Policy Brief

Rethinking LNG: Safeguarding Thailand's Energy Security Amid Heightened Risks

On behalf of:

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Imprint

Analysis

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About CASE

The project Clean, Affordable and Secure Energy for Southeast Asia (CASE) supports power sector transitions in Indonesia, Thailand, Viet Nam and the Philippines through evidence-based analysis and narrative change. The project supports decision-makers, industry leaders and consumers in enacting strategic reforms in the power sector in pursuit of the Paris Agreement goals and a just transition.

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Disclaimer

The views expressed in this paper do not necessarily reflect those of the individuals acknowledged above, the organisations they represent, or the CASE Consortium and its members.

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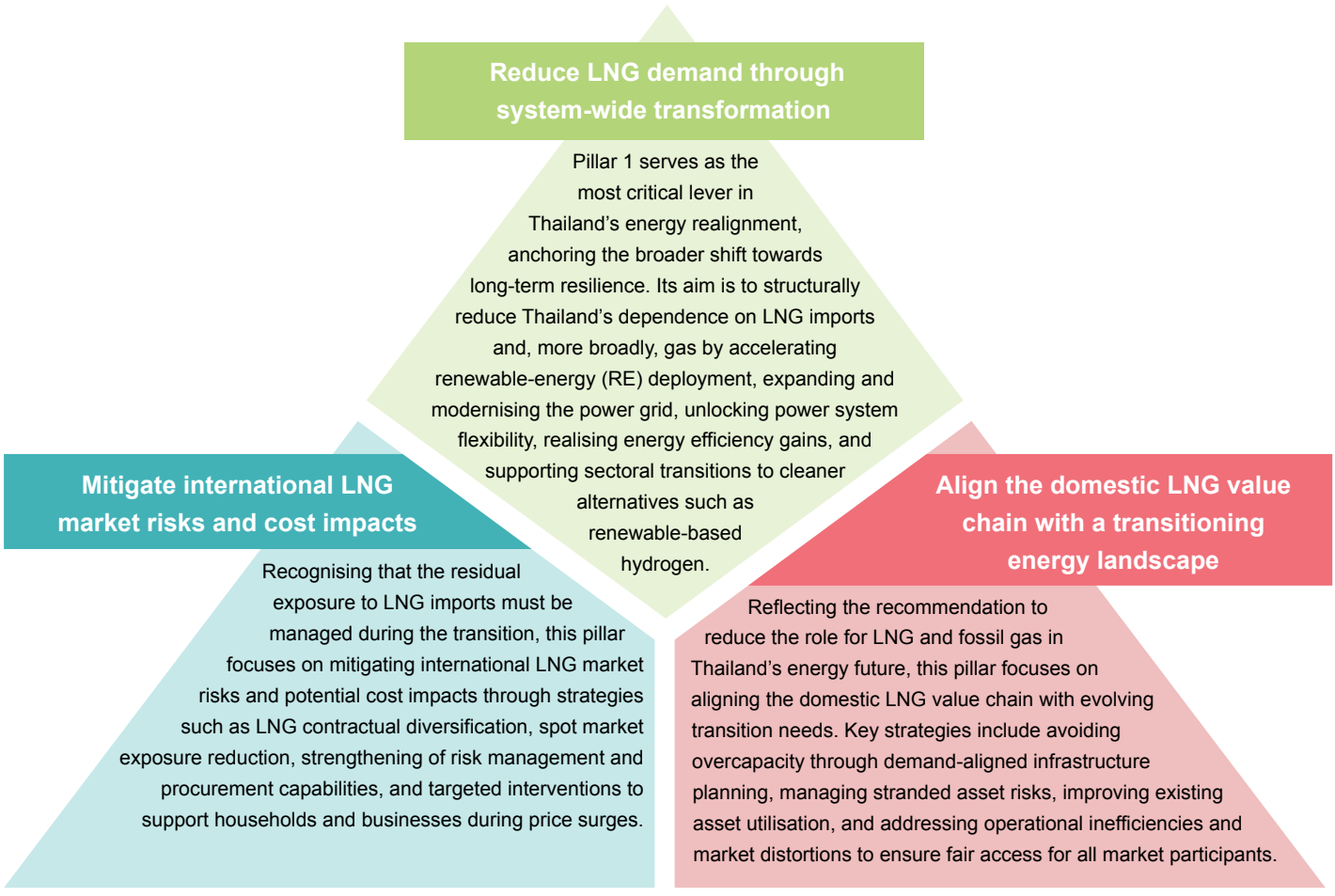
Executive Summary

Thailand's growing reliance on liquefied natural gas (LNG) imports has become a defining and increasingly concerning feature of its energy trajectory, driven by compounding supply-side and demand-side pressures. Domestic gas reserves are dwindling, yet in the absence of policy intervention, persistent gas demand across power and industrial sectors is continuing to entrench gas as a cornerstone fuel of the Thai economy, threatening the country's prospects for a resilient, sustainable energy future. On its current path, Thailand is set to see LNG imports account for nearly 50% of the total gas supply by 2030, up from less than 30% in 2024.

