



PETRONAS

# The global drive for cleaner energy calls for emissions reduction and sustainable energy production practices.

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As Malaysia's global energy solutions provider, PETRONAS is decarbonising its operations starting from home.



The past few years have seen nations take heed of the negative impact of greenhouse gases (GHG) and climate change.



## Countries globally are strategically aligning their efforts for sustainability, as many nations commit to achieving carbon neutrality by 2050.



Malaysia stands alongside these nations with its own commitment to lowering GHG emissions and working towards becoming a net-zero carbon nation by the very same year.



This global movement extends to the LNG industry too, as energy providers take steps to address significant emission challenges while recognising the need to meet rising demand for gas. This transition towards sustainable energy production will be a complex objective with many moving parts to account for. For one, dependence on coal will still linger as the ongoing need for energy security sees some nations priced out of gaining continuous LNG resources.



**Hence, it is crucial that net-zero carbon emissions be made a reality in the near future, as a means to reduce coal dependence with a more reliable transition fuel such as natural gas.**



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## **PETRONAS is aligned with this movement, with the company's own initiatives to produce LNG in a more sustainable manner.**

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The first of these initiatives starts from within the LNG production process, as PETRONAS implements electrification throughout its plants. This is best demonstrated through the electrification project at the PETRONAS LNG Complex (PLC) in Bintulu, Sarawak. This project was initiated through a strategic collaboration with Sarawak Energy Berhad (SEB).

It is aimed at reducing the use of natural gas in Gas Turbine Generators (GTG) which power the plants through the electricity that they generate. Upon the completion of its dedicated substation and transmission line tower by 2024, the PLC will be able to receive a continuous supply of 90.0 Megawatts electricity generated from renewable hydropower, via the Sarawak main grid.



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## **This electrification milestone is expected to substitute around 40 per cent of PLC's total power requirements, and enable the reduction of greenhouse gas emissions by 0.5 million tonnes of carbon dioxide (CO<sub>2</sub>) equivalent per year.**

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Secondly, PETRONAS has implemented a zero-flaring practice during offloading which guides the procedures onboard both the company's floating LNG facilities: PFLNG Satu and Dua. This practice ensures that optimal operating conditions are maintained, to balance boil-off gas between PFLNG and the LNG Carrier, and helps in reducing emissions.

PETRONAS also uses methods of Carbon Capture and Storage (CCS) to reduce the carbon intensity of existing facilities and infrastructures.



With the company's very own CCS project at the Kasawari gas field in Sarawak, PETRONAS is set to oversee one of the largest offshore CCS projects in the world. Expected to come online by 2026, the Kasawari gas field will target to reduce CO<sub>2</sub> volume emitted via flaring by 3.3 million metric tonnes of CO<sub>2</sub> equivalent annually.

These methods of electrification, flaring reduction, and CCS are not just measures that PETRONAS undertakes to decarbonise the processes of LNG production. They also signify the company's commitment in supporting Malaysia's aspirations of achieving the status of a net-zero carbon nation by 2050.

As natural gas holds importance as a transition fuel in the journey towards a sustainable future, PETRONAS' role as a progressive energy and solutions provider is to strive for more sustainable LNG production thus forging a lower-carbon future for all.