



PETRONAS

# Increasing supply and accessibility to fulfill growing global demand for LNG.

PETRONAS adopts forward-thinking strategies throughout its global supply chain to provide sustainable LNG solutions.



For an industry just over half a century old,

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## liquefied natural gas (LNG) has matured rapidly into a crucial energy source in the global energy mix.

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This growth is supported by the trend towards a more sustainable energy future, given LNG's lower carbon footprint as compared to traditional fossil fuels such as coal and oil.

Recent years in the LNG market have been challenging. The unprecedented COVID-19 pandemic initially decreased global LNG demand due to economic lockdowns, but the downturn was short-lived.

Demand began to rise again in 2022 due to the geopolitical conflict in Russia, when the country dramatically reduced its pipeline gas exports to Europe. This compelled European and Asian countries to import LNG from other sources, pushing LNG and natural gas prices to historic highs.



Like all markets, the sudden price hike eventually subsided, enabling the global gas market to regain stability.

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**Today, the rapid growth of industrialisation and urbanisation is leading to an increase in LNG and natural gas demand, especially from emerging economies in Asia.**

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However, there are concerns that the current LNG supply will struggle to keep up with the rising demand. This raises a critical question: How does a global energy company like PETRONAS navigate and meet the demands of this dynamic LNG landscape?



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**On the global stage, PETRONAS is strengthening its supply portfolio by expanding into new markets.**

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This includes a partnership with Argentina's largest oil and gas company, YPF, to pursue a potential integrated LNG project at Argentina's Vaca Muerta's vast unconventional gas fields. The plant is estimated to produce 5 million tonnes of LNG per year (MTPA) for potential future exports.

Apart from new partnerships, PETRONAS maintains a diverse supply portfolio from gas production facilities at various locations across the globe, including Malaysia (PETRONAS LNG Complex), Australia (Gladstone LNG), and Egypt (Egypt LNG). Future projects in North America, collaborating with third-party suppliers such as Plaquemines LNG and Sabine Pass Liquefaction, underline the company's steadfast commitment to meeting the growing LNG demand.

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**The volatility of the gas market has also shifted buyers' behaviour to value more flexibility to manage uncertainty in the dynamic LNG industry.**

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Recognising this, PETRONAS has implemented various contracting approaches to address the unique needs of different customers. These contracting approaches include:



### Flexible Contract Terms

This contract term offers the maximum flexibility to customers. It allows adjustments in delivery schedules, quantities, and pricing to adapt to changing market conditions. Buyers can use this flexibility to efficiently manage their energy portfolio and respond to changing demand.



### Indexation and Price Formulas

These tailored contracts use indexation to different natural gas indices such as JKM, Henry Hub, AECO, as well as other price formulas to ensure that the contract pricing stays aligned with market realities.



### Hybrid Contracts

Hybrid contracts combine features of long-term and short-term spot market arrangements. Buyers get a mix of fixed and variable pricing, providing more options for managing price volatility.



### Portfolio Contracts

This contract term allows buyers to access PETRONAS' global LNG supply hub in Malaysia, Egypt, Australia and soon, Canada. Diversification through this flexible approach enhances the security of supply for buyers.

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**In addition to flexible contracting terms, PETRONAS provides customers with a range of customer-centric solutions catering to specific energy needs.**

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The first solution is LNG Break Bulking, which allows the transfer of LNG cargoes into smaller parcels between vessels, whether stationary or underway. Doing so supports the growth of new markets and assists non-traditional buyers facing operational constraints at their terminal.

Secondly, PETRONAS has become a one-stop gas supply centre for remotely located customers with their innovative Virtual Pipeline System (VPS) solution. Operational since 2020, the VPS solution has successfully delivered over 16 million kilograms of LNG using trucks fitted with ISO Tanks.

Lastly, PETRONAS is actively diversifying its global LNG fleet to meet the world's energy demands. The global LNG fleet of small, medium, and large-sized vessels has been reliably delivering LNG to over 25 countries. To date, PETRONAS has completed over 12,500 LNG cargoes from its global supply portfolio in Malaysia, Australia, and Egypt.

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**In the ever-evolving landscape of the LNG market, PETRONAS remains committed to delivering energy that powers progress.**

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By adapting to market shifts, these strategic initiatives help to tackle the supply and demand challenges faced in the industry.

Importantly, these efforts strengthen LNG's position as the preferred fuel for the energy transition, encouraging and easing the shift from heavy carbon fossil fuels towards more sustainable options - enabling progress for all towards a cleaner and greener future.

