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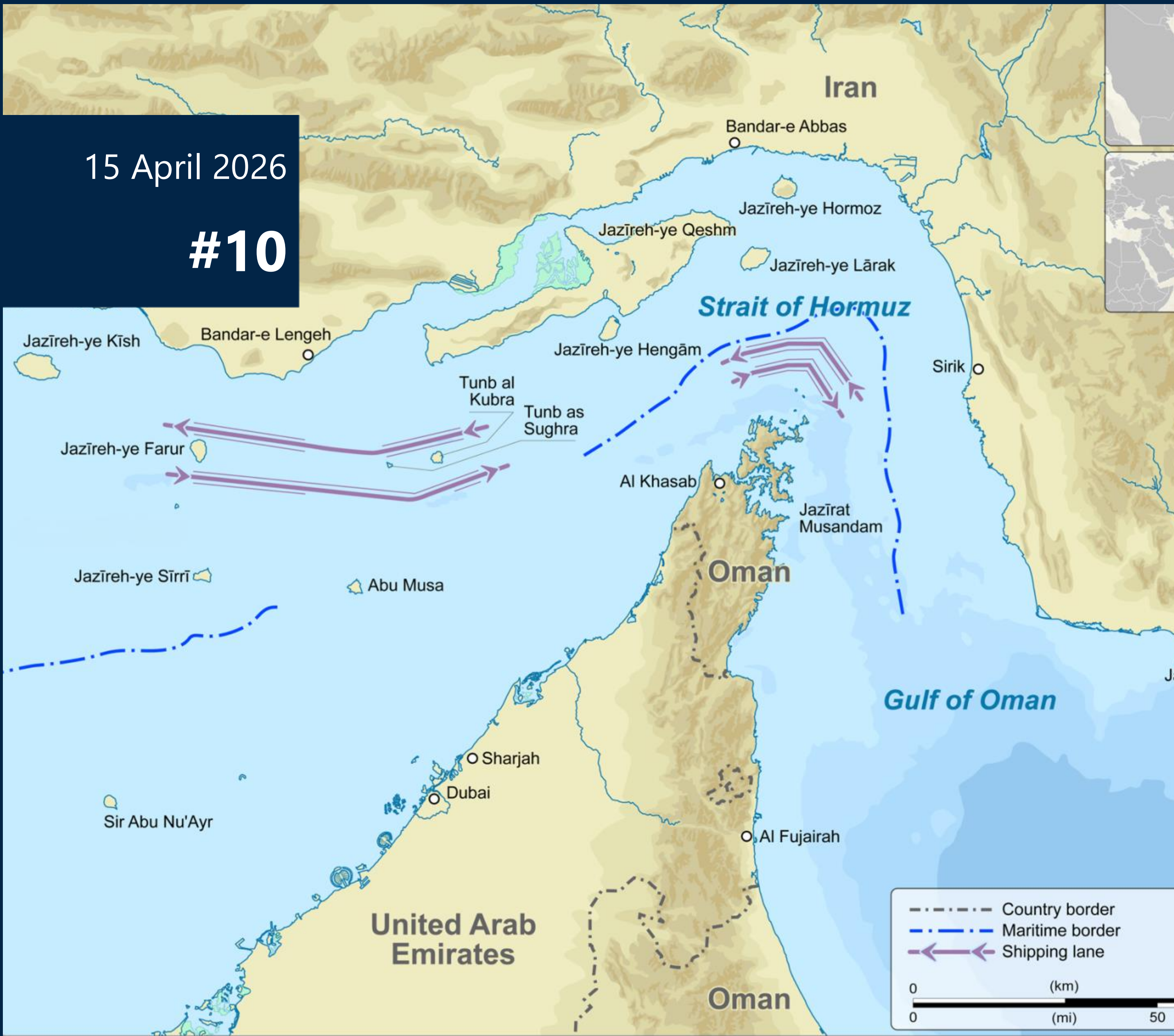

From Shock to Transformation: Rethinking Asia's Energy Security Post-Hormuz Crisis

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POLICY BRIEF

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Highlights

1. A single chokepoint at the Strait of Hormuz carries ~20% of global oil and up to 25% of LNG, with 80-90% of flow destined for Asia, making this a system-wide vulnerability.
2. Asia is structurally exposed, with major economies importing 30–90% of oil and gas from the Middle East, much of it transiting Hormuz.
3. Beyond skyrocketing fuel prices, the Hormuz crisis revealed critical weakness in the current system when it is under stress.
4. Coal has re-emerged as a strategic buffer across Asia under system stress, exposing a critical gap in the transition towards reliable low-carbon energy systems.
5. Energy security must shift from supply diversification to system design, combining stable low-carbon energy, diversified supply partnerships, and deeper Asian regional cooperation.

