

PETRONAS accelerates carbon capture and storage for a future with cleaner energy production.

With constant innovations in the long-held practice of CCS, Malaysia's global energy provider continues to make strides towards a future of energy production that is cleaner and decarbonised.



In our pursuit for a decarbonised future, PETRONAS is at the forefront of innovation and efficiency, revolutionising the LNG value chain to create a more secure and sustainable energy landscape. PETRONAS catalysed the journey to realise the aspiration of achieving net-zero carbon emissions by 2050.



We kick-started our ambition in CCS back in 2004 by harnessing cutting-edge technology and implementing efforts to build the value chain.

This starts right at our home ground, Malaysia, with the use of Carbon Capture and Storage (CCS) technology in our high-carbon dioxide (CO₂) gas fields.

In 2010, PETRONAS ventured into monetising our high-CO₂ gas fields with capture technology through the Tangga Barat project. By 2026, PETRONAS aims to leverage our storage technology to store CO₂ in depleted gas fields, with the Kasawari gas field being the first.

As part of our goals, we are not only refining our methods of capture and storage, but also maturing the technology in place for onshore processing plants, in order for the CO₂ to be converted into more valuable products.

The Kasawari gas field, located in offshore Sarawak, is how PETRONAS will be showcasing the adoption of CCS in a high CO₂ gas field project, which could also contribute towards gas security supply. The Kasawari Gas project is planned for commencement in 2026 and is expected to capture an annual average of 3.3 million metric tonnes per annum of CO₂, making it among the largest CCS offshore projects in the world.

Extending our efforts across borders, we have also developed CCS solutions in partnership with technology providers, such as ExxonMobil, Shell, POSCO, JAPEX, and a panel

of like-minded global entities joining our cause to foster a wide-reaching network of collaboration towards a better future.

By advocating for this collective effort in our nation, through engagements with government, state agencies and corporations, PETRONAS aims to establish a synergy that encourages further investment, and more widespread adoption of CCS technologies, while we continue to advance our own decarbonisation goals significantly.

With the goal to achieve zero venting by 2024 and reduction of 11.6 million tonnes of CO₂ emissions from existing facilities by 2025, PETRONAS is driving the recognition of CCS as a crucial part of the equation towards a future of sustainable energy production.

