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Elevated oil prices compound Southeast Asia's fossil fuel subsidy challenge

- *Recent disruptions in global oil markets have exerted inflationary pressure on many Southeast Asian economies, where fossil fuels still account for a significant share of the energy mix, and reliance on energy imports from the Middle East remains substantial.*
- *Fossil fuel subsidies in Southeast Asia reached USD353.1 billion (8.1% of gross domestic product) in 2024. This support included explicit price and producer subsidies, as well as implicit subsidies for unpriced environmental externalities from fossil fuel use and foregone tax revenues. Indonesia, Malaysia, Thailand, Vietnam, and the Philippines account for the majority.*
- *Elevated oil prices have forced Southeast Asian governments to contain retail fuel prices, straining fiscal budgets and dedicated stabilization funds. This has renewed scrutiny of fossil fuel subsidies and underscored the urgency of reform as part of broader efforts to strengthen energy security and improve fiscal sustainability.*
- *Redirecting resources toward targeted support measures, expanding access to affordable clean energy, and investing in energy-efficient technologies can reduce fiscal pressures while protecting vulnerable groups. These measures can also free up public resources for healthcare and education, which generate higher social and economic returns.*

Major disruptions in global energy supplies following the closure of the Strait of Hormuz in early March have pushed crude prices to multi-year highs. With more than 80% of the crude oil and liquefied natural gas (LNG) transiting the strait bound for Asia, the region is bearing the brunt of the disruption.

Major Southeast Asian economies, including Indonesia, Malaysia, Thailand, Vietnam, and the Philippines, are highly exposed to these supply disruptions, as fossil fuels comprise a significant share of their energy mix. Based on 2025 data, reliance on energy imports from the Middle East remains substantial. Crude oil import dependence stands at 25% in Indonesia, 36% in Malaysia, 58% in Thailand, 92% in Vietnam, and 97% in the Philippines. For liquefied petroleum gas (LPG), Indonesia sources around 30% from the region, while Vietnam sources 42%. Malaysia's

exposure to refined petroleum products is about 8% (2025), while Thailand sourced around 24% of its LNG imports in 2024 from the Middle East.

Global oil market disruptions feed directly into domestic fuel markets, with effects varying across countries. This variation depends on policy frameworks and government responses, particularly in how retail fuel prices are managed. Indonesia and Malaysia rely on broad-based fuel subsidy frameworks to cushion consumers from price increases, while Thailand and Vietnam use dedicated funds to support price caps and subsidies. Although the Philippines operates a deregulated fuel market, it has declared a state of national energy emergency, granting the government additional powers to manage fuel price adjustments.

This is not the first time governments in Southeast Asia have had to deal with such shocks. Supply disruptions linked to geopolitical tensions and shifting demand patterns have contributed to persistent volatility in oil prices. In these circumstances, governments across the region are often constrained in their response capacity, given their limited energy reserves and weaker fiscal buffers relative to advanced economies.

As a result, the region continues to face repeated episodes of inflationary pressure, fiscal strain, and rising production costs. This has renewed attention on fossil fuel subsidies. Although politically sensitive and difficult to reform, these subsidies are increasingly being scrutinized as part of broader efforts to strengthen energy security and improve fiscal sustainability.

Governments scramble to contain retail fuel prices amid market volatility

Indonesia, Malaysia, Thailand, Vietnam and the Philippines carry some of the highest fossil fuel subsidy burdens in Southeast Asia. In 2024, explicit subsidies, arising from price support mechanisms that keep end-user prices below supply costs alongside direct support to producers, reached USD54.2 billion across these five economies (Southeast Asia: USD55.9 billion or 1.3% of the region's gross domestic product [GDP]). As a share of GDP, subsidies were largest in Indonesia at 2.3%, followed by Malaysia at 1.5%, Vietnam at 0.6%, Thailand at 0.3% and the Philippines at 0.1%.

Governments in these countries are scrambling to contain retail fuel prices, but rising global costs and uncertainty over the duration of the Middle East conflict are putting their efforts at risk. Existing oil reserves in storage are limited in these countries, with most holding less than 30 days of supply, except for the Philippines and Thailand, which reportedly have enough for around 45 days and 106 days, respectively. This is in contrast to Northeast Asian countries—Japan (254 days), South Korea (208 days), and China (120 days).

Indonesia and Malaysia have kept fuel prices subsidized while also introducing purchase caps from 1 April 2026 to manage demand. In Indonesia, petrol purchases have been capped at 50 liters per day for four-wheeled vehicles, including private, public transport, and public service vehicles. Diesel purchases have been capped at 50 liters per day for four-wheeled private and public service vehicles, 80 liters per day for four-wheeled public transport vehicles, and 20 liters per day for six-wheeled public transport vehicles. Meanwhile, Malaysia has temporarily reduced the purchase limit for RON95—a commonly used grade of petrol—from 300 liters to 200 liters per month.

