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KUALA LUMPUR: Malaysia is well positioned as a promising regional hub for carbon capture, utilisation and storage (CCUS), contributing to sustainable practices in the oil and gas sector as highlighted in National Energy Transition Roadmap (NETR), MIDF Amanah Investment Bank said.

Under NETR, Malaysia aims to establish three CCUS hubs by 2030 with a shared storage capacity of up to 15 million tonnes per annum (mTpa), about 300,000 barrels per day (bpd).

Malaysia has identified 16 depleted fields suitable for CCUS, which is a set of methods to stop carbon dioxide (CO₂) from reaching the atmosphere or remove what is already there.

MIDF Amanah in its research note said these fields offer a total estimated storage capacity of 46 trillion cubic feet for safe carbon storage. Among these, 11 are offshore in Sabah and Sarawak, while the remaining five are offshore in Peninsular Malaysia, which includes Terengganu and Pahang.

Hence, the CCUS bill, set to be tabled in Parliament this November and is expected to be concluded in 2025, will benefit many oil and gas services and equipment (OGSE) companies.

The bill is to regulate the activity and attract more

investors to the country.

It could also mandate a future unified permit application for CCUS projects, which could further assist in environmental protection and workforce safety, while adding other CCUS solutions to the nation, such as carbon sinks in rainforests and underutilised land.

Terengganu fields poised for CCUS

Terengganu stands out among the proposed states for CCUS due to its offshore oil wells and existing terminal facilities in Keroh, said the investment bank.

CCUS uses a similar facility to those used in the oil and gas industry. Hence, the cost for a completed CCUS facility – terminals, pipelines, floating production, storage and offloading vessels (FPSOs), liquid carbon dioxide (LCO₂) carriers, offshore rigs, field development and maintenance, and workforce – is roughly around RM20 billion to RM30 billion.

With the facilities in Keroh, the cost of new builds would not only be significantly lower, but also the efficiency of the existing operational infrastructure has the potential to attract more investments into the state and industry, it said.

Additionally, Terengganu has

an ecosystem of conventional and renewable energy resources that could benefit the state's implementing CCUS, further enhancing its position as one of the main regional hubs for sustainable energy solutions.

Companies like MISC to benefit

For CCUS offshore facilities and transportation, MIDF Amanah said it expects MISC Bhd to play a significant role in Malaysia's CCUS operations.

"Given that CCUS involves capturing and transporting CO₂ from point-source industrial facilities to storage or utilisation sites, MISC has the potential to contribute by providing safe and efficient transport solutions for captured CO₂ via LCO₂ carriers."

Additionally, Malaysian Marine and Heavy Engineering (MMHE), a subsidiary of MISC, had shown a promising role in providing new builds of CCUS offshore facilities. MMHE secured the engineering, procurement, construction, installation, and commissioning (EPCIC) contract for the Kasawari carbon capture storage project.

With these two expertise, we opine that MISC has the potential to be one of the forerunners in establishing CCUS regional hubs in Malaysia, said the investment

bank, setting a target price of RM9.75 for MISC share price. At 9.05 am, MISC was flat at RM8.64.

Downside risk

The downside risks to CCUS are the high cost of developing and deploying infrastructure, long-term storage uncertainty, challenging transportation methods, and disproportionate perceptions and impacts.

"We opine nevertheless that the proposed bill could reduce these risks considerably over time.

"Overall, we view the proposed bill as a great leverage to accelerate CCUS solutions to aid many sectors in abating greenhouse gas emissions as part of its sustainability solutions.

CCUS could also assist the oil and gas and marine transportation sectors, as these are often viewed as hard-to-abate industries under environmental, social and governance responsibility.

"With a stronger and clearer policy on CCUS, we believe that the CCUS operation – with a spillover to the overall oil and gas industry – would attract investments to the companies, state and nation, subsequently ensuring that the energy transition, as proposed in NETR, would run smoothly as planned." — Bernama