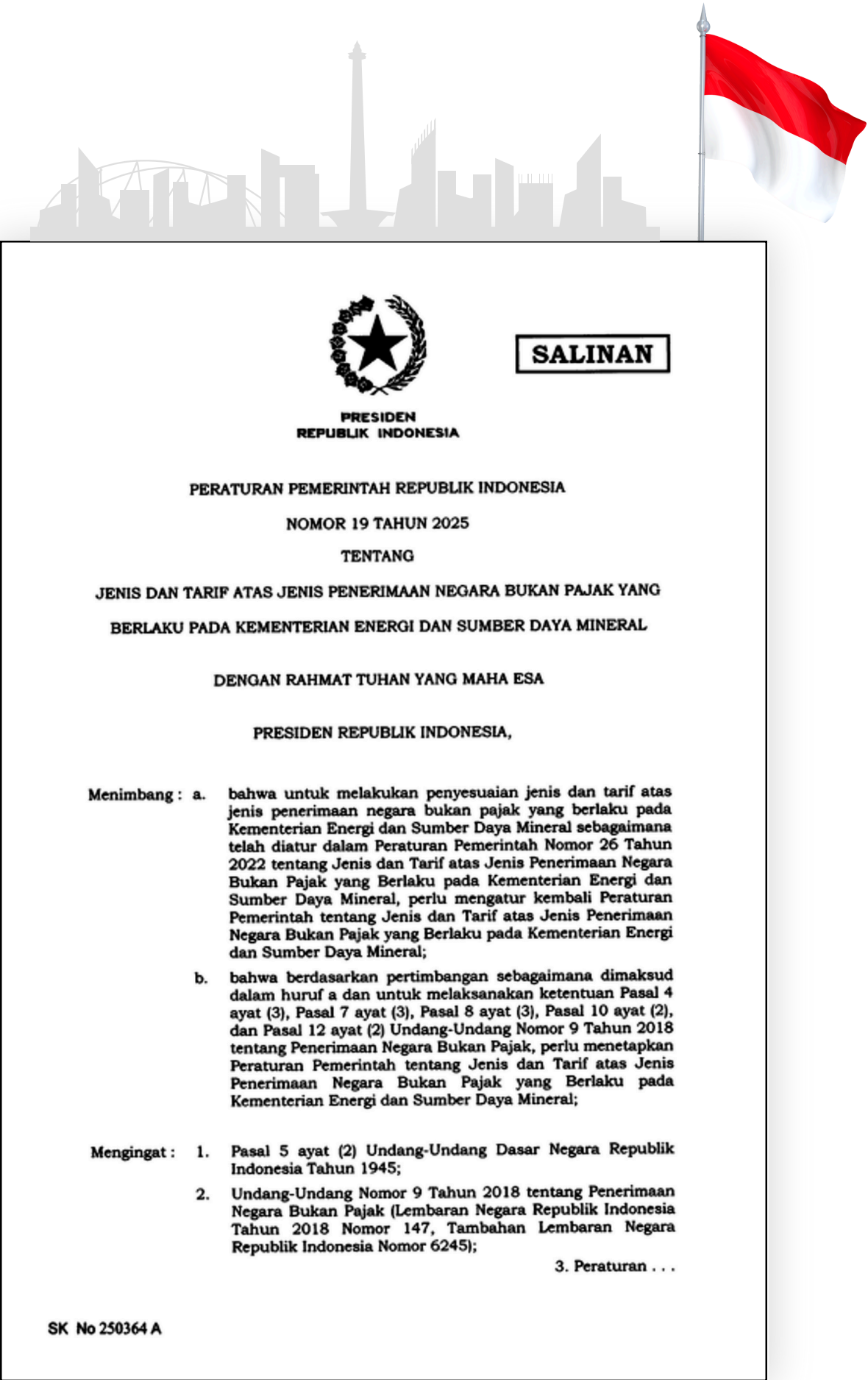


Government Regulation No. 19/2025: Expanding Non-Tax State Revenue from Carbon Storage

Government Regulation No. 19/2025, enacted by President Prabowo Subianto on April 11, 2025, repeals Regulation No. 26/2022 and **establishes carbon storage activities as a source of Non-Tax State Revenue (PNBP)**.