Summary

Asia faces acute vulnerability to the geopolitical tensions centred on the Strait of Hormuz, receiving 80-89% of its oil and close to 90% of liquefied natural gas via the Strait of Hormuz. While strategic national oil and gas reserves provided temporary relief, fast-rising prices, and now shortage of supplies, are triggering both coal resurgence and determination to find alternative supplies of fossil fuel to ensure energy security in the short-term while accelerating the development of nuclear energy. The crisis, on a positive note, represents an opportunity to shift from crisis response towards systemic redesign, recognising that future energy security depends not on access to markets, but on the resilience of energy systems.

What's the issue?

The world is once again confronting an energy crisis, but a comparison with the 1970s oil shocks only understates both its scale and its structural implications. Prior to the Iran conflict, approximately 20 million barrels per day of oil, equivalent to about 20 per cent of global consumption, passed through the Strait daily.[1] In addition, roughly 90–100 billion cubic metres of LNG annually, representing 20–25 per cent of global LNG trade[2], also transited this route. Today's disruption is not confined to oil alone. It simultaneously affects crude, natural gas, and critical supply routes, most notably

[1] International Energy Agency. 2026. "Strait of Hormuz: Factsheet." February 2026. https://www.iea.org/about/oil-security-and-emergency-response/strait-of-hormuz.

[2] International Energy Agency. 2026b. "The Middle East and Global Energy Markets: Key Facts on the Strait of Hormuz, Oil and Gas Markets, and the IEA's Response." 2026. https://www.iea.org/topics/the-middle-east-and-global-energy-markets.

the Strait of Hormuz, through which a significant share of global energy flows.

Asia is by far the dominant beneficiary of energy flows through the Strait of Hormuz. Around 80–90 per cent of crude oil and oil products transiting the Strait are destined for Asian markets, while roughly 83–90 per cent of LNG exports passing through the route also go to Asia, with these volumes accounting for about 27 per cent of Asia's total LNG imports.[2] In addition to energy, the Strait is a critical artery for broader trade, with a significant share of containerised goods, petrochemicals, and bulk commodities moving along the same corridor linking the Gulf to Asia's manufacturing and consumption centres. Taken together, this means Asia is not only the largest energy recipient from Hormuz, but also heavily dependent on it for wider trade flows, making the region uniquely exposed to disruptions in this single maritime chokepoint. As such, the closure of the Straits of Hormuz is not merely a price shock but a systemic stress test. The lesson is no longer about diversifying supply. It is about redesigning the energy system itself.

Even without a full physical disruption, heightened geopolitical risk has translated into immediate market impacts. Oil prices have risen from around US$80–90 per barrel[3] to above US$120 per barrel,[4] while Asian LNG spot benchmarks (JKM) have increased from approximately US$10–15 per MMBtu to US$25–40 per MMBtu. These increases, although below the peaks observed during the Ukraine crisis, reflect a persistent and concentrated risk premium associated with a single point of failure in the global energy system.

The impact on Northeast Asia is particularly acute. Japan imports approximately 2.8 million barrels per day of crude oil, of which around 95 per cent is sourced from the Middle East.[5] South Korea imports about 2.8–3.0 million barrels per day, with roughly 70 per cent originating from the same region. In natural gas, Japan imports approximately 65–70 million tonnes of LNG annually, while South Korea imports around 45–50 million tonnes,[6] accounting for about 30 and 11 per cent in each respective country's total LNG import. Since all of these LNG supplies transit through the Strait of Hormuz, this creates a dual exposure where both oil and gas supply chains are simultaneously vulnerable.