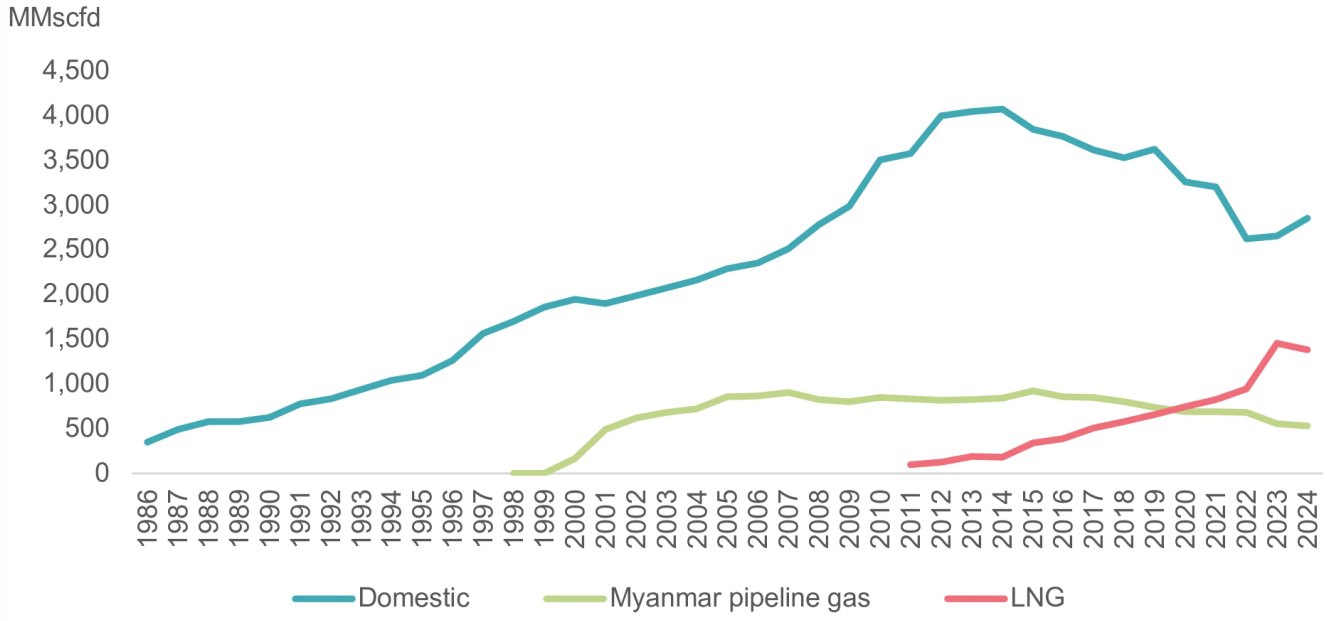
While Thailand's rising LNG import needs may be eased by oversupply and lower prices seen in global forecasts in the near term, optimism should be balanced with caution, especially as increased reliance on imports risks deepening the country's trade deficit. The LNG market is inherently cyclical and remains highly vulnerable to external shocks, ranging from climate disruptions and geopolitical flare-ups to rapid technological shifts. For Thailand, these risks pose serious financial, macroeconomic and socioeconomic challenges that could severely undermine long-term energy security and development goals.

To bolster resilience amid escalating LNG market risks, Thailand must urgently recalibrate its energy policy, redefining LNG's role from a cornerstone of its energy trajectory to a flexible, complementary resource within a diversified and resilient energy system. In line with this vision, the three-pillar LNG Realignment Framework can facilitate Thailand's structural shift away from its heavy reliance on LNG and, more broadly, gas while enabling strategic management of market risks and a restructuring of the existing domestic value chain:



The Expanding Role of LNG in Thailand's Energy Mix

Thailand has witnessed a rapid growth in LNG imports over the past decade, driven largely by declining domestic gas production and diminishing pipeline flows from Myanmar against the backdrop of persistent gas demand. Between 2014 and 2024, LNG imports rose by more than sevenfold, reaching 1,386 MMscfd in 2024 (EPPO, 2025).



Source: EPPO, 2025

Figure 1: Thailand's natural gas supply, (1986-2024)

Looking ahead, Thailand's reliance on imported LNG is currently set to deepen as legacy fields in the Gulf of Thailand mature and their reserves decline, with no meaningful progress in developing new fields. Joint development of the Overlapping Claims Area (OCA), already fraught with challenges, has seen further setbacks due to the recent flare-up in Thai-Cambodian relations. Overall, despite recent gains at the Bongkot and Erawan gas fields, the combination of dwindling smaller reservoirs and lack of new projects towards 2030 means domestic output alone will be insufficient to curb Thailand's rising dependence on LNG.

Compounding this challenge is the forthcoming sharp drop in pipeline imports from Myanmar. The expiration of the Yadana contract in 2028 will significantly reduce available volumes, further tightening supply. Although PTT Exploration and Production (PTTEP) has been pursuing a contract renewal (Energy News Centre, 2024), gas supplies from Yadana and other Burmese gas fields are no longer the source of security they once were for Thailand. In addition to TotalEnergies' withdrawal from the Yadana project operatorship in 2022, the broader operating environment for gas production in Myanmar has generally deteriorated following the military's takeover of the Myanmar Oil and Gas Enterprise (MOGE), a key stakeholder in the Yadana, Yetagun, and Zawtika gas fields.