Area	Key Points
Non-Tax State Revenue types from CCS	Provides a regulatory framework for revenue sourcing from CCS activities, that includes: • Compensation for permit issuance and CCS area exploration. • Royalties for CCS storage fee. • Financial obligation and termination of exploration permits for injection target zones. • Financial obligation for injection drilling cancellation.
Non-Tax State Revenue Fee	The fee for Non-Tax State Revenue from CCS includes: • Bid Document for CCS area limited selection = 5,000.00 USD per bid document. • If the winner of the auction or limited selection for the CCS permit area withdraws, fails to submit a letter of commitment, and/or does not apply for an exploration permit in accordance with the provisions of the laws and regulations = 100% USD of the guaranteed value.

CCS was not previously included in Indonesia’s Non-Tax State Revenue (PNBP) under Government Regulation No. 26/2022. While Presidential Regulation No. 14/2024 only addressed revenue from storage services in the form of "compensation for storage," the new Government Regulation No. 19/2025 **expands the scope to include permit issuance, area exploration, and defined corresponding charges, reflecting a broader approach to CCS-related PNBP**. This regulation highlights the government’s strengthened commitment to advancing CCS initiatives, demonstrating its support for the global shift toward a more sustainable and low-carbon future.



Indonesia Strengthens Legal Framework for CCS Activities with New Government Regulations

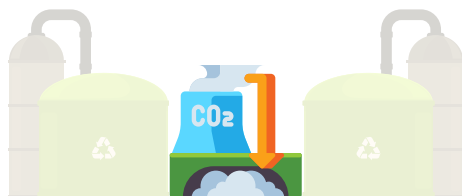


On June 5, 2025, Government Regulation No. 28/2025 was issued, regulating **the implementation of Risk-Based Business Licensing** as a follow-up to Government Regulation No. 21/2021. This includes **CCS activities**, which are classified under **high-risk business activities**, as part of the oil and gas sector.

High-risk activities are those with significant potential negative impacts on health, safety, the environment, and/or other resources, and therefore require strict oversight. Business actors **must obtain a Business Identification Number (NIB) and an operational license**. This license is a more comprehensive approval from the central or local government, typically requiring **pre-operational assessments and approvals—such as Environmental Approval, Building Approval (PBG), and Certificate of Proper Function (SLF)**.

Fortunately, the regulation also introduces the **Online Single Submission (OSS) system**, which **streamlines and integrates the licensing process, improving both efficiency and oversight**. It further establishes **sanctions** for business activities that fail to comply with Risk-Based Business Licensing norms (PB-UMKU).

This legislation underlines the government's strong commitment to integrate CCS into national commercial activities, while also building an enabling framework that supports regulatory clarity and progress toward a low-carbon future.





SALINAN

PRESIDEN
REPUBLIK INDONESIA

PERATURAN PEMERINTAH REPUBLIK INDONESIA
NOMOR 28 TAHUN 2025
TENTANG
PENYELENGGARAAN PERIZINAN BERUSAHA BERBASIS RISIKO

DENGAN RAHMAT TUHAN YANG MAHA ESA

PRESIDEN REPUBLIK INDONESIA,

Menimbang : a. bahwa penyederhanaan Perizinan Berusaha melalui penerapan Perizinan Berusaha Berbasis Risiko perlu dilakukan reformasi kebijakan secara berkelanjutan dalam mewujudkan kemudahan dalam memulai dan menjalankan usaha guna mendukung cipta kerja;

b. bahwa penyederhanaan Perizinan Berusaha melalui penerapan Perizinan Berusaha Berbasis Risiko sebagaimana telah diatur dalam Peraturan Pemerintah Nomor 5 Tahun 2021 tentang Penyelenggaraan Perizinan Berusaha Berbasis Risiko yang merupakan peraturan pelaksanaan Undang-Undang Nomor 11 Tahun 2020 tentang Cipta Kerja perlu disempurnakan untuk semakin memberikan kepastian hukum kepada pelaku usaha terutama mengenai proses bisnis dan jaminan kualitas layanan;

c. bahwa dengan berlakunya Undang-Undang Nomor 6 Tahun 2023 tentang Penetapan Peraturan Pemerintah Pengganti Undang-Undang Nomor 2 Tahun 2022 tentang Cipta Kerja menjadi Undang-Undang, Peraturan Pemerintah Nomor 5 Tahun 2021 tentang Penyelenggaraan Perizinan Berusaha Berbasis Risiko perlu diganti;

d. bahwa berdasarkan pertimbangan sebagaimana dimaksud dalam huruf a, huruf b, dan huruf c, perlu menetapkan Peraturan Pemerintah tentang Perizinan Berusaha Berbasis Risiko;

Mengingat: . . .