Southeast Asia faces a similar but evolving risk profile. The region imports approximately 5–6 million barrels per day of crude oil and refined products. Singapore sources about 50–per cent of its crude imports from the Middle East, reflecting its role as a regional refining

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[3] International Energy Agency. 2026. "Oil Market Report - March 2026."
[4] Wong, Kandy. 2026. "If the Iran War Takes Oil above US$120 a Barrel, How Bad Could the Shock Get?" *South China Morning Post*, March 19, 2026. https://www.scmp.com/economy/global-economy/article/3347193/if-iran-war-takes-oil-above-us120-barrel-how-bad-could-shock-get.
[5] Golubkova, Katya. 2026. "Japan's Middle East Energy Dependency - and How It Mitigates Shocks." *Reuters*, March 4, 2026. https://www.reuters.com/sustainability/boards-policy-regulation/japans-middle-east-energy-dependency-how-it-mitigates-shocks-2026-03-04/.
[6] World Bank. 2026. "Natural Gas, Liquefied Imports by Country |2024." 2026. https://wits.worldbank.org/trade/comtrade/en/country/All/year/2024/tradeflow/Imports/partner/WLD/product/271111.

hub. Thailand imports around 1.0 million barrels per day, with approximately 40–50 per cent from the Middle East. Indonesia imports roughly 0.8 million barrels per day, with 30–40 per cent from Middle Eastern suppliers, a share that is increasing as domestic production declines. Vietnam is also becoming more import dependent as its upstream resources mature. These structural trends reinforce the region's growing reliance on energy flows that depend on uninterrupted transit through the Strait of Hormuz.

Governments have responded with short-term measures to stabilise markets. Strategic petroleum reserve releases have exceeded 200 million barrels globally, led by the United States with approximately 180 million barrels, followed by China with 30 to 40 million barrels, and Japan and South Korea contributing 15 to 20 million barrels each. While these measures have moderated price spikes, they remain temporary and do not address underlying structural vulnerabilities.

At the same time, elevated prices are incentivising renewed investment in offshore and deepwater oil production. Notable examples include Brazil's Búzios field in its pre-salt basin and the Whale deepwater project in the U.S. Gulf of Mexico. These developments are economically viable at higher price levels but risk reinforcing long-term dependence on fossil fuels if not carefully managed. Prior to the Iran War, but arguably and partly influenced by the Ukraine War, some of the Asian economies have already started exploring the option of deepwater projects, such as the "Northern Hub" in the Kutei Basin, Indonesia, Kelidang Cluster gas project in Brunei, Gumusut-Kakap in Malaysia, and the Krishna Godavari basin in India. The Hormuz-crisis only serves to accelerate those developments in the short-term.

Why is this important?

The current crisis has far-reaching implications that extend beyond immediate supply disruptions.

First, it raises the risk of stagflation. Stagflation refers to a situation where inflation remains high while economic growth slows or stagnates. A historical example can be observed in the United States during the late 1970s, when oil price shocks led to inflation exceeding 10 per cent while economic growth weakened significantly. A more recent example can be seen in parts of Europe following the Ukraine crisis, where energy price spikes contributed to inflation rates above 8 to 10 per cent while industrial output declined. The current crisis risks creating similar conditions, particularly in energy-importing economies in Asia.

Second, the crisis highlights the concentration of global energy flows in a small number of critical chokepoints. Unlike previous disruptions, which were more geographically dispersed, the current situation is heavily centred on the Strait of Hormuz. This creates a systemic vulnerability that is difficult to mitigate through traditional diversification strategies, particularly for Asia where economic growth remains closely tied to imported energy.

Third, historical responses to energy crises demonstrate the importance of decisive structural change. Following the 1973 oil crisis, countries such as France undertook a rapid expansion of nuclear energy, with nuclear power eventually accounting for around 70 per cent of electricity generation. Japan also expanded its nuclear fleet significantly in the decades that followed. These strategies reduced dependence on imported oil and enhanced long-term energy stability. In contrast, today's energy transition in Asia has leaned heavily towards intermittent renewables without sufficient investment in firm, dispatchable low-carbon capacity. That's why such a crisis has inflicted pain on emerging Asian economies like Pakistan, Bangladesh, Sri Lanka, the Philippines, and Thailand that depend heavily on imported fuel for energy production.