Even as supply-side pressures intensify, Thailand's reliance on natural gas continues to be deeply embedded, driven by persistent demand across key sectors. In 2024, total gas consumption reached 4,496 MMscfd, with the power sector accounting for the largest share at 64.2%, followed by gas separation plants (18.6%), industry (15.1%), and natural gas vehicles (2.2%) (EPPO, 2025). While policy plans have signalled an intended shift away from natural gas in Thailand's power sector, the fuel is expected to maintain a dominant role in years to come. According to the latest Power Development Plan (PDP) draft, its share of electricity generation is projected to remain above 50% through 2030. Meanwhile, industrial gas consumption is set to see notable growth, with the 2024 draft Gas Plan forecasting demand to reach 1,111 MMscfd by 2037, representing a 64% increase from 2024 levels.

In addition to these 'push' factors driving Thailand towards LNG, a 'pull' factor is also emerging. Pressure to procure more US LNG as part of tariff negotiations with the Trump administration is also feeding into the momentum for increased LNG imports. As these developments unfold, Thailand has found itself on a trajectory that could see LNG's share of the gas supply rise to nearly 50% by 2030 (BNEF, 2025a).

The global LNG market: outlook and risks

Thailand's rising LNG demand coincides with a period of anticipated global oversupply, which seemingly promises favourable conditions for price-sensitive importing nations. Major expansions in export capacity in the United States and Qatar (North Field East, South, and West), together with new supply across different regions, are expected to push global LNG supply to 594 million MT by 2030, a 42% increase from 2024 levels (BNEF, 2025a).

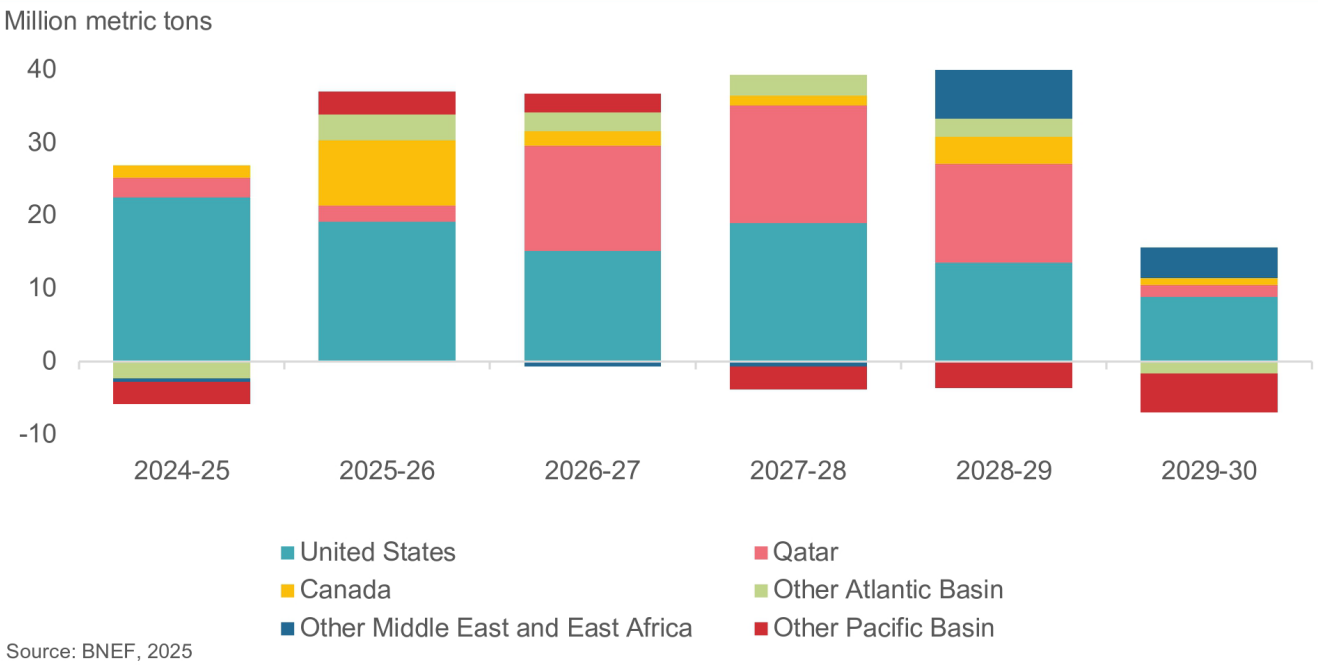
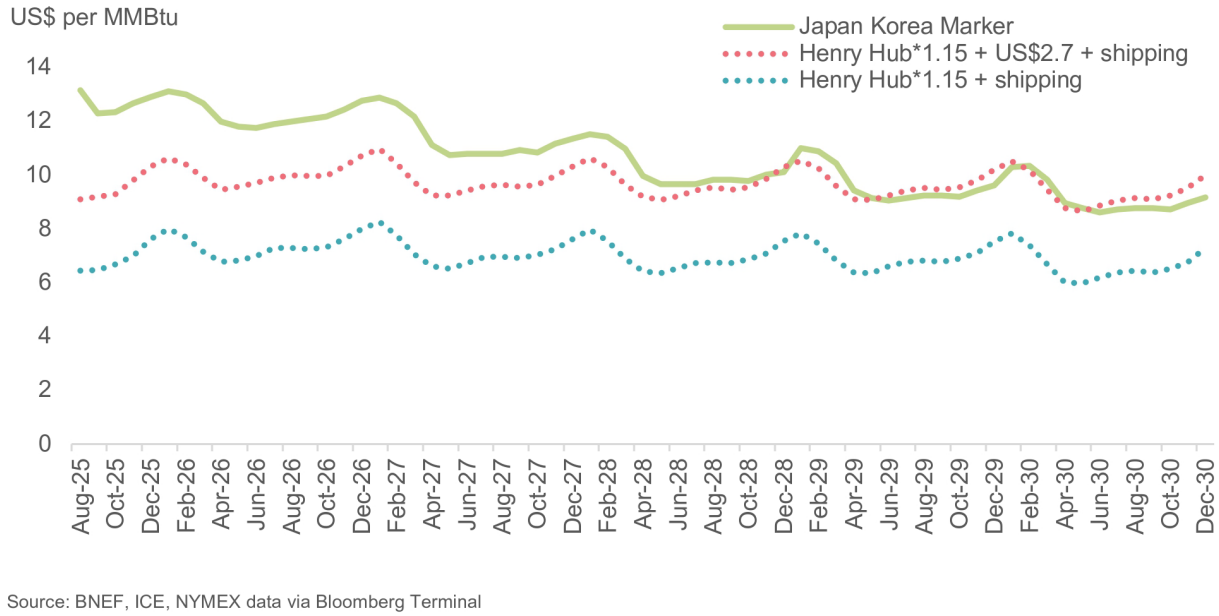