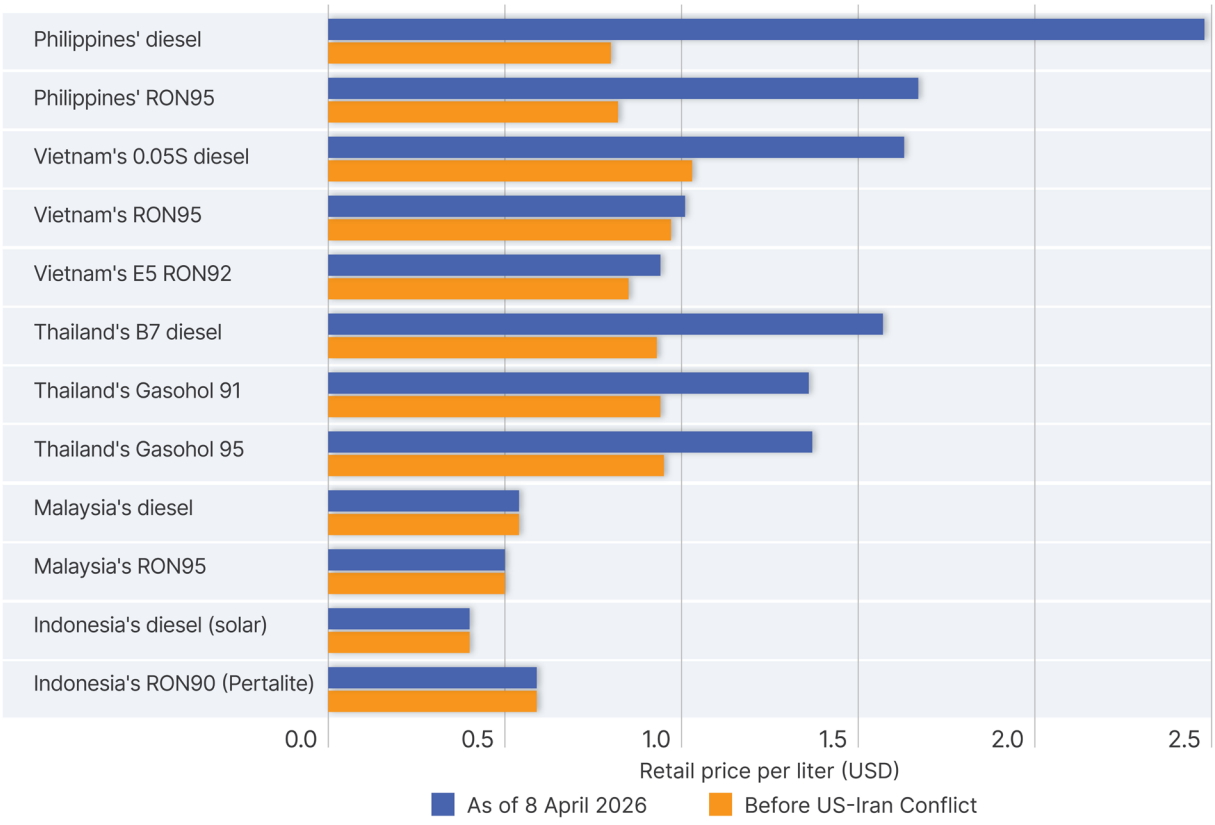
Thailand manages its diesel prices through the Oil Fuel Fund, a state mechanism that collects levies on fuel sales during low-price periods and absorbs extra costs beyond capped rates during price spikes. As the fund absorbed rising costs to maintain an initial cap of THB30 (USD0.9) per liter in early March, its deficit widened, prompting the government to adjust

retail price caps several times. The government has also reduced excise and other fuel taxes, while lowering E20 and E85 prices (high biofuel blends) to incentivize a shift toward alternative fuels and moderate demand. As of 8 April 2026, diesel prices were nearly 70% higher than in February (Figure 1).

Similarly, Vietnam has drawn on its Fuel Price Stabilization Fund to contain oil prices, while bringing forward the rollout of E10 biofuel from June to April to manage consumption. The government has also put in place a range of temporary fiscal measures until 30 June 2026. Import tariffs on selected fuel products have been reduced to zero. The environmental protection tax, which typically ranges from VND600 (USD0.02) to VND2,000 (USD0.08), has been cut to zero for gasoline (excluding ethanol), diesel, and jet fuel, while the special consumption tax on gasoline has been reduced from 8–10% to 0%. In addition, businesses have been exempted from declaring and paying fuel value-added tax (VAT) during this period, while retaining input VAT deduction.

The Philippines does not cap or provide universal subsidies for fuel. Retail diesel and gasoline prices have more than doubled since February, prompting the government to provide targeted subsidies to vulnerable groups. The government has allocated PHP2.5 billion (USD40.4 million) for a fuel subsidy program to assist drivers and transport operators affected by rising fuel costs. In addition, around PHP150 million (USD2.4 million) has been earmarked for distribution to farmers and fishers. Oil companies are facing government pressure to roll back fuel prices amid public pressure.

Figure 1: Price movements of subsidized fuel products in each country



Source: Indonesia: Jakarta Globe; Thailand: The Nation; Malaysia: Ministry of Finance; Vietnam: VnExpress; Philippines: Philstar
Notes: 1) Malaysia's diesel subsidy applies only in East Malaysia.
2) In the Philippines, diesel and RON95 are neither subsidized nor subject to price caps and are included for comparison purposes.
3) Currency conversions are based on exchange rates as of 8 April 2026.

To further curb national fuel consumption, Thailand, Vietnam, Malaysia, Indonesia, and the Philippines have all implemented flexible work arrangements for public sector employees and are encouraging the private sector to follow suit.

