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PETRONAS sees energy demand doubling by 2050

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Urgent need to scale investments, diversify energy mix

## OIL AND GAS

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**KUALA LUMPUR:** The global energy system is under severe strain from geopolitical conflicts, climate change and rapid technological shifts, says Petroliaam Nasional Bhd (PETRONAS) president and group chief executive officer (CEO) Tan Sri Tengku Muhammad Taufik Tengku Aziz, as he warns of a “polycrisis” gripping the sector.

Speaking at the opening of Energy Asia 2025 yesterday, Tengku Muhammad Taufik said the region’s energy demand is set to nearly double by 2050, requiring “the entire energy ecosystem to come together with synchronised and aligned efforts for a just and equitable transition where no community is left behind.”

He said energy security and climate action must not be viewed as competing but “complementary agendas”, adding that the region must urgently scale investments and diversify its energy mix to meet both goals.

Recent developments – including the escalation of conflict near the Strait of Hormuz, which channels 20% of global oil supply – have “sent prices surging in anticipation of a supply shock”, he said, warning that volatility is becoming the new norm.

“These seismic shifts of global conflicts, technological revelations and climate change have manifested in what PETRONAS describes as a ‘polycrisis,’” he added.

Tengku Muhammad Taufik noted that energy demand from data centres alone is expected to more than double, from 415 terawatt-hours (TWh) in 2024 to 945TWh globally by 2030 – accounting for over 20% of total demand growth during this period.

He said the Asia-Pacific region – home to 4.8 billion people – is projected to account for half of global energy demand by 2050.

“To address Asia’s growth ambitions even as it aims to achieve net zero, US\$88.7

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Tan Sri Tengku Muhammad Taufik Tengku Aziz

trillion in energy investment will be needed until 2050,” he said.

“On this note, I would argue that investment and spending across both conventional and renewable energy systems continue to be required.”

According to Tengku Muhammad Taufik, while fossil fuels still make up over 80% of the region’s energy mix, Asia is well-positioned to scale renewables and decarbonisation efforts through solar, wind, carbon capture, utilisation and storage and cleaner natural gas.

He said three things are important. Firstly, diversifying the energy mix.

“Nations must build a more balanced portfolio of both low-emission options and emissions-abated fuels to bolster energy resilience across different economies and use cases.”

This means more lower emissions barrels, sustainable aviation fuels and other biofuels, liquefied natural gas sourced from increasingly challenging terrains, lower- or zero-carbon hydrogen, solar and wind energy, carbon capture.

“Secondly, scaling up energy investments. As energy is the lifeblood of economies, investments will be critical to ensure energy availability and affordability.”

Lastly, fostering regional collaboration.

“We must all do this together if we are to bring forth our common energy future,” Tengku Muhammad Taufik concluded.

Echoing the sentiment, Saudi Aramco president and CEO Amin H Nasser warned that the “transition plan” had been “oversold and under-delivered”, particularly in Asia.

“We were told it would be rapid, painless and inevitably mean the collapse of conventional energy,” he said.

“Yet oil demand still exceeds 100 million barrels per day with no sign of collapsing.”

Nasser argued that “pragmatism is replacing idealism” and said fossil fuels will remain central in the energy mix, as emissions from these sources are reduced.

“The goal is not to abandon traditional energy; it is to improve it while expanding new solutions at a realistic pace.”

At a separate panel discussion, Institute of Strategic and International Studies Malaysia chairman and chief executive Datuk Mohd Faiz Abdullah said cooperation is essential for a successful energy transition, given Asean’s economic and technological diversity.

He said developing skilled workers, improving financial support for poorer countries and addressing regional imbalances are key challenges for a fair transition.

Meanwhile, Organisation of Petroleum Exporting Countries secretary-general Haitham Al Ghais emphasised the importance of continued investment in oil, noting that “from now to the year 2050, there are requirements for a staggering US\$17.4 trillion for the oil industry”.

“We have to transition. We have to move forward. We have to take care of climate change. But it cannot be at the expense of energy security nor energy affordability.”