Figure 2: LNG supply growth by region (YOY)

This supply boom, coupled with expectations of softened demand from major importers such as Europe and China, is projected to place significant downward pressure on the JKM towards 2030. BNEF (2025a) projects the JKM[1] to trend below US$11/MMBtu from 2028 onwards, with spot prices potentially falling below US$9/MMBtu in the shoulder demand months by 2030.



Source: BNEF, ICE, NYMEX data via Bloomberg Terminal

Figure 3: Benchmark LNG price forecasts

While the market outlook based on foreseeable supply and demand dynamics may present an appealing environment for LNG importers, it is worth bearing in mind that projected price curves for commodities almost always appear as deceptively smooth lines, which are generally in stark contrast to the erratic swings in their historical movements.

The global LNG market, like other commodity markets, is inherently cyclical. Periods of high prices consistently trigger waves of overinvestment, which eventually lead to oversupply. This in turn causes prices to crash, inducing underinvestment, future shortages, and yet another surge in prices that sets the stage for the next cycle. These boom-bust investment cycles have been a recurring feature of LNG market dynamics for the past two decades, as illustrated below in Figure 4. In fact, the record-high prices in the early 2020s were key catalysts for the wave of investment decisions that have since led to the emerging supply glut and relatively attractive prices that the market is now anticipating in the coming years (the typical lead time for bringing LNG export projects online is 4-7 years).

Beyond its cyclical nature, **the LNG market is also acutely sensitive to external shocks,** which often compound the effects of underlying structural imbalances. For example, the pandemic-induced plunge in global energy consumption in 2020 sent LNG prices tumbling to historic lows. This shock was especially damaging for LNG suppliers because it struck during a period of market saturation and a softened price landscape, shaped by a wave of new export capacity from the United States and Australia following the demand boom after the Fukushima incident and Japan's subsequent nuclear shutdown.

[1] The Japan-Korea Marker (JKM), a benchmark price for spot liquefied natural gas (LNG) in Northeast Asia, serves as the most important international LNG pricing reference for Thailand.