Spiraling subsidy costs set to weigh on fiscal health

The Indonesian government has allocated IDR381 trillion (USD22.5 billion) for energy subsidies and compensation to state energy firms for maintaining fuel prices and electricity tariffs this year. However, this budget was set prior to the conflict, based on an assumed average crude price of USD70 per barrel and an exchange rate of IDR16,500 per dollar. With Brent crude prices returning to triple-digit levels, efforts to keep fuel prices subsidized are likely to significantly widen Indonesia's budget deficit. The deficit stood at IDR695 trillion (USD40.1 million) or 2.9% of GDP in 2025, up from 2.3% in 2024.

The recent price surge pushed Malaysia's monthly petrol and diesel subsidies to an estimated RM5 billion (USD1.3 billion), which is more than seven times the RM700 million (USD178 million) spent prior to the run-up in global oil prices ahead of the war. Fossil fuel subsidies accounted for an average of 78% of the country's total subsidy bill between 2021 and 2024. Malaysia's fuel subsidies jumped more than fourfold (Table 2) in the aftermath of the Russia-Ukraine war in 2022, widening its fiscal deficit to RM99.5 billion (USD25.2 billion) or 5.6% of GDP in the same year.

Table 1: Breakdown of Malaysia's fuel subsidy spending

	2021	2022	2023	2024
RON95 (RM billion)	4.7	23.1	18.3	19.7
Diesel (RM billion)	2.9	18.7	13.5	11.5
LPG (RM billion)	2.7	3.4	2.7	3.7
Total subsidies (RM billion)	10.0	45.2	34.5	34.9
Average Brent crude (USD/barrel)	71.0	100.9	82.6	80.8

Source: Auditor General's reports.

The Thailand Oil Fuel Fund, which recorded a surplus of THB2.5 billion (USD70 million) on 1 March 2026, slipped into a deficit of THB786 million (USD22 million) on 8 March 2026, which further widened to THB62.4 billion (USD1.9 billion) on 26 April 2026 (Table 3). The deficit comprised a THB24.1 billion (USD736 million) shortfall from the oil account and a THB38.2 billion (USD1.2 billion) loss from the LPG account. This echoes earlier episodes of strains when the fund posted a total deficit of THB123 billion (USD3.44 billion) at the end of 2022 during the Russia-Ukraine war, peaking at THB133 billion (USD3.72 billion) on 20 November 2022.

To support liquidity amid ongoing price pressures, Thailand's Energy Ministry had initially planned to seek approval from the new government for a THB150 billion (USD4.2 billion) loan backed by the Finance Ministry, mirroring measures taken during the previous oil crisis. However, no further updates have been provided on this proposal. More recently, the Thai cabinet approved a THB20 billion loan (USD617 million) for the fund, with repayments scheduled between July 2028 and August 2031. Unlike the previous facility, this loan does not carry a guarantee from the Finance Ministry. Around THB30 billion (USD840 million) of the earlier debt remains outstanding.

Table 2: Thailand's Oil Fuel Fund net position

	End-2020	End-2021	End-2022	End-2023	End-2024	End-2025	26 April 2026
Net Fund position (THB million)	28,474	-4,480	-123,155	-78,557	-77,532	-6,644	-62,364

Source: Oil Fuel Fund Office.

Per an announcement on 13 March 2026, Vietnam's Fuel Price Stabilization Fund held a surplus of around VND5.6 trillion (USD220 million), sufficient for roughly 15 days at earlier disbursement rates for gasoline, kerosene, mazut and diesel. As oil prices subsequently eased amid a ceasefire, payouts were cut to VND800 (USD0.03) per liter for gasoline and mazut, and VND400 (USD0.02) per liter for diesel. The government has provided a VND8 trillion (USD303 million) advance from the state budget to support the fund. Meanwhile, the removal of fuel-related import tariffs, environmental protection tax and special consumption tax is expected to reduce state revenue by VND7.2 trillion (USD295 million) per month.

Vietnam's Fuel Price Stabilization Fund has demonstrated greater resilience than Thailand's, largely due to differences in design and implementation. Vietnam adopts a hybrid pricing mechanism, under which retail fuel prices are regularly adjusted in line with global benchmarks. The fund is used primarily to smooth short-term price volatility rather than suppress prices over prolonged periods. The government also allows more flexible and timely adjustments, including out-of-cycle price revisions, helping prevent the buildup of large financial imbalances.

Subsidy burdens become significantly larger when implicit costs are included

The underpricing of fuels consists of two distinct components—explicit and implicit subsidies.

Explicit subsidies refer to the gap between the financial cost of supplying fuel and the price paid by end users. These subsidies tend to attract greater attention because they are directly reflected in government budgets and sovereign fiscal positions.

Implicit subsidies, by contrast, are an often-overlooked dimension of fossil fuel subsidies. According to the International Monetary Fund (IMF), implicit subsidies arise when the efficient price of fuel—defined as the sum of supply costs, environmental externalities associated with fossil fuel use, and foregone consumption tax revenues—exceeds the retail price net of explicit subsidies. Environmental costs include carbon emissions, local air pollution, and road-related externalities such as congestion, accidents, and road damage. These costs vary by country, reflecting differences in emission intensities, exposure-related health risks, valuation of mortality risk, and estimates of infrastructure wear and tear associated with fuel consumption, among others.