SK No 253386 A

Indonesia Secures USD 38 Billion for CCS Projects Starting in 2030



Indonesia has secured **IDR 640 trillion investment IDR (USD 38 billion)** from multinational companies, which currently being evaluated for **CCS technology development in Java Sea region**. One of the key initiatives is the strategic collaboration between **PT Pertamina (Persero)** and global energy giant **ExxonMobil** to develop a **CCS hub in the Sunda–Asri Basin**. Preliminary studies show promising CO₂ storage capacity, with an ambitious target for the project's **Final Investment Decision by 2026**. ExxonMobil provides CCS technology, while Pertamina contributes through concession rights and service offerings.

Indonesia and Singapore Signed Deals on Carbon Capture and Power Trade

On June 13, 2025, Indonesia and Singapore, represented by Singapore's Minister in charge of Energy and Science Technology, Dr. Tan See Leng, and Indonesia's Minister of Energy and Mineral Resources (MEMR), Dr. Bahlil Lahadalia, signed three MoUs in commitment to draw up a partnership for developing CCS facilities, Cross-Border Trade (CBET) in low carbon electricity, and Sustainable Industrial Zone (SIZ).

A joint Working Group will study components of a legally-binding government-to-government **(G2G) agreement on CCS, which is** necessary to enable cross-border CCS projects to be implemented.



Photo: ANTARA/Putu Indah Savitri

Malaysia to enact the Carbon Capture, Utilisation and Storage Bill 2025 or the "CCUS Act" Following Parliamentary Approval



On March 25, 2025, the Carbon Capture, Utilization and Storage Bill 2025 (the “CCUS Act”), a legal framework for regulating the capture, transportation, utilization, and permanent storage for carbon dioxide in Malaysia, specifically Peninsular and Federal Territory of Labuan, has passed by The Parliaments.

Area		Key Points
Key Feature	This regulation seeks to reduce carbon emissions, mitigate climate change effects, and promote development of the CCUS industry as a new source of economic growth.	
Malaysia Carbon Capture, Utilization and Storage Agency (the “Agency”)	• This agency aims to advise the government of Malaysia, oversee CCUS activities, manage storage resources, administrate the “Post-Closure Stewardship Fund”, and promote CCUS policies and initiatives. • This agency consists of: the Secretary General of the Ministry charged with the responsibility for CCUS, the Director General of the Department of Environment, and not more than 6 members to be appointed by the Minister charged with the responsibility for CCUS.	