This structural gap is increasingly evident in the current crisis. Across Asia, countries have turned towards coal as a stabilising response to energy insecurity. Japan has lifted operating constraints on coal-fired power plants to allow full utilisation of existing capacity, while South Korea has relaxed generation caps and relied on coal to offset constraints in gas supply. In both cases, coal is functioning not merely as a fuel, but as a system-level buffer that substitutes for disrupted oil and gas supplies in real time. This reflects a regressive but rational response under system stress, where affordability and reliability take precedence over decarbonisation. Unlike the post-1970s period, where structural shifts reduced dependence on oil, today's transition has not yet delivered viable alternatives at scale. As a result, coal has re-emerged as the default fallback option, echoing the pattern seen during the Ukraine War-induced energy shock. In this sense, coal is not returning because the transition is failing, but because it is incomplete.

Fourth, elevated energy prices are creating competing dynamics. Despite a much alluded "setback" as Asian economies turn more strongly towards coal and further diversifying with more risky options such as deepwater drilling, the Hormuz-crisis arguably creates an opportunity to accelerate the adoption of low-carbon alternatives. Higher prices improve the economic viability of hydrogen, ammonia, and methanol, even though these options remain more expensive than conventional fuels under normal conditions. This creates a strategic window to advance the energy transition by scaling new fuel systems.

Finally, the fragmentation of global energy markets induced and potentially amplified by the Hormuz-crisis means that energy security is increasingly determined by system design and strategic positioning rather than market access alone. Countries must now consider not only where energy comes from, but how their entire energy system is structured to withstand disruption. In many of the emerging Asian economies, nuclear energy appears to be part of the answer in transforming their future energy economy.

What should the policymakers do?

1. Reassess dependence on the Middle East rather than simply assume diversification away from it

The instinctive response to the current crisis is to look for ways to reduce dependence on the Middle East which needs further scrutiny. The Middle East is not just another supplier that can be replaced. It remains the most cost-efficient and scalable source of oil and gas supply in the global energy ecosystem. Any serious attempt to displace it would likely result in higher costs, tighter markets, and potentially new forms of vulnerability. The more pertinent question, therefore, is not whether Asia can move away from the Middle East, but how it should engage with it more strategically.

A shift in mindset is required. Energy relationships should not be viewed purely through the lens of trade, but as long-term strategic partnerships. This means deepening cooperation beyond simple supply contracts, including participation in upstream assets, joint development of refining and petrochemical capacity, and collaboration on emerging energy carriers. By embedding Asia more deeply into the Middle East's energy ecosystem, the relationship becomes more interdependent and, in turn, more resilient to disruption.

Resilience must also be built into the physical system. This includes expanding storage capacity, diversifying shipping routes where possible, and strengthening contingency planning around chokepoints including Strait of Hormuz, Strait of Malacca, Suez Canal, Bab-el-Mandeb, and the Panama Canal. Such a proposition should not equate to eliminating dependence, but towards better managed and less exposed positions. At the same time, a stronger multilateral and perhaps Asian regional cooperation framework can be institutionalised with support of strategic Asian and non-Asian stakeholders to enhance regional connectivity and integration towards a single entity with common strategic priorities, such as energy resilience, security, and sustainable growth.

2. Expand the supplier base, including politically sensitive options

Diversification remains necessary no matter the state of bilateral, multilateral or even regional development, but it must be approached with realism rather than idealism. Australia and the United States have already become important suppliers to Asia, particularly in coal and LNG, and their role will likely continue to grow. These relationships provide valuable flexibility and reduce concentration risk, but they do not fully substitute for Middle Eastern supply.

The most critical and yet complex question is Russia. It is often treated as a politically sensitive topic, especially under the current global geopolitical circumstances, yet it cannot be ignored in any serious discussion of energy security. Russia remains one of the world's largest energy exporters, and in recent years, major Asian economies such as China and India have significantly increased their imports of Russian oil, taking advantage of discounted pricing and supply availability. In Southeast Asia, engagement has been more cautious and limited, but countries like Vietnam and Indonesia are engaging in discussions about importing Russian oil. Singapore has also resumed receiving Russian crude cargo after the US waiver on sanctions. Russia is also the most dominant player in providing enrichment and conversion services for nuclear power reactor fuels globally.

This proposition, however, does not imply endorsement of any geopolitical position or alignment, but rather a pragmatic response to tightening energy markets. It underscores a broader reality that energy security increasingly requires navigating a more fragmented and complex global landscape. In practice, Asia will need to maintain a diversified portfolio of suppliers that spans different regions and political alignments. Such an approach is not without risk, but neither is overdependence on any single source. The challenge lies in managing these relationships carefully, using contractual, financial, and diplomatic tools to balance opportunity with exposure.