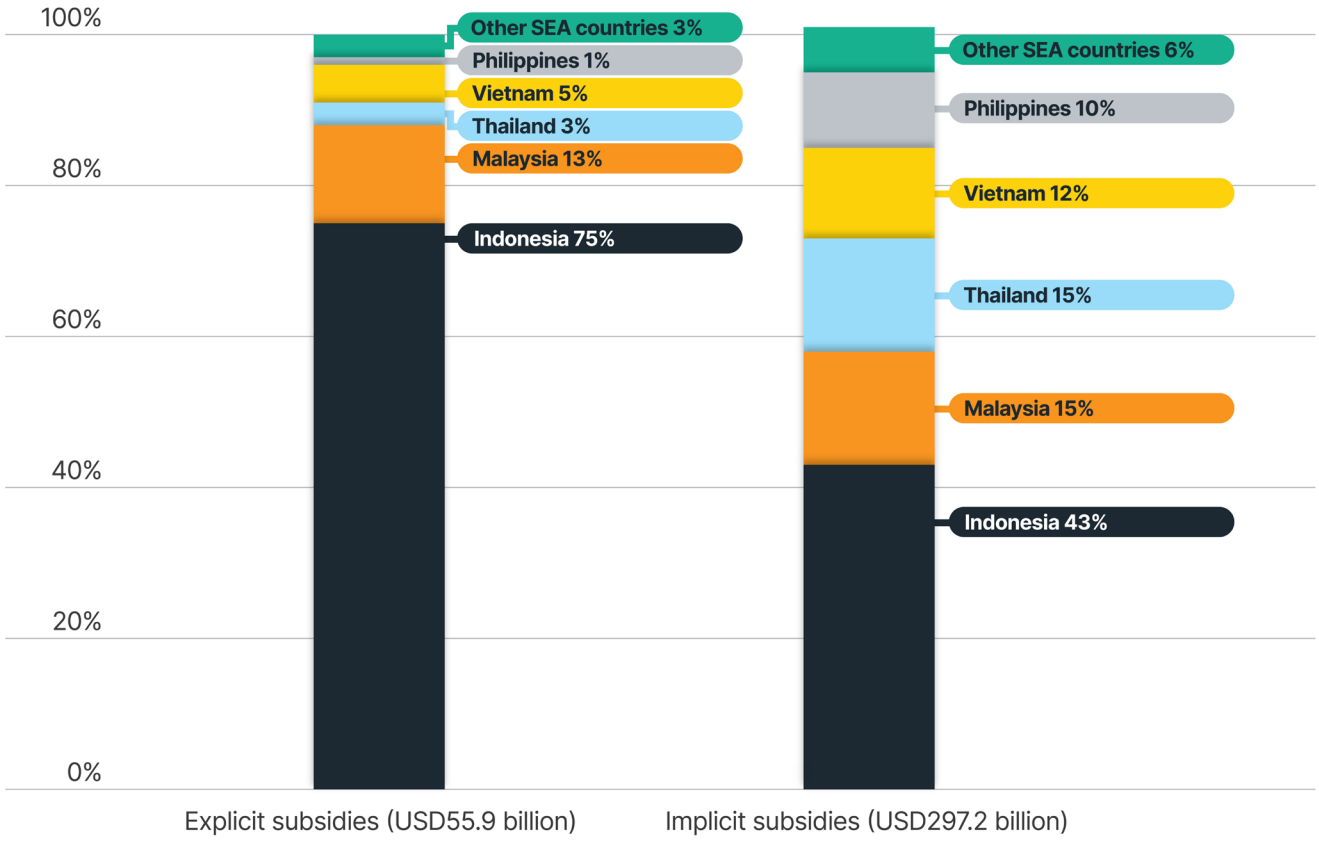
Explicit subsidies = [supply costs – fuel prices] * fuel consumption

Implicit subsidies = [environmental cost – fuel tax (if any)] * [1 + general rate of consumption tax] * [fuel consumption]

Efficient fuel price = [supply cost + environmental cost] * [1 + general rate of consumption tax]

In Southeast Asia, implicit subsidies amounted to USD297.2 billion or 6.8% of GDP in 2024. Together with explicit subsidies, total fossil fuel subsidies in the subregion reached USD353.1 billion or 8.1% of GDP in the same year. Subsidy burdens are heavily concentrated in Indonesia, Malaysia, Thailand, Vietnam, and the Philippines. Collectively, these five economies accounted for 97% and 94% of explicit and implicit subsidies, respectively (Figure 2).

Figure 2: Breakup of Southeast Asia's explicit and implicit subsidies in 2024



Source: IMF database; IEEFA calculations.

In Indonesia, total fossil fuel subsidies reached USD170 billion in 2024, equivalent to 11.2% of GDP. Coal and gasoline together accounted for 51% of total subsidies, reflecting the continued centrality of both fuels in Indonesia's energy system. Indonesia also stands out as the only country among the five to provide substantial producer subsidies, mainly for coal, which amounted to USD6.7 billion in 2024.

Malaysia's fossil fuel subsidies totaled USD51.3 billion in 2024, or 10.5% of GDP. Subsidies were heavily concentrated on transport fuels, with diesel and gasoline making up roughly two-thirds of the overall subsidy bill. Thailand's fossil fuel support stood at USD45.5 billion, equivalent to 7.0% of GDP. Diesel accounted for 44% of subsidies, followed by coal at 21%.