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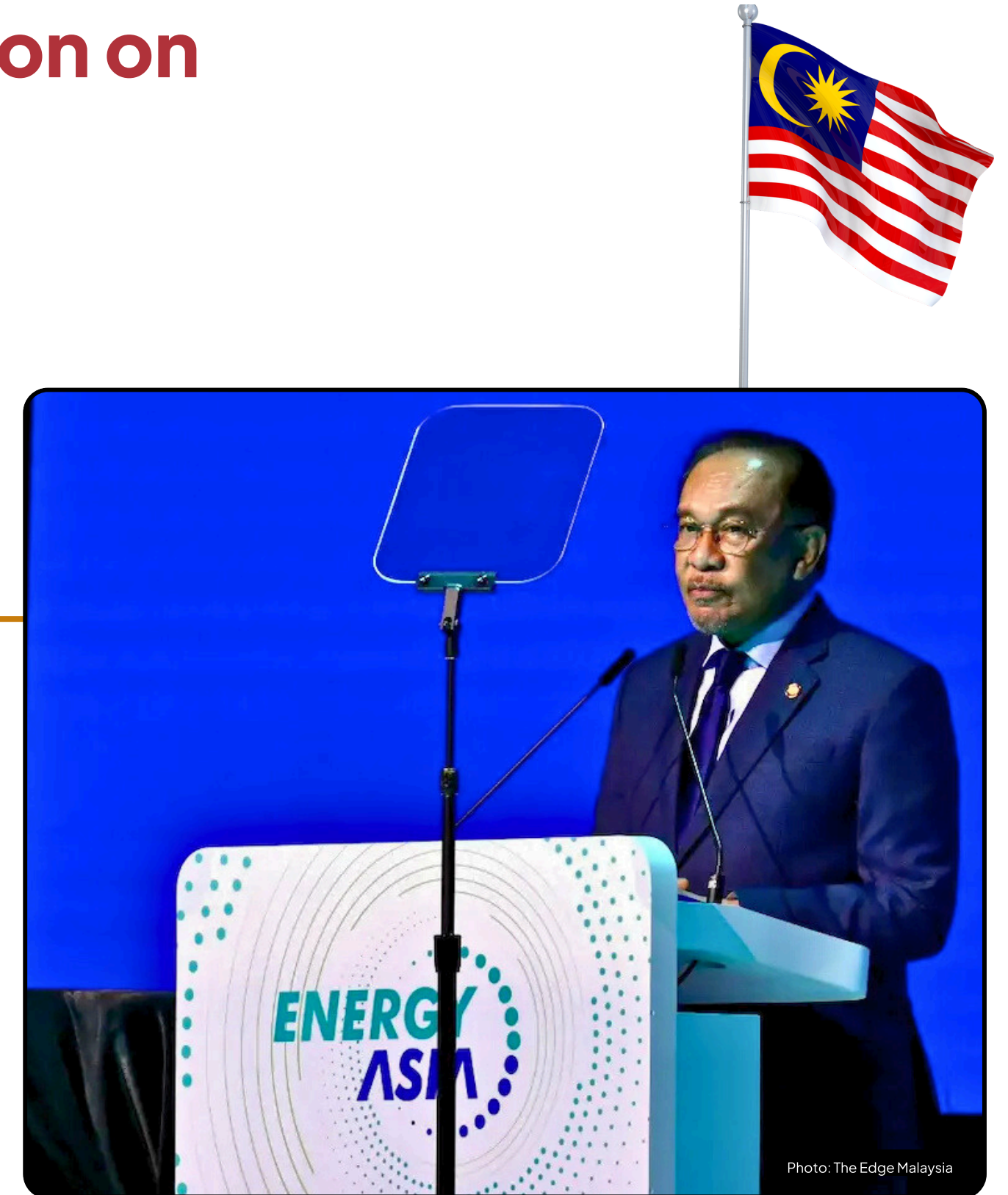
Area	Key Points	
Regulated Activity	The CCUS Act mandates: • The owning and operating of a carbon capture installation. • The transportation of CO₂ obtained through carbon capture, whether by road, railway, water, pipeline or by any other means. • The utilization of CO₂ obtained through carbon capture.	The CCUS prohibits: • The importation of CO₂ obtained through carbon capture outside Malaysia. • Any geological assessment of any potential storage complex or any geological formation in both onshore and offshore areas. • The operation of offshore and/or onshore storage sites for the permanent storage of CO₂ captured within or outside of Malaysia.
Operational Obligations	An operator must ensure that CO ₂ streams into a storage site which comply with the specified CO ₂ stream acceptance criteria – crucial for maintaining the integrity and safety of storage operations.	
Injection Levy	There is an injection levy to be paid by an operator to fund long-term monitoring and corrective measures of each storage site by the Government. This levy is pooled into the Post-Closure Stewardship Fund, ensuring financial support for ongoing stewardship activities.	
Closure and Post Closure Obligations	A storage site may only be closed after the “prescribed conditions” for closure have been completed and a closure certificate issued by the Agency. Nonetheless, the offshore and onshore operator continues to have post-closure obligations, by being responsible for: (i) site monitoring and reporting; (ii) corrective measures (iii) remediation measures and (iv) any other prescribed activities; until these obligations are transferred to the Government.	
Post-Closure Stewardship Fund	The CCUS Act establishes the Post-Closure Stewardship Fund (the “Fund”) which is administered and controlled by the Agency, to cover the costs of long-term stewardship of storage sites to be borne by the Government, including monitoring and remediation costs, after the transfer of obligations to the Government. It is comprised of: (i) Government contributions; (ii) injective levies; and (iii) income earned from investments financed from the Fund.	



Malaysia highlights international collaboration on CCS in Energy Asia

In Energy Asia 2025, **Malaysia's Prime Minister Datuk Seri Anwar Ibrahim** highlight that ASEAN has laid the groundwork of CCS through the [CCS Deployment Framework and Roadmap](#), which aims **to streamline policies and facilitate** the flow of capital and carbon **across borders**.

He added that **Malaysia's CCS efforts involve** more than **10 international partners**, including Japan, South Korea, and global energy firms such as Total and Shell. Petronas is also working with ENEOS Corporation, Mitsubishi and JX Nippon to explore the transportation and storage of carbon dioxide **from the Tokyo Bay area to Malaysia.**



JX Nippon Mining & Metals

Malaysia Partnered Up with Petronas in Expanding CCS Activities Across Malaysia

Malaysia partnered up with Petronas to provide 80 million tonnes of CCS capacity annually by 2030.