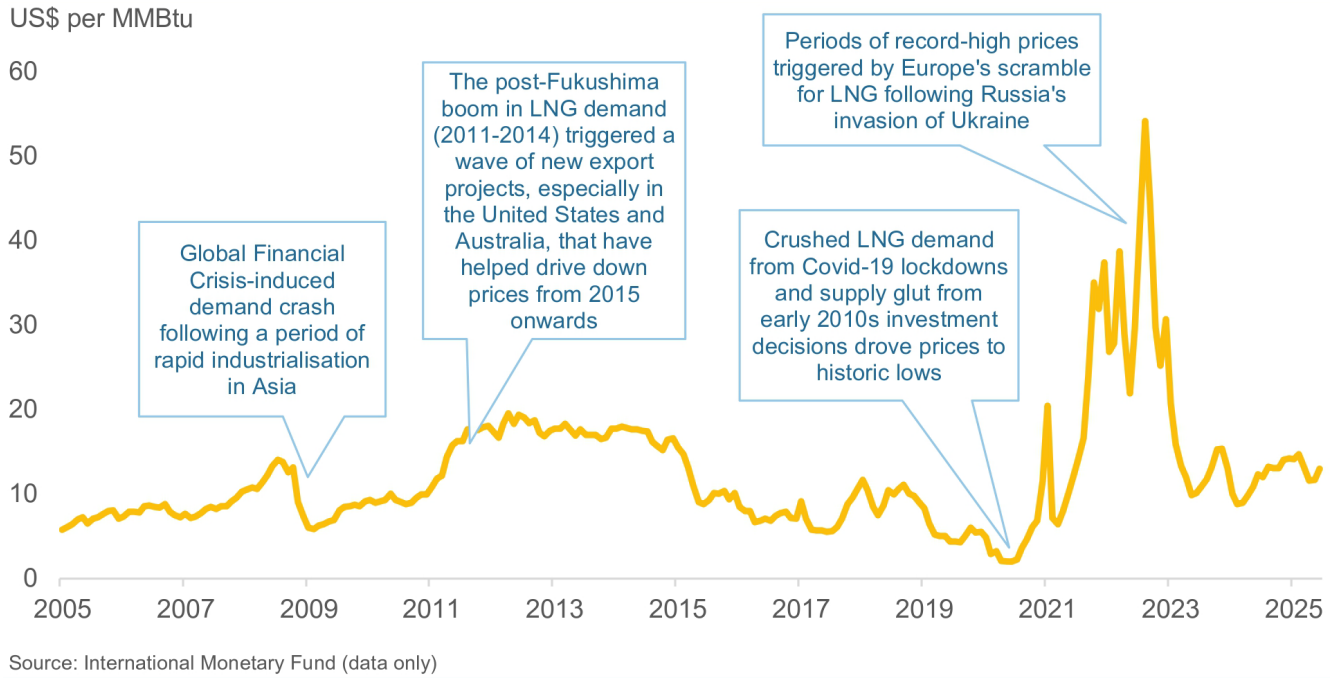


Figure 4: Historical LNG prices in Asia

Forecasting models generally capture seasonal variation, but they fall short when it comes to capturing external shocks (e.g., geopolitical upheavals, technological disruptions) and behavioural dynamics like herd behaviour that underlie investment cycles. Consequently, they obscure the volatile nature of the market, including the risks of abrupt market shifts.

As such, while prevailing market analyses may reasonably project a buyers' market and persistent supply overhang through the late 2020s, it would be a mistake to downplay the likelihood of price swings and potential for an eventual tightening post-2030. After all, prolonged low-price environments tend to discourage new investment, planting the seeds for the next period of scarcity. Beyond cyclical investment patterns, a range of ongoing trends warrants serious concern regarding potential disruptions to the international LNG market. Some of these shifts may be relatively short-lived but painful (e.g., regional record-breaking heatwaves), while others may prove consequential enough to reshape the global LNG landscape (e.g., similar to the post-Fukushima nuclear exit).

The escalating impacts of climate change are introducing additional layers of risk to the global LNG supply chain, as evident from recent events. In May 2024, one of Bangladesh's Floating Storage Regasification Units (FSRU) sustained severe damage when Cyclone Remal made landfall, forcing the unit offline for over three months.[2] This sparked a nationwide gas crisis and resulted in major economic losses from power supply cuts and disrupted industrial activity. Climate-related vulnerabilities are also surfacing on the export side of the LNG value chain. Persistent drought conditions in the Panama Canal (the shortest route to Asia for US LNG exporters) have limited daily vessel crossings since the second half of 2023. Combined with the Houthi rebel attacks in the Red Sea, this development has resulted in US LNG cargoes bound for Asia being increasingly rerouted around the Cape of Good Hope, significantly adding to transit time and shipping costs.

[2] In total, the FSRU was offline for nearly six months in 2024, beginning with routine repairs that took it out of service from late January to the end of March (Reynolds & Doleman, 2024).

Global tensions and rising conflicts, such as the mentioned disruption to passage through the Red Sea, are compounding the risks for LNG market players. The Strait of Hormuz, through which one-fifth of global LNG trade flows, has emerged as a flashpoint amid escalating tension in the Middle East (EIA, 2025). According to Rystad Energy estimates reported by Bloomberg (2024), a disruption in the Strait could potentially trigger LNG prices to surge past US$100/MMBtu. For Thailand, which sources roughly 30% of its LNG from the region (The Nation, 2025), any disruption to this strategic waterway has the potential to severely compromise the country's energy security. Even conflicts further away from Asia could have far-reaching consequences for the region. The Russia-Ukraine war, for instance, triggered a dramatic surge in European LNG demand in 2022 as pipeline flows from Russia collapsed. European countries drove prices to historic highs as they aggressively outbid other buyers to secure cargoes. This scramble priced out many developing economies. Pakistan, despite its long-term contracts, saw LNG traders Gunvor and Eni default on and divert more than a dozen shipments scheduled for delivery to Pakistan from October 2021 to June 2022 to Europe, where they could command higher spot premiums. While contractual cancellation penalties applied, the price differential between spot prices in Europe then (over US$30/MMBtu) and Pakistan's contract price (around US$12/MMBtu) was more than enough for the traders to cover the fees and still make a hefty profit (Bloomberg, 2022). The fallout for Pakistan was severe: power outages swept across the country during peak summer heat, fertiliser output plummeted and textile manufacturing was suspended across key regions. During the 2022 Eid holiday, the Pakistani government had to pay nearly US$100 million for a single spot shipment (Bloomberg, 2022), a record high that was all the more burdensome considering the weak Rupee and their modest foreign exchange reserves.

