

2024 Recap – Fossil Fuel Insights

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To provide an update on the fossil fuel key trends in 2024 and expectations for 2025. This article highlights the pathways of coal, oil, and gas in maintaining sustainable energy security towards clean energy transition in ASEAN.

Throughout the year 2024, the fossil fuel industry's activities are heating up again in ASEAN after an unprecedented shock of the global energy crisis between 2021-2023. As reported in the previous [2023 Recap - Fossil Fuel Insights](#), the region demonstrated resilience in oil and gas upstream activities, while navigating the complexities of the energy market to maintain fiscal and economic stability. This trend persisted into 2024, presenting ongoing challenges to energy security as ASEAN Member States (AMS) took significant measures to address declining oil and gas production and mitigate the impacts of energy market disruptions. Despite this, the region continued to explore innovative solutions to enhance energy security, reduce carbon emissions, and ensure sustainable energy development in the face of ongoing market volatility.

“Southeast Asia continues efforts to balance energy needs and climate commitments amidst declining oil and gas production, volatile markets, and fluctuations in energy demand. The region prioritises sustainable energy security, increasing LNG reliance, regional collaborations, and exploration activities to address resource limitations. Coal remains dominant, with Indonesia, Vietnam, and the Philippines boosting production and infrastructure, despite global energy transition pressures. Key advances in carbon capture, methane emissions reduction, and renewable integration highlight

commitments to cleaner energy. Investments in fossil fuels persistent as ASEAN nations sought to stabilise fiscal economies whilst transitioning towards a sustainable energy future.”

The Unyielding Role of Coal: 2025 Echoes 2024

Coal still holds its role as the main fuel source to fulfil energy demand and might still increase in 2025 amidst the region's plans for energy transition. The [dominance of coal](#) is associated with the high availability of this fossil fuel. The main regional producers of coal are Indonesia, Philippines, and Vietnam. According to the Ministry of Energy and Mineral Resources (MEMR), coal continues to dominate Indonesia's primary energy mix, accounting for [approximately 67%](#) in August 2024. The Indonesian government has approved a 2024 [coal production quota](#) of 922.14 million metric tons (Mt), nearly 30% higher than the previous target of 710 million Mt in 2023. To enhance production efficiency and drive sales growth, the Indonesian state-owned coal mining company has begun constructing [two train-loading stations](#), with a capacity to transport up to 3,000 tons/hour each.

The Philippines [relies heavily on its currently operating coal plants](#) to ensure the country has enough baseload capacity to meet the demand.

clean energy in the Philippines, the [establishment of new coal plants](#) remains necessary to provide stability of power supply, while renewable energy generating sources are still building up. A power company in the Philippines also suggested that the country needs to [continue relying on existing coal-fired plants](#) to maintain growing power demand.

Vietnam's [coal imports rose](#) significantly during the dry seasons, reaching 6.5 million tons in May 2024, driven by economic recovery and increased power demand from air-conditioning. [Coal imports from Lao PDR to Vietnam](#) are also expected to move faster as talks to speed up the progress of infrastructure projects between the two ASEAN countries are prioritised to support the demand. This trend is expected to continue as [coal-fired power plants will operate at a high level](#) in 2025 to meet the rising demand for electricity as stated by the government.

ASEAN countries maintain investments in coal power infrastructure projects through 2024. In Vietnam, a [delayed 2.12 GW coal-fired power plant](#) secured a loan to support its design, construction, and operation. [Investment in fossil fuel-fired power plants](#) in Thailand is projected to continue, with an expected increase of USD 3.7 billion by 2037 under the revised Power Development Plan (PDP). Meanwhile, the Philippines' government invested USD 323,000 for two-year exploration of the first [coal operating contract](#) in the Bangsamoro Autonomous Region to maintain energy security by reducing dependence on foreign coal sources.