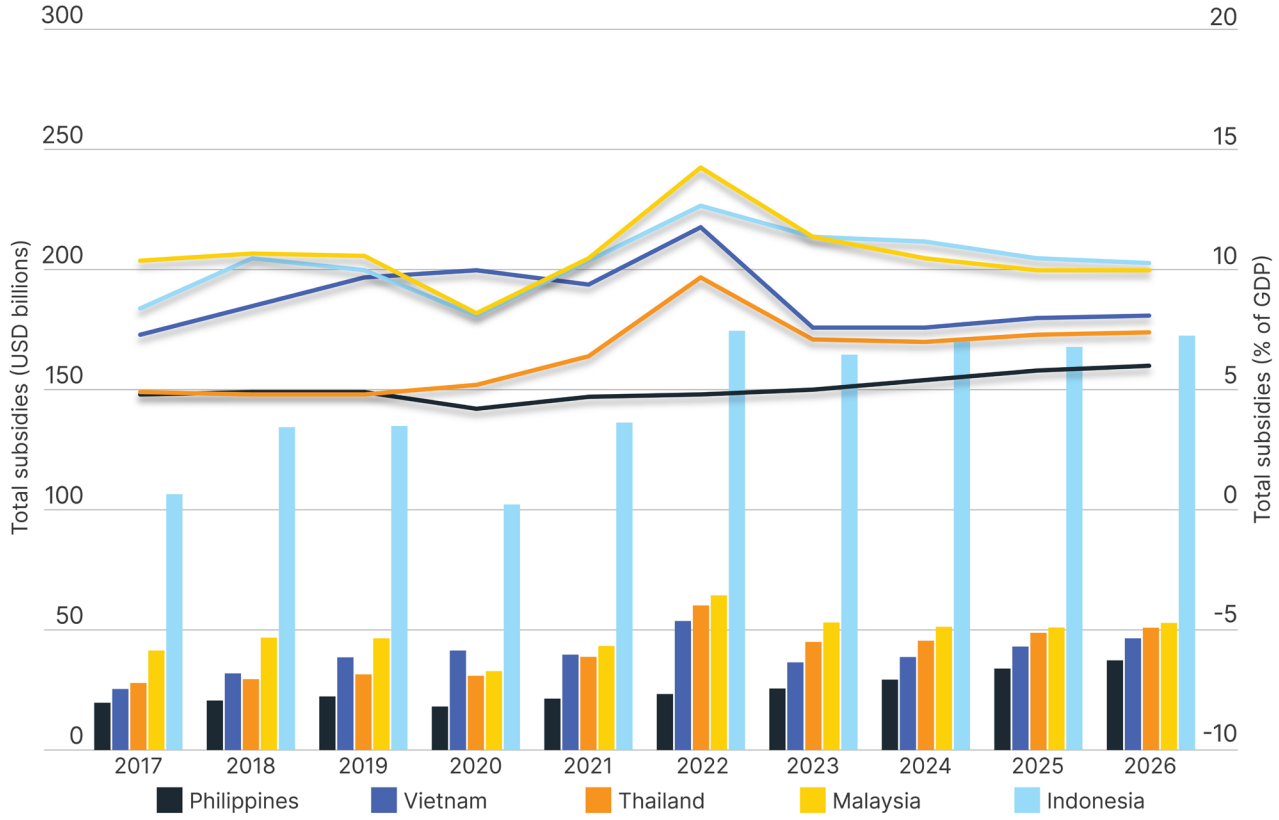
In Vietnam, fossil fuel subsidies stood at USD38.7 billion, or 7.6% of GDP. Coal made up the largest portion, comprising 40% of subsidies, while gasoline ranked second at 25%. In the Philippines, total subsidies were the lowest among the five countries at USD29.3 billion, or 5.4% of GDP. Coal was also the largest component (34%) in the country's subsidy bill, followed by gasoline at 27% and diesel at 26%.

Amid the energy crisis triggered by the Russia-Ukraine war, total energy subsidies rose sharply in 2022 (Figure 3), reaching USD174.5 billion in Indonesia (up from USD136.3 billion in 2021),

USD64.4 billion in Malaysia (up from USD43.3 billion in 2021), USD60.2 billion in Thailand (up from USD38.8 billion in 2021), USD53.7 billion in Vietnam (up from USD39.7 billion in 2021), and USD23.3 billion in the Philippines (up from USD21.4 billion in 2021).

Energy mixes, policy priorities, and subsidy structures differ significantly across these economies, resulting in varying levels of exposure to global volatility (Figure 4).