Petronas aims to provide up to **80 million tonnes of CCS capacity annually by 2030**. Not only emitting carbon emission from domestic operation, but also from other countries like Japan, Korea, and Singapore. Japan alone will require about 120–200 million tonnes per annum (Mtpa) as stated by Petronas Carbon Management Department Senior General Manager, Emry Hisham Yusoff.



7 potential additional sites are being considered for CCS activities



He also revealed that Petronas has identified up to seven potential CCS sites in Malaysia, in addition to three existing sites, two in Peninsular Malaysia and one in East Malaysia.

Malaysia's ambition to make Kasawari CCS Area as the biggest offshore CCS

Kasawari gas field was discovered in 2011 located off the coast of Malaysian Borneo. The government and Petronas plans on making the Kasawari field the world's largest offshore CCS project, storing CO₂ from around the world as soon as 2028. The plan is to build a fixed offshore platform 200 kilometers (120 miles) from the coast, where compressed CO₂ will be reinjected into a depleted reservoir via a 138-km (86-miles) subsea pipeline. This project is expected to cost MYR 4.5 to MYR 5 billion.

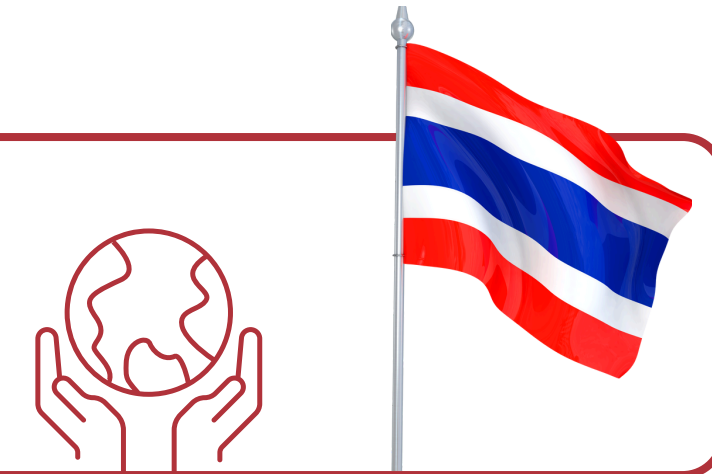
It's part of an ambitious plan to make CCS central to Malaysia's energy transition, after its inclusion in the National Energy Transition Roadmap, and the March passage of the CCUS Bill.



Thailand is Set to Achieve Net Zero 2050 by Advancing CCUS Technology Promoted by TCMA



Vice Chairman of TCMA, Mr. Nopadol Ramyarupa, stated that CCS has made significant progress through seven major actions aligned with global cement guidelines since Thailand 2050 Net Zero Cement and Concrete Roadmap.



The Thai Cement Manufacturers Association (TCMA) together with the National Nanotechnology Center of the National Science and Technology Development Agency (NSTDA) and its partners from government agencies, industry, research institutions, and academia, has signed an **MoU to establish the Thailand Carbon Capture, Utilisation, and Storage Alliance (TCCA).**

TCMA's collaboration with government agencies, research institutes, the private sector, and academia through the formation of TCCA is expected to establish a robust operational ecosystem for the practical deployment of CCUS in Thailand. The Alliance has four key objectives:

1. Advocate for supportive government policies and incentives
2. Enhance knowledge-sharing and accessibility to technology
3. Strengthen international collaboration and funding opportunities
4. Maximise the impact of cross-sector partnerships to make CCUS economically viable across the industry.



Photo: Bangkok Post

PTT Exploration and Production Public Company Limited (PTTEP)'s Progress on Thailand's CCS Project, Eyeing Final Investment Decision (FID) in 2025



PTTEP is dedicating an extra **\$1.747 billion** over five years to decarbonisation initiatives. These efforts include ventures into offshore wind energy, **CCS**, and hydrogen fuel, with the ultimate goal of transforming into a low-carbon organisation.

PTTEP is actively progressing with its CO₂ storage assessment offshore Thailand. The Front-End Engineering Design (FEED) for Thailand's first CCS project study in 2021 at the Arthit Field, an offshore gas exploration field in the Gulf of Thailand, has been completed. This project is expected to commence **CCS operations at the Arthit Field by 2027, aiming to reduce CO₂ emissions by approximately 700,000–1,000,000 tons per annum** from its petroleum production process. This year, **PTTEP is planning on final investment decision (FID)** for this project.



Other than CCS locating in Arthit, PTTEP is now currently preparing to acquire seismic to **assess the CO₂ storage potential in the upper Gulf, eastern coast of Gulf (specifically Rayong and Chonburi), and North Bangkok.**

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