Navigating Energy Needs in ASEAN: More Oil and Gas Exploration

Throughout 2024, oil and gas production in the region has experienced a steady decline which has been dropping since 2020. In Malaysia, crude oil and condensate [production fell for two consecutive quarters](#), declining by 0.5% year-on-year to 48 million barrels in the first quarter of 2024. Malaysia also expects [lower natural gas and crude oil output](#) in 2025 due to planned maintenance shutdowns of production

facilities and reduced demand in key export markets. In response to the decline in production, Malaysia's national oil and gas company has started operating its Kasawari Field with an estimated reserve of [10 trillion cubic feet of gas](#).

Indonesia's oil production has gradually declined over time; however, the government noted significant improvements in the fourth quarter of 2024, reaching [600,000 barrels per day \(BOD\)](#). Indonesia has maximised oil and gas reserves through several explorations, such as in [North Sumatra](#), [Sulawesi](#), and [East Kalimantan](#). In October 2024, the Indonesian government realigned its strategy to [reduce oil and gas exploration](#) permits from 320 to 140. This shift aims to prioritise the optimisation of existing wells, developing structures, advancing Enhanced Oil Recovery (EOR), finalising projects, and reactivating fields. With this approach, Indonesia is confident in meeting its oil production targets of [601,000 BOD by 2025](#) and [1 million BOD](#) by 2028.

Indonesia and Malaysia have strengthened their energy partnerships and investments, focusing on the potential for future oil and gas development, as the two main exporters in the region. Malaysia's oil and gas company (Petronas) received a [20-year extension](#) to its production sharing contract for the Ketapang block in Indonesia. Meanwhile, Indonesia's oil and gas state-owned enterprise (Pertamina) undertook an exploration project, with Petronas of Malaysia, on [Block SK510 considered as of the 'big fish'](#) in Malaysia with an estimated reserve of 6.6 trillion cubic feet of gas.

In other countries, drilling and exploration activities for oil and gas also have expanded throughout the year to maintain reliable performance. Thailand's government renewed efforts to restart discussions with Cambodia on [joint petroleum production](#) in the Overlapping Claims Area (OCA) in the Gulf of Thailand. In the Philippines, the Malampaya offshore field [exceeded its gas export capacity](#) during a grid alert in April, delivering up to 290 million standard cubic feet per day (MMSCFD).

Growing Reliance on Liquefied Natural Gas (LNG) to Fuel Powerhouse

In 2024, ensuring a stable LNG supply for electricity generation remains a key priority for ASEAN. Malaysia's Petronas has signed a five-year agreement to supply [16 million standard cubic feet of gas per day to Sabah Electricity](#) for power generation in Sabah and Labuan. In the Philippines, Quezon Power Philippines Ltd. Co. (QPPL) plans to construct a 1,200 MW LNG power plant with an [onshore regasification and storage facility](#), with commercial operations set to start by 2028. The facility will function as both an LNG import terminal and a combined cycle power plant to supply electricity in Luzon. Three leading power players in the Philippines—Meralco PowerGen Corporation (MGen), Aboitiz Power Corporation (AP), and San Miguel Global Power Holdings Corp. (SMGP)—are [launching the country's first integrated LNG facility](#) to boost power supply with over 2.5 GW of generation capacity, backed by advanced LNG storage and regasification capabilities.

With the increasing dependence on LNG for power generation, governments are enhancing infrastructure for storage facilities and transportation networks to mitigate potential disruptions. The [commercial operations of the floating storage and regasification unit \(FSRU\) Jawa Satu](#) for Indonesia's Jawa-1 LNG-fired power plant has commenced. It marks Asia's inaugural gas-to-power initiative, a significant achievement in the region's energy landscape. Singapore has launched its [first floating storage and regasification unit \(FSRU\)](#), stationed at Jurong Port, to supply natural gas for electricity. Vietnam Oil and Gas Group has finalised agreements for the [Block B-O Mon gas-to-power](#) project, involving offshore gas fields and a pipeline to supply gas to thermal power plants.