3. Recognise that supply diversification alone is insufficient and re-think about the current energy system

Even with a broader set of suppliers, recent events make it clear that diversification alone cannot eliminate systemic risk. Disruptions today cut across fuels and markets simultaneously, which means resilience must be built into the system itself, not just its supply sources.

This requires a more pragmatic view of how energy systems operate under stress. In Northeast Asia, countries such as Japan and South Korea have not shifted back to coal as a long-term strategy, but they have retained and, when necessary, activated coal capacity to stabilise their power systems when LNG supply becomes constrained. In this sense, coal functions as a strategic buffer rather than a preferred pathway. The shift is more explicit in other parts of Asia. The Philippines has increased coal-fired generation to replace expensive LNG, while Bangladesh has relied more heavily on coal to stabilise its power system amid fuel shortages and outages. India has similarly pushed coal plants to operate at higher utilisation to ensure system reliability. Taken together, these developments underscore a consistent pattern: when energy systems are under stress, they fall back on firm and dispatchable sources that are already available.

This points to a broader issue. A resilient energy system must be able to absorb shocks by drawing on different energy sources when needed. Coal, while undesirable from a climate perspective, remains part of that fallback layer. However, its continued role will only be defensible if coupled with technologies such as carbon capture and storage. At the same time, there are early indications that nuclear energy is regaining attention in parts of Asia, particularly in Japan and South Korea, where it is increasingly viewed as a stable and reliable low-carbon option that can strengthen system resilience.

Ultimately, rethinking the energy system means moving towards a layered architecture, where different energy sources serve distinct roles supported by the gradual change in demand, such as electrification and synthetic fuel-based economy. The most evident example of China's strategy to scale up both alternative energy and transport electrification which has shown to be a proven pathway for reducing the country's exposure to oil imports. The goal is to allow different options to deliver sustainability, provide flexibility, and ensure stability when the system is under stress. The objective is not to eliminate trade-offs, but to manage them deliberately. In a more fragmented and uncertain world, the true measure of energy security is no longer how efficiently a system operates in normal times, but how reliably it holds together when conditions deteriorate.

4. Rebalance energy transition towards reliability as well as sustainability

The current crisis has exposed a structural imbalance in the way the energy transition has been pursued. While renewable energy has expanded rapidly, less attention has been given to ensuring that the system remains reliable under stress. This gap becomes particularly visible when fuel markets tighten and fallback options are limited.

This is not an argument against renewables. Rather, it is a reminder that decarbonisation and energy security must advance together. A system that performs well under normal conditions but struggles under stress is not resilient. The recent reliance on coal across parts of Asia is a clear highlight of this tension; the absence of sufficient firm and dispatchable alternatives. Afterall, "energy transition is not all about where we are transitioning to, but more about where we are transitioning from which is a fossil dominated world" (quote from Dr Victor Nian).

A more balanced transition would recognise the need for stable and reliable low-carbon energy options alongside renewables. In this context, nuclear energy is increasingly difficult to ignore. Its ability to provide consistent, dispatchable power with limited exposure to fuel price volatility makes it particularly relevant for import-dependent economies. The renewed policy support and reactor restart in Japan, South Korea's continued reliance on nuclear as a core component of its energy mix, and Vietnam's advancement towards its first nuclear power project suggest that this reassessment is already underway.

Ultimately, the objective is not to favour one technology over another, but to ensure that the system as a whole remains functional across a wide range of scenarios. A resilient energy system must balance sustainability with stability, rather than assume that one will naturally deliver the other. The greatest risk to energy transition may not come from external shocks, but from self-imposed constraints where hesitation, misaligned priorities, or emotionally driven decisions prevent the pragmatic use of available solutions such as carbon-managed fossil fuels and nuclear energy.

5. Use the current crisis to accelerate alternative fuel pathways towards “green petroleum” and rethink energy system design through new production architectures

The current crisis highlights not only the vulnerability of existing fuel supply chains, but also the opportunity to rethink what future fuels could look like. In this context, there is growing relevance in the concept of “green petroleum”, namely hydrogen, ammonia, and methanol produced from low-carbon energy sources. These fuels have the potential to function as direct substitutes for conventional hydrocarbons in sectors such as shipping, aviation, and heavy industry, while retaining many of the advantages of existing fuel infrastructure.