While Europe's ongoing attempt to decouple from Russian gas may be easing fears of a repeat scenario for price-sensitive Asian buyers, **the possibility of European LNG demand towards 2030 overshooting forecasts still looms.** With delays in renewables deployment and an underwhelming biomethane production outlook, among other things, Europe's strong appetite for LNG imports may persist beyond expectations in the coming years. This could pose challenges for Thailand and other price-sensitive LNG buyers in Asia competing with European importers in the spot market, especially since the share of spot shipments to Europe is already forecast to remain above 50% through 2030 even under the assumption of the region's subdued demand growth (BNEF, 2025a).

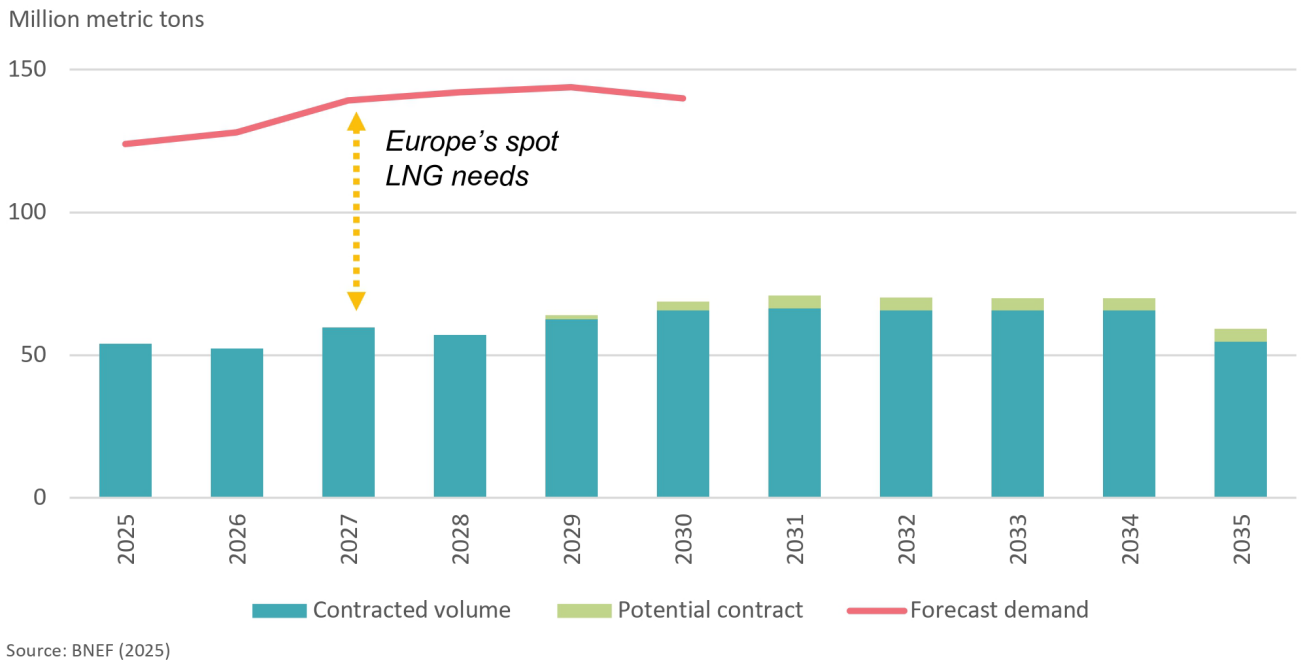


Figure 5: Europe's projected LNG demand and contract coverage

In addition to traditional competitive pressures, **emerging trends that could significantly reshape the structural dynamics of the global LNG market may arise, such as nascent demand associated with the accelerating AI boom.** While data centres accounted for only around 1.5% of global electricity consumption in 2024, this footprint is widely expected to expand rapidly (IEA, 2025a). Unlike conventional cloud computing, AI workloads are far more energy-intensive due to their advanced cooling, computational, and hardware requirements. Early estimates from the Lawrence Berkeley National Laboratory (2024) suggest that US data centre electricity consumption could reach up to 12% of national power demand by 2028. Crucially, gas-fired power plants are emerging as one of the key solutions to meet this surge, particularly in the United States, where utilities are ramping up plans for new gas-fired capacity to power future data centres (IEA, 2025a). In this context, especially amid intensifying US-China rivalry, rising domestic electricity demand in the United States may divert a significant portion of US natural gas from being processed into LNG for export, potentially adding notable strain at the upstream end of the global LNG supply chain. At the same time, expanding energy demand from AI-driven data centre activity worldwide is adding a new variable to global LNG dynamics, raising the risk that cargoes could be increasingly directed towards high-income AI hubs, which would constrain access for lower-income importers like Thailand. Yet, current LNG demand forecasts largely overlook this prospective structural shock, in part because the energy footprint of AI data centres remains poorly understood and data availability is limited. As AI-driven data centre construction accelerates, the implications for global LNG balance could be far more disruptive than widely anticipated.

Furthermore, **rising tariffs in the United States are contributing to an already inflationary environment for capital expenditure, driving up liquefaction fees at US LNG export facilities.** These cost pressures are increasing the likelihood of contract renegotiations and may cause US LNG contract prices to diverge from the broader trend of falling global spot prices. For counterparties such as Thailand, this divergence introduces a risk of long-term exposure to elevated prices, even as headline forecasts point to a softening market environment.

