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Malaysia accelerates its CCUS aspirations

The Edge, Malaysia



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Malaysia's journey to establish its carbon capture, utilisation and storage (CCUS) ecosystem is set to reach a significant milestone this year. With the recently established CCUS Act 2025 as the encompassing regulation for our ecosystem's development, the nation must now ensure that all the supporting levers — including regulations, technical expertise and incentives — are in place to establish domestic and international collaborations that will empower this new venture.

CCUS entails a long-term approach, which requires careful planning to ensure positive spillover effects on the wider economy, and commitment from investors along the value chain to ensure its enduring success.

Following the enactment of the CCUS Act, efforts are now underway to establish the competent agency that will oversee all activities related to CCUS and the management of carbon dioxide (CO<sub>2</sub>) storage resources in Peninsular Malaysia and Federal Territory of Labuan.

Carbon capture is a viable alternative to other carbon management levers which otherwise add to operating costs without addressing the emissions that continue to be released into the atmosphere. With CCUS, emissions are physically reduced, and what emerges are superior products and services that are accepted by global markets. This advantage may outweigh the costs that arise from the CCUS solution adoption.

For a developing country like Malaysia, hard-to-abate sectors such as the cement and steel industries will still need to develop their infrastructure to support socioeconomic growth. Investments in CCUS are necessary to overcome the decarbonisation challenges faced by these economic contributors. Further, if energy security takes precedence without the implementation of CCUS, significant increases in greenhouse gas emissions will be observed. We must take the necessary steps to drive Malaysia's efforts towards international climate change commitments, such as its Nationally Determined Contribution (NDC) targets, and CCUS is key to that.

In the drafting of the CCUS Act, a whole-of-nation approach is practised to ensure it is comprehensive, effective and fully encompassing. Civil society organisations, government bodies, industry leaders, local communities and the public were actively engaged and consulted with throughout the process. It is my belief that the development of CCUS-related policies and regulations, taking into account the feedback from all stakeholders, will ultimately ensure its safety and sustainability, and be able to instil stakeholder confidence to attract partnerships and technology into the country.

Malaysia is cognisant of the huge potential demand for CCUS among its regional peers. We want to lead the way in the region's CCUS push, in order to maintain the competitiveness of regional industries as the global backdrop on environmental sustainability and compliance increasingly takes centre stage.

Due to its strategic location on the East Coast of Peninsular Malaysia, CCUS hubs could be the enabler of a more equitable socioeconomic development as a pull factor to attract industries previously more concentrated in the more accessible West Coast region. The enactment of the CCUS Act is also crucial in allowing cross-border transport of CO<sub>2</sub>. Leveraging foreign sources and investments will contribute to Malaysia's CCUS expansion to achieve economies of scale.

Emphasising the need to safeguard Malaysia's interests, the CCUS Act provides for the imposition of an injection levy on storage site operators. This will be at a fair rate to support the country's CCUS infrastructure development, keeping in mind our goal of being competitive, attracting investors to choose Malaysia as the preferred CCUS hub.

The government is also setting up a Post-Closure Stewardship Fund, which will be utilised for long-term stew-



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— Datuk Nor Azmie Diron, Secretary General, Ministry of Economy

**Putting Things into Gear**  
Energy Transition Lever: Carbon Capture, Utilisation and Storage (CCUS)

Initiatives	Champions
Gazette CCUS Act and Regulations	Ministry of Economy
Enhance incentives and facilitate access to sustainable financing	Ministry of Finance & Ministry of Economy
Facilitate CCUS Hub infrastructure development with potential investors and financiers	Ministry of Economy
Establish bilateral MOUs and subsequently bilateral agreements for transboundary CO <sub>2</sub> movement for permanent storage	Ministry of Economy
Promote utilisation of CO <sub>2</sub> in Malaysia	Ministry of Investment, Trade and Industry

ardship of storage sites, including long-term monitoring of stored CO<sub>2</sub> to ensure safety and compliance with international standards at the facilities through their life cycle.

Today, the majority of nations have joined hands to achieve the aspiration of limiting global temperature rise, with over 170 signatories of the 2016 Paris Agreement. Regardless of changes in the geopolitical landscape, climate change is a reality, and net zero will remain a

prevalent feature in global economic growth. Malaysia has to prepare and set the foundations, or risk missing out on the opportunity to emerge as a leading CCUS hub in the region.

With the institutionalisation of rules and regulations on all CCUS activities, the ecosystem can be adopted in a measured and professional manner. It is the commitment of the government to improve the set of rules and legislation from time to time, as we grow our experience and expertise in this field.

Looking ahead, we envision a CCUS Roadmap for Malaysia to chart the various trajectories of the growth of the industry in the country. In pursuing this, we must ensure that the positives are enjoyed not just by the multinational corporations, but also our small and medium enterprises and local talents. Efforts must be put in to pave the way for local players to incorporate this sector's pathway into their planning, such as through provision of technology and services required along the CCUS value chain.

The CCUS venture is an opportunity for Malaysians from the perspective of innovation. We must push ourselves to meet the higher targets for this industry, identify the right actions and equip Malaysians with the knowledge required to tackle climate change as we pursue greater economic growth for the country. I look forward to the next phase of Malaysia's CCUS ambition and welcome greater participation from all stakeholders for a meaningful and successful journey towards net zero.

Datuk Nor Azmie Diron  
Secretary General  
Ministry of Economy