Global Fuel Price Volatility Sparks Regional Energy Policy Reforms and Subsidy Adjustments

The decline in US crude stockpiles in mid-March 2024, coupled with the geopolitical tensions disrupting fuel supplies in the region, contributed

to the volatility in fuel prices. Indonesia has set the March 2024 crude oil price at [USD 83.78 per barrel](#), a USD 3.69 increase. The global situation has been further complicated by domestic market and political dynamics which pushes prices higher. Fuel prices in Myanmar have surged to over [3,000 kyats per litre \(USD 1.43\)](#), with gasoline and diesel prices rising by more than 100 kyats (USD 0.05) per litre in just two days. The price of gas commonly used in Myanmar for cooking has [more than tripled](#) amid massive supply shortages, with some households being forced to switch to charcoal. In September 2024, Cambodia saw [a drop in gasoline and diesel prices](#) by 4.87% and 6.35%, respectively, over the past 30 days, with regular gasoline priced at USD 0.98 (KHR 3,900) and diesel at USD 0.94 (KHR 3,750) per litre, while the country anticipates an increase in oil demand by 2030.

In stabilising energy markets, governments used subsidies to protect consumers from volatile prices. The Indonesia government increased the allocation budget to [USD 115 billion for energy subsidies](#) in 2024, for fuel, LPG, and electricity, in response to the significant increase in demand. Meanwhile, Malaysia began to reduce diesel subsidies to save about [USD 852 million annually](#), shifting to targeted subsidies that aid low-income groups, while reallocating savings to assist those in need, amidst rising commodity prices and efforts to address fiscal and wage concerns. However, the policy has raised concerns about [cross-border smuggling](#) due to price disparities with neighbouring countries like Thailand, where diesel prices remain higher. Authorities anticipate increased smuggling activities as syndicates exploit these differences, highlighting the challenges of subsidy rationalisation.

Besides, governments are implementing evolving policies to address these interconnected challenges, including energy pricing reforms, and initiatives to support a stable and sustainable energy market. A draft law to empower energy authorities in Thailand to better [regulate domestic oil and cooking gas prices](#) is progressing for parliament approval. Under the bill, the government will set up a new commission to determine appropriate tax rates and extend

subsidies for diesel, LPG, and electricity due to the ongoing economic slowdown. Thailand planned to restructure the [country's energy pricing system](#), including relaxing regulations on oil imports and reducing petrol prices. [Vietnam](#) is also working toward a more market-driven fuel pricing mechanism while ensuring consumer protection. The Ministry of Industry and Trade has proposed allowing traders to set retail prices within a regulatory ceiling to maintain transparency and prevent monopolistic practices.

Riding the Waves: Market Adjustments and the Investment Boom Amid Global Uncertainty

Fluctuating prices have also impacted revenue, especially in downstream sectors. Malaysia's Petronas reported an 11% decline in first-quarter [net profit to USD 2.7 billion](#), due to higher operating costs and lower realised prices, amid a volatile oil and gas market. In contrast, Vietnam's upstream oil and gas companies experienced strong profit growth in Q3 2024 due to rising exploration activities. However, downstream firms in the country faced [significant profit declines](#) due to falling global oil prices.

In Indonesia, the government has updated [Regulation \(13/2024\)](#) regarding gross split production sharing contracts (PSCs), increasing contractors' profit share to 75%-95%, aimed at boosting upstream investment and making the country's oil and gas sector more competitive. Additionally, Vietnam's Ministry of Industry and Trade has introduced a draft decree on fuel trading to [replace Decree 83/2014/ND-CP](#), which aims to strengthen the position of primary traders. Thereby, it can provide companies with enhanced opportunities for market share growth and improved profit margins.

Although the industry experienced market turbulence, the region still witnessed a surge in upstream [oil and gas investments](#), driven by favourable market conditions, technological advancements, and rising energy demands. In Vietnam, a company has made a [final investment decision \(FID\)](#) on an integrated development

project involving a gas field off the Vietnamese coast and a pipeline connection to a nearby power plant. Meanwhile, Thailand's PTTEP planned to invest [USD 6.7 billion in oil and gas](#) to boost petroleum production by 9% to 505,000 barrels per day. In the Philippines, the Energy Regulatory Commission (ERC) is set to review a [USD 3.3 billion LNG deal](#) involving major energy companies to assess its impact on consumers amid concerns about reduced competition and potential increases in energy costs.