Considering the various risks discussed, it becomes clear that **the prevailing optimism surrounding anticipated global oversupply and projected favourable prices in the late 2020s should be tempered with scepticism**, particularly for developing economies with limited financial buffers and pressing socioeconomic concerns such as Thailand.

Thailand amid the shifting global LNG landscape

During the global LNG supply crunch triggered by Russia's invasion of Ukraine, Thailand's exposure to the LNG spot market was relatively modest at around 3 million MT (BNEF, 2025a). Nevertheless, the country was heavily impacted. Retail electricity tariffs climbed to a record high of 4.72 THB/kWh (US$0.14/kWh) by the fourth quarter of 2022, a 31% increase from the year prior. By the end of the fiscal year, the Electricity Generating Authority of Thailand's (EGAT) outstanding debt soared to THB110 billion (around US$3.37 billion) as it helped to cushion the impact on consumers (The Nation, 2023). This intervention, while socially imperative, strained public finances and illustrates how volatile LNG prices directly affect national accounts and fiscal space.

The economic exposure could grow substantially as Thailand's dependence on LNG continues to increase. By 2030, Thailand's LNG imports are set to more than double from 2022 levels to nearly 19 million MT, with potentially up to 63% of the volume (12 million MT) to be sourced from the spot market (BNEF, 2025a).[3] Such a heavy reliance on the spot market means that unexpected disturbances and price swings in the international LNG market could sharply increase Thailand's LNG import bill. For example, even a relatively modest increase of US$3/MMBtu above BNEF's projected ~US$9/MMBtu in 2030 could add as much as US$1.87 billion (THB 60.7 billion) to the country's baseline trade deficit.[4]

[3] These projections exceed the values suggested in the 2024 draft Gas Plan. The BNEF (2025) estimates incorporate recent geopolitical and policy developments, most notably Thailand's renewed political momentum behind gas and LNG amid a shifting global energy landscape. This includes growing international pushback against the energy transition, especially from the United States, which marks a departure from the relatively renewables-friendly policy environment within which the 2024 draft Gas Plan was conceived.

[4] This estimate assumes Thailand maintains 12 million MT of spot market exposure in 2030.

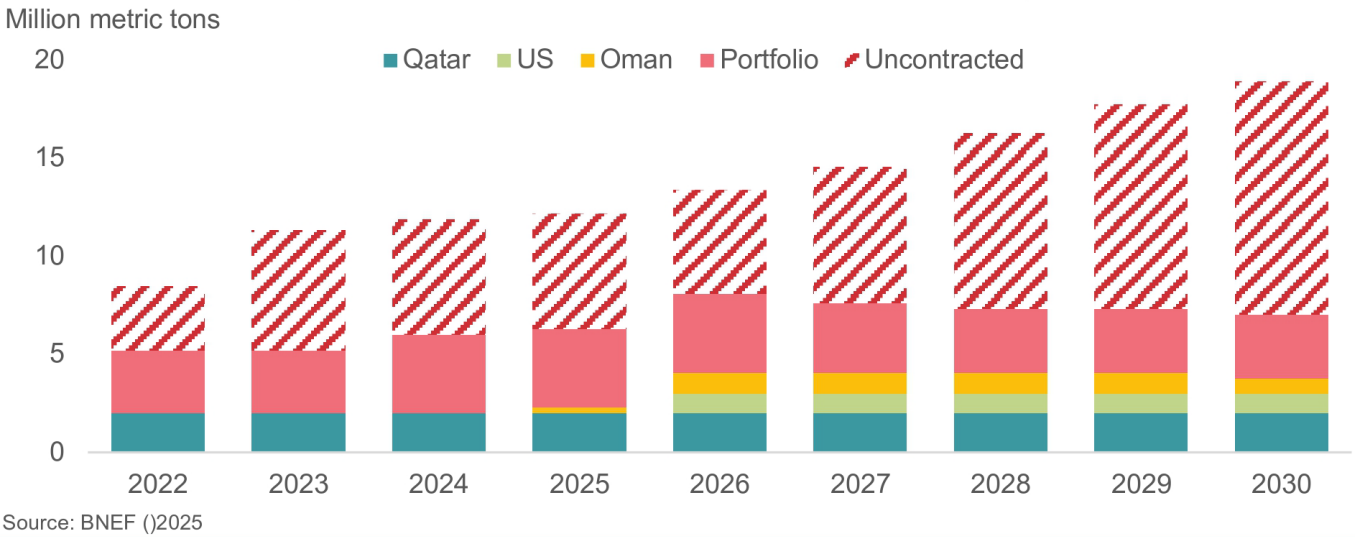


Figure 6: Thailand's LNG projected demand by source

LNG supply shocks and price spikes have broad implications that can ripple across multiple layers of an LNG-importing economy. High LNG prices raise costs for businesses and consumers, fuelling inflation throughout the economy. In developing countries, these pressures are often exacerbated by currency depreciation during global crises, which further amplifies the inflationary impact. Elevated energy costs also weaken Thailand's export competitiveness and deter foreign direct investment inflows, especially as regional peers accelerate RE adoption. Energy-intensive industries, facing profit squeezes and operational disruptions in the face of gas supply shortages, may be forced to implement layoffs. As households contend with rising living costs and job losses, the situation can spiral into broader political and social instability. Meanwhile, government attempts to soften the blow through subsidies and other support schemes would not only divert funds from other development priorities such as healthcare and education but also widen fiscal deficits, which in turn pose several long-term risks (e.g., higher debt service costs, erosion of investor confidence). Thailand's LNG reliance therefore renders the country vulnerable not only to global market risks but also to cascading consequences domestically.