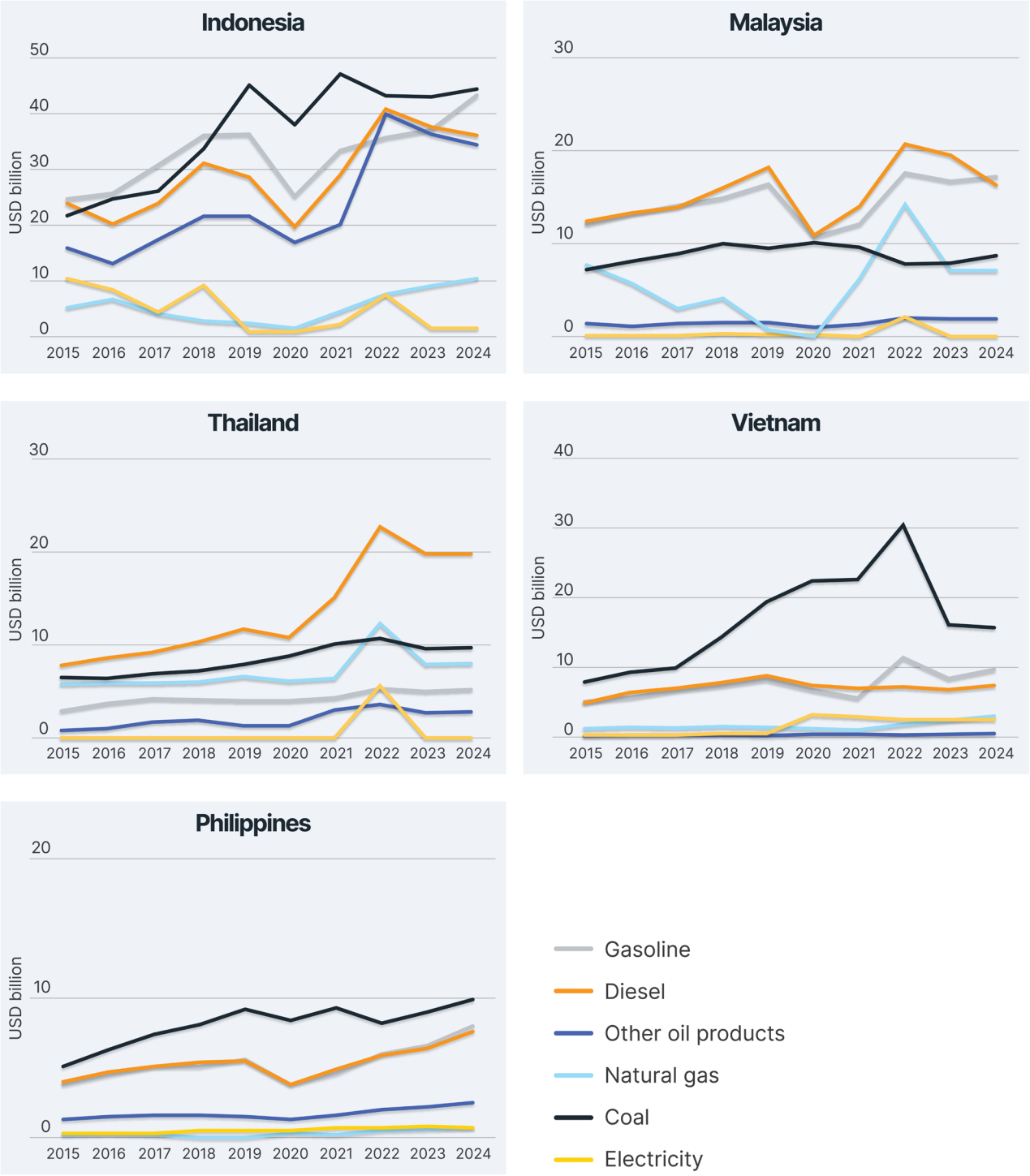
Figure 3: Trends in total subsidies by country (USD billion)



Source: IMF; IEEFA.

Note: Total subsidies represent the sum of explicit, implicit, and producer subsidies. Producer subsidies are present only in Indonesia. Data for 2025 and 2026 are IMF estimates.

Figure 4: Trends in total subsidies by fuel type (USD billion)



Source: IMF; IEEFA.

Note: Total subsidies represent the sum of explicit, implicit, and producer subsidies. Producer subsidies are present only in Indonesia.

Reforming subsidies is challenging but necessary

Fossil fuel subsidies have often started as broad-based measures that apply uniformly across the population regardless of income or need. While administratively simple, this approach is inherently inefficient because the absence of effective targeting mechanisms allows such

subsidies to disproportionately benefit higher-income households, which typically consume more fuel due to greater vehicle ownership and usage.

An IMF study found that the richest 20% of households in low- and middle-income countries capture around 43% of total fuel subsidies, approximately six times more than the poorest 20%. More recently, Malaysia's Prime Minister stated in 2024 that the wealthiest 15% of the population, along with foreign nationals, captured about 40% of RON95 petrol subsidies, amounting to around RM8 billion (USD2 billion). In Indonesia, around 63% of subsidized Pertalite fuel is consumed by middle- and upper-income households.

Blanket subsidies undermine policy effectiveness and weaken the core objective of protecting domestic consumers, especially lower-income households. These groups are most vulnerable to subsidy removal and should instead be supported through well-targeted social protection measures.

In addition, artificially low domestic prices create price differentials with neighboring markets, increasing the risk of smuggling and cross-border arbitrage. Subsidized fuel may be diverted and resold at higher prices, particularly in border regions. At the same time, weak monitoring and verification systems enable ineligible users to access subsidized fuel, resulting in substantial leakage. Evidence from Indonesia, Malaysia, Thailand and Vietnam points to similar challenges.

By keeping fuel prices artificially low, these policies also reinforce fossil fuel dependence and slow the transition to cleaner energy alternatives. The current fuel supply crisis should therefore serve as a catalyst for governments and industries to accelerate the transition to renewable energy and reduce exposure to future supply shocks.