Southeast Asia's Fossil Fuel Reckoning: Balancing Energy Needs and Climate Commitments

In Indonesia, big banks are increasingly willing to [make fossil-fuel investments for the global energy transition](#) to shorten the life of Cirebon coal-fired power plants. Indonesia's newly elected President also vowed to [retire all coal plants in 15 years](#). While in Thailand, [investment in fossil fuel-fired plants will still continue at a slower pace](#) leading to 2030 along with the push for more renewable energy. In Vietnam, [a study was conducted by the Institute of Energy](#) to explore the challenges and opportunities in transitioning away from coal-fired power plants in Northern Vietnam in line with the country's commitment to net-zero emissions by 2050.

The phase-down of coal is critical, the demand for reliable energy sources creates a need for a cleaner alternative in the short term. Natural gas is considered a transition fuel in the ASEAN region to bridge from coal dependency to a more renewable energy mix. The Philippines also viewed LNG as a crucial component for ensuring energy security and environmental sustainability, as the [Malampaya gas facility's service contract \(SC 38\) has been extended from ending in 2024 to 2039](#). Vietnam fostered favourable conditions for [coal-to-gas power transition](#) projects, while also encouraging foreign investment. In Indonesia, it is expected that the [demand for natural gas will almost double by 2040](#) in the quest to reach the Net Zero Emission Target in 2060. The [optimising of LNG market penetration](#) is being carried out by PT Perusahaan Gas Negara Tbk (PGN) amidst the

decline in production to support the industrial sector and the government.

Although natural gas is considered a suitable energy source for transitioning from coal to renewable energy, there remain significant challenges, particularly methane gas leakage. Methane, a powerful greenhouse gas, is approximately 84 times more potent at warming the atmosphere than carbon dioxide over a 20-year period. Petronas of Malaysia [drives decarbonisation and methane emissions reduction efforts](#) with the ASEAN members and international organisations during the launch of the ASEAN Energy Sector Methane Leadership Program 2.0 (MLP 2.0) to support the Global Methane Pledge.

Besides methane abatement efforts, carbon capture and storage (CCS) is a crucial emerging technology in the region that can mitigate emissions from remaining fossil fuel use. Pertamina, Indonesian state-owned refiner and South Korean state-owned oil firm KNOC have made a deal for a [joint study to develop rig-to-carbon capture \(CCS\)](#) to repurpose decommissioned offshore oil and gas platforms. Indonesia issued the [Regulation of the Minister of Energy and Mineral Resources \(Permen ESDM\) No. 16/2024](#) on the Implementation of Carbon Storage Activities at the end of 2024. In addition, BPH Migas disclosed that the country's [prolonged use of fossil fuel energy](#) could be made possible by CCS technology. Thailand's oil and gas company (PTT) planned to advance its carbon reduction efforts through [carbon capture, utilisation, and storage \(CCUS\) technology](#) and a hydrogen fuel trial to help the country achieve carbon neutrality by 2050 and

net-zero emissions by 2065, with a pilot CCUS project planned by 2027 and hydrogen integration into gas for power generation by 2030.

Implementation of stricter regulations and ambitious targets showcased the commitment to cleaner energy alternatives. A collective effort towards a coal phase-out was also evident, supported by regional initiatives and dedicated funding schemes. Despite enormous struggle to maintain energy security and affordability, Southeast Asia demonstrated a transformative shift towards cleaner energy sources, marked by initiatives on CCS/CCUS technology, energy source diversification, and international collaborations to reduce carbon emissions.

Energy insight is an inside analysis based on collected news for certain period of time, through the ASEAN Energy News Clipping of the ASEAN Energy Database System (AEDS). This edition covers the year of 2024.



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