What makes these fuels particularly compelling is not just their carbon profile, but their ability to be produced across a wider range of geographies and energy inputs. This opens up the possibility of diversifying not only suppliers, but also production models, reducing reliance on concentrated fossil fuel regions and enabling a more distributed and resilient energy system.

In this regard, new concepts in energy infrastructure deserve serious consideration. One such approach is the development of offshore floating multi-utility complex, an idea being explored by the Centre for Strategic Energy and Resources, integrating multiple energy sources, including offshore wind, tidal, wave, ocean thermal energy, and potentially floating nuclear, to power the production of clean fuels such as hydrogen, ammonia, and methanol. By co-locating energy generation and industrial processes, such systems could function as floating clean energy and chemical hubs.

If designed to operate in international waters, these complexes could also enable new forms of collaboration, including multi-stakeholder and multi-ownership structures that are not constrained by national boundaries. This creates an opportunity to rethink not only how energy is produced, but how it is governed and distributed. In effect, it represents a shift from geographically fixed energy systems to more modular and globally connected production networks.

While such concepts remain at an early stage, they point towards a broader direction of travel. Future energy systems need not simply evolve from existing models, but can be fundamentally reconfigured. The combination of the concept of future “green petroleum” and new production architectures offers a pathway to diversify supply, reduce geopolitical exposure, and build a more resilient and flexible energy ecosystem.

6. Accept that trade-offs are unavoidable and strengthen regional cooperation to manage them

Energy policy is defined by trade-offs. The energy trilemma, namely, equity (or affordability), security and environmental sustainability cannot always be achieved simultaneously, particularly in a more volatile and fragmented global environment. The current crisis has made these tensions more visible and more immediate. Short-term reliance on fossil fuels may be necessary to ensure stability, even as long-term decarbonisation remains essential. The challenge is not to avoid these trade-offs, but to manage them deliberately and transparently.

In this context, regional cooperation becomes not just desirable, but necessary. No single country in Asia can fully insulate itself from systemic shocks, given the scale of demand and the interconnected nature of supply chains. A more coordinated approach can help distribute risks, optimise resources, and enhance collective resilience.

There is growing potential for a more structured form of cooperation that extends beyond traditional regional boundaries. A Gulf–ASEAN-led framework, supported by the wider Asian region, could anchor deeper integration between energy producers and consumers, moving beyond transactional trade towards long-term strategic alignment. Such an approach would allow both regions to co-develop supply chains, infrastructure, and emerging fuel markets, thereby reducing exposure to short-term disruptions.

At the same time, intra-regional cooperation within Asia must also deepen. Initiatives such as the ASEAN Plan of Action on Energy Cooperation (incl. the initiative of ASEAN Power Grid), as well as greater connectivity across the rest of Asia, can enhance system flexibility and enable more efficient allocation of resources. These efforts are not without complexity, particularly given differing national interests and regulatory frameworks, but the alternative of fragmented systems is increasingly untenable.

In a more uncertain world, resilience will not come from isolation, but from coordination. Managing trade-offs effectively requires not only domestic policy clarity, but also the ability to align interests across borders. The question is no longer whether cooperation is needed, but how quickly and how meaningfully it can be realised.

Biography

Dr Victor Nian is a Founding Co-Chairman of the Centre for Strategic Energy and Resources. His expertise spans energy and climate policy, sustainability and net-zero strategy, long-term planning, and industrial economy. He is a recognised authority on nuclear energy, digital transformation, and sustainability governance in Southeast Asia. He advises public and private organisations on the geopolitics and market dynamics of strategic technologies. Dr Nian leads efforts in energy policy development, technology commercialisation, value chain development, and private-public collaboration to accelerate the energy transition in emerging Asian economies. He holds a PhD in Mechanical Engineering and a BEng (Hons) in Electrical Engineering with a Minor in Management of Technology from the National University of Singapore.