Reform success depends on timing and political commitment

Heavy subsidy burdens have led many countries to repeatedly pursue fossil fuel subsidy reforms. However, while subsidies are often easy to introduce and implement, they are politically challenging to reduce or remove. Given that energy prices are tied to household living costs and business operating expenses, any adjustment tends to have immediate and visible economic impacts, often triggering public dissatisfaction and resistance.

The timing of reform is therefore critical. For instance, Indonesia's attempt to remove subsidies during the 1997 Asian financial crisis and Malaysia's reforms in 2008 amid the global financial crisis triggered large-scale protests that forced governments to reverse course. By contrast, later reforms implemented in Malaysia in late 2014 and Indonesia in early 2015 were more successful because they coincided with a decline in global oil prices. Both countries introduced mechanisms to align domestic fuel prices more closely with international market prices while scaling back gasoline and diesel subsidies. The lower global oil price environment helped cushion the impact on consumers.

However, sustaining these reforms require continued political commitment and the availability of affordable and viable alternatives for consumers. Without these conditions, rising global oil prices can trigger inflationary pressures and renewed calls for subsidy reinstatement. This was evident in 2018, when a surge in oil prices driven by tightening supply and strong demand contributed to the reintroduction or expansion of subsidies in Malaysia, Thailand, and Indonesia.

Recent reform efforts emphasize better targeting and improved efficiency

In recent years, a common trend in managing heavy subsidy burdens has been the push to improve targeting and efficiency. Governments are increasingly deploying digital and administrative tools to better direct support to eligible groups. MyPertamina in Indonesia and BUDI Madani 95 in Malaysia are examples of such tools. By requiring consumers to access subsidized fuel through app- or card-based systems, these mechanisms help ensure that benefits reach only eligible users. They also generate valuable data on consumption patterns, strengthening monitoring capabilities, and enabling more effective policy refinement over time.

Alongside these systems, targeted assistance measures have been expanded to protect vulnerable groups. In Malaysia, these include fleet card programs for eligible logistics and transport operators and the BUDI Agri-Komoditi scheme, which provides cash assistance to farmers and small businesses reliant on diesel vehicles. Both Indonesia and Malaysia have signaled intentions to restrict subsidized fuel access for higher-income households. However, such measures have yet to be fully implemented due to their complexity as well as enforcement challenges and political sensitivities.

Thailand's blanket subsidy framework has shown clear strain amid the recent crisis, with the government raising retail fuel prices multiple times since March. These adjustments are likely to weigh on the country's fishing industry, a key export sector that generated around USD7 billion in fishery products in 2024. To contain fiscal pressures, the government has begun shifting its approach by introducing temporary targeted subsidies, including for non-scheduled freight trucks, public transport operators and ride-hailing drivers.

Vietnam's current mechanism allows fuel prices to be adjusted regularly in line with global benchmarks. The recent relief measures, including waivers on environmental protection taxes, special consumption taxes, and fuel-related import tariffs, are temporary and were introduced in response to the recent spike in oil prices. Overall, the government's approach is more targeted and time-bound, aimed to address short-term cost pressure.

The Philippines has allowed its downstream oil industry to track global oil prices through weekly price adjustments following the implementation of the Oil Deregulation Act in 1998. As a result, the country is often more vulnerable to the impact of global oil price surges. To mitigate this, the government has relied on ad hoc but targeted support measures for affected groups, particularly in the transport sector. For instance, the government allocated a PHP2.5 billion (USD40.6 million) relief fund to support public utility vehicle drivers, including taxis, tricycles, ride-hailing and delivery services. In April 2026, the government also announced a PHP10 (USD0.2) per liter subsidy for public utility vehicles for a three-month period with a total budget of PHP1.5 billion (USD24.4 million).

The way forward

The highly uncertain global environment and the increasing frequency of oil price shocks should serve as a catalyst for governments and industries to accelerate the transition to cleaner, and more resilient energy alternatives.

While fossil fuel subsidies remain politically sensitive and difficult to reform, addressing them is becoming increasingly unavoidable as part of broader efforts to strengthen energy security and improve fiscal sustainability. With appropriate supporting measures and a well-designed policy framework, such reforms can be implemented more effectively and sustainably.

Recommendations

1. Remove blanket subsidies and introduce targeted support measures

Blanket fuel subsidies are costly, inefficient and regressive. Governments should replace them with targeted forms of support that better direct resources toward vulnerable groups while reducing fiscal burdens. For countries that have already introduced app- or card-based systems to curb leakage and smuggling, further refinements are needed. These include differentiating access and pricing based on usage patterns through the introduction of new consumption caps or tightening of existing monthly limits.

In Indonesia and Malaysia, where governments maintain fixed fuel prices, a more flexible pricing mechanism that allows partial adjustment to global market movements would help reduce fiscal pressures during periods of high oil prices while still preserving a degree of price stability for consumers.

Governments should also expand targeted social protection measures such as cash transfers, transport assistance or food support to ensure vulnerable groups are better protected from cost-of-living pressures. Such measures are more efficient and equitable than universal fuel subsidies.

2. Redirect subsidy savings toward better targeted programs

Fossil fuel subsidies crowd out higher-priority public spending. Redirecting these resources allows governments to allocate funds more strategically. Reinvestment in healthcare and education can improve human capital, boost productivity, and support inclusive growth. These sectors typically deliver far greater social and economic returns than broad-based fuel subsidies.

Health expenditure per capita remains relatively low across these economies. According to World Bank data for 2023, spending stood at USD132 in Indonesia, USD450 in Malaysia, USD327 in Thailand, USD197 in Vietnam, and USD194 in the Philippines. These are well below levels in advanced regional economies such as Singapore (USD3,922), Japan (USD3,638), and South Korea (USD3,137).

A similar gap is evident in education spending. As a share of GDP, government expenditure on education remains modest in Indonesia (1.3%), Thailand (2.5%), and Vietnam (2.9%), while Malaysia and the Philippines allocate relatively higher shares at 3.5% and 4.0%, respectively.[1] By comparison, Japan and South Korea spend around 3.3% and 5.4% of GDP, respectively.[2]

3. Invest in infrastructure and public transport

Expanding and upgrading public transport systems such as buses and rail networks, provide affordable and reliable mobility alternatives. This is particularly important in Southeast Asia, where transport accounts for a significant share of household expenditure. Evidence from the region shows that transport costs range from 9–16% in the Philippines, 13% in Indonesia, 11% in Malaysia, and 22% in Thailand.

Beyond individual affordability, the broader economic and environmental gains are also significant. Globally, the transport sector accounts for roughly 30% of final energy demand.

[1] Vietnam data refers to 2022; Indonesia, Malaysia, and Thailand data refer to 2023; and the Philippines data refers to 2025.
[2] Japan data refers to 2021, while South Korea data refers to 2022.

In Southeast Asia, this challenge is compounded by rapid urbanization and a surge in vehicle ownership that has outpaced the development of transport infrastructure.

Strengthening mass transit systems is therefore a pivotal strategy for easing chronic congestion and reducing air pollution, which remains a persistent public health challenge driven largely by transport emissions. It also improves energy efficiency in the transport system, as moving passengers via buses and rail requires significantly less energy per person compared to private vehicles. In addition, robust transit systems support national decarbonization pathways. This is especially crucial as Indonesia, Malaysia, Thailand, and Vietnam work toward net zero emissions, while the Philippines aims to reduce greenhouse gases by 75% by 2030. As of 2024, transport accounted for 12% of emissions in Indonesia, 18% in Malaysia, 20% in Thailand, 9% in Vietnam, and 15% in the Philippines.

4. Make cleaner alternatives more affordable

To ensure a politically and socially sustainable transition away from fossil fuel subsidies, governments must make cleaner alternatives both affordable and accessible. A key priority is accelerating the electrification of transport through well-designed policies. These include targeted purchase incentives, tax reductions, and financing support to help lower upfront costs, which remain a primary barrier to electric vehicle (EV) uptake in many developing economies.

EV adoption across Southeast Asia has accelerated significantly, albeit from a low base. In 2025, EV penetration reached 33% in Vietnam (up from 9% in 2023), 30% in Thailand (up from 11% in 2023), 18% in Indonesia (up from 6% in 2023), 4% in Malaysia (up from 2% in 2023), and 4% in the Philippines (up from 0% in 2023). The wide divergence in these figures reflects varying scale, consistency, and policy support aimed at improving affordability.

National strategies across the region demonstrate a diverse range of fiscal tools. Vietnam offers a full exemption on EV registration fees from 2025 through February 2027, which significantly reduces upfront costs, given that these fees typically account for 10–12% of the vehicle price. Thailand has utilized its Battery Electric Vehicle 3.5 scheme to lower import duties and cut excise tax from 8% to 2% for eligible EVs, while providing direct purchase subsidies of THB100,000 (USD3,068) in 2024 and THB75,000 (USD2,300) in 2025 for selected mass-market models.

Meanwhile, between 2023 and 2025, Indonesia's incentives for EVs included a temporary luxury tax exemption, import duty waivers and reduced VAT of 5–10% (depending on local manufacturing content). Malaysia has adopted a more extended and comprehensive incentive framework, offering full import and excise duty exemptions for imported EVs until 2025, and for locally assembled EVs until 2027, alongside tax incentives for charging infrastructure and related investment. In the Philippines, zero tariff rates and import duty exemptions for EVs are in place until 2028.

5. Invest in energy-efficient technologies

Governments should also invest in energy-efficient technologies to reduce overall energy consumption and minimize reliance on fossil fuel imports. This is particularly important in Southeast Asia, where rapid urbanization and rising cooling demand are driving strong growth in electricity consumption, especially in residential and commercial buildings. The adoption of high-performance air conditioning systems and smart energy management technologies can significantly improve energy efficiency and reduce electricity use.

A recent roadmap by the ASEAN Centre for Energy and the United Nations Environment Programme highlights the potential of passive cooling solutions such as natural ventilation, reflective roofs, and high-performance building envelopes—to reduce cooling energy demand by around 20–50%. However, the uptake of these technologies remains constrained by high upfront costs, limited technical expertise, and limited access to financing. In this context, governments could consider redirecting a portion of existing energy subsidies to support their deployment and large-scale adoption.

At the power system level, smart grid technologies and stronger demand-side management measures, such as shifting electricity use to off-peak hours, can improve efficiency by better aligning electricity supply with demand. An estimated USD4 billion to USD10.7 billion is required to modernize ASEAN's power networks, which could help prevent up to USD2.3 billion in economic losses from unplanned outages by 2040.

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