Dr Aisha Al-Sarihi is an affiliated expert of Centre for Strategic Energy and Resources, and a non-resident fellow at Arab Gulf States Institute and Middle East Council on Global Affairs. Her expertise spans political economy, sustainability, energy transition, and climate policy and governance. She is a recognised authority on the political and economic dimensions of climate action, resource governance, and low-carbon development in emerging economies. Dr Al-Sarihi has held various research positions in the past, including, the Middle East Institute of the National University of Singapore, King Abdullah Petroleum Studies and Research Centre, London School of Economics and Political Science, and Georgetown University. She holds a PhD from Imperial College London and BSc and MSc degrees from Sultan Qaboos University.

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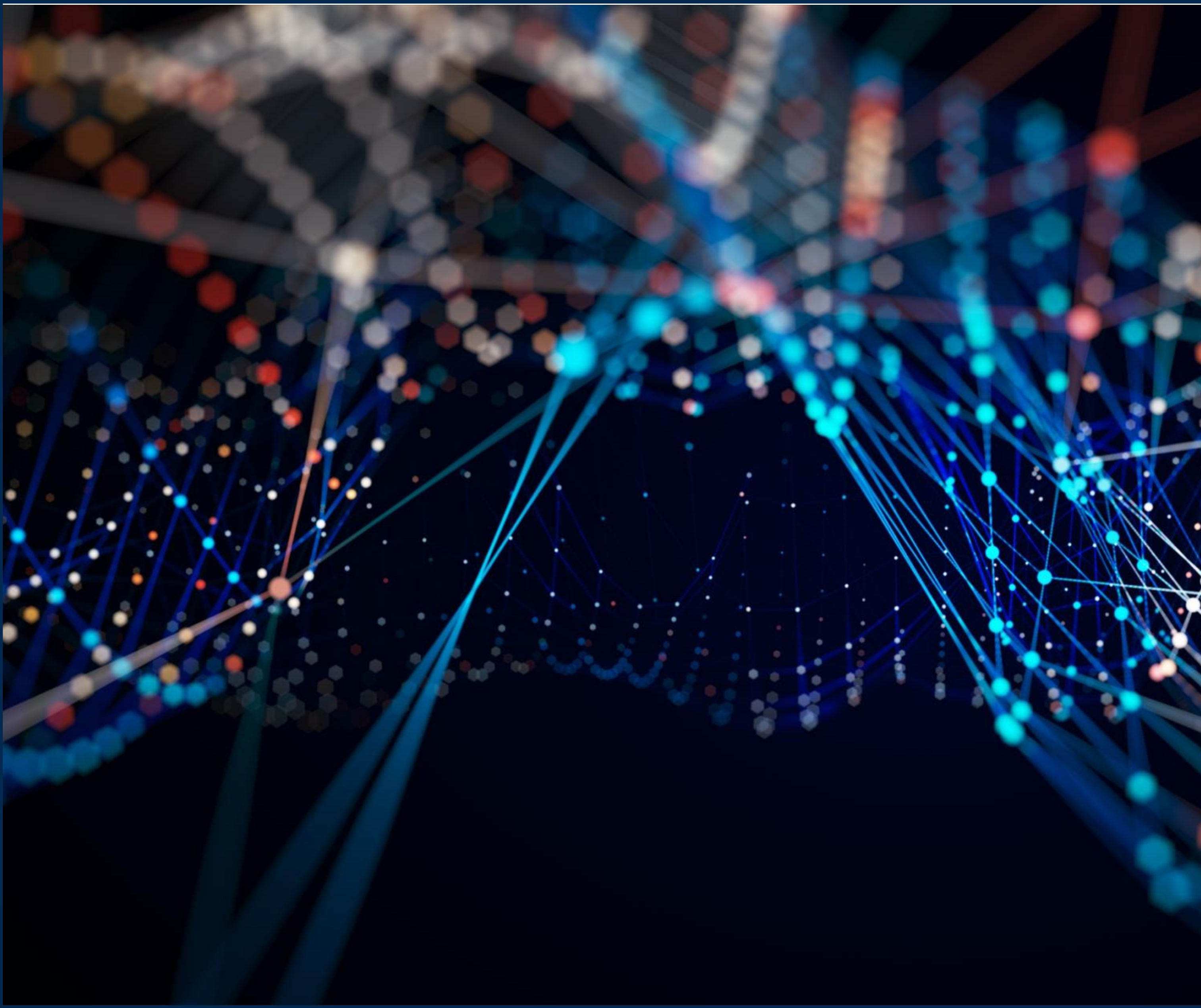

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