This fragility is compounded by Thailand's broader energy and climate context. Long-term reliance on LNG risks threatening decarbonisation objectives and locking the country into a fossil fuel-intensive development path that undermines its stated ambitions. As global momentum shifts towards renewables, Thailand's LNG investments also risk becoming underutilised—stranded and unable to deliver the required returns on investment. Additionally, prioritising LNG infrastructure demands substantial capital outlays that could otherwise support the development of domestic value chains and deployment for variable renewable energy, grid modernisation, battery storage, and industrial transformation. The longer Thailand delays this shift, the harder it becomes to pivot towards a cleaner, more resilient energy future.

Recalibrating Thailand's approach to LNG: Strategies to safeguard Thailand's energy future

Thailand stands at a critical juncture as it confronts these mounting vulnerabilities. Its current orientation towards LNG demands a deeper, more deliberate re-evaluation in light of accelerating global energy transitions and domestic sustainability goals. Encouragingly, recent policy shifts signal a growing recognition of the need for reform: the latest PDP draft aims to accelerate RE deployment, while the introduction of a pooled gas pricing mechanism has helped to redistribute cost burdens among end consumers. Gas market liberalisation is also gaining traction, paving the way for new LNG importers to participate and challenge the status quo. While these are important steps, they will not be sufficient for safeguarding Thailand's energy future.

What is needed now is a comprehensive and coordinated set of strategies that does not merely support Thailand in adapting to LNG risks but fundamentally reshapes how LNG and, more broadly, gas fit within its energy landscape. **This policy brief proposes a three-pronged approach (i.e., three pillars) to guide the transition.** The first pillar targets structural shifts that can help reduce Thailand's long-term reliance on LNG and gas. The second focuses on strategies to mitigate international LNG market risks and cost impacts, in recognition that residual exposure to LNG imports must be managed during the transition. Lastly, the third centres on domestic reforms to ensure Thailand's LNG value chain is proportionate, efficient, and governed by transparent, rules-based market structures that can enable fair competition.

The following section presents each pillar in turn, along with strategic actions proposed to operationalise them. Consistent with this policy brief's targeted scope and action-oriented nature, the recommendations under each pillar are weighted towards short- and medium-term measures that warrant relatively urgent attention, with the broader longer-term vision reflected through the strategic pillars themselves.

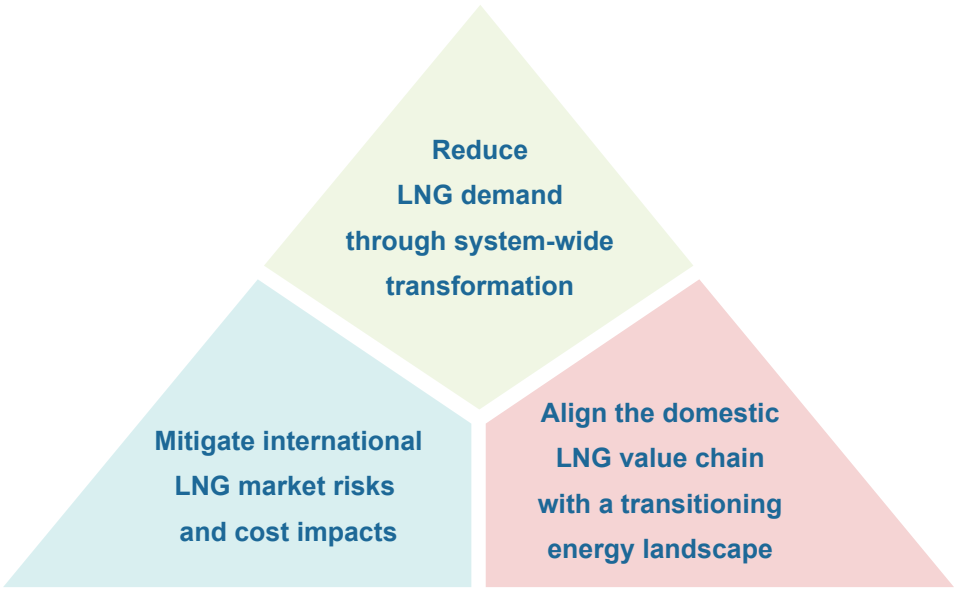


Figure 7: Strategic LNG Realignment Framework

Strategic Pillar 1:
Reduce LNG demand through system-wide transformation

To secure Thailand's long-term energy security and meet its decarbonisation targets, it is most critical to pursue a deliberate structural shift away from LNG. This shift involves not only reducing the role of gas in the energy system but also transforming the underlying drivers of gas demand across end-use sectors and strengthening the enabling factors for alternatives to gas consumption. Policymakers play a pivotal role in this transformation by communicating policy commitments, establishing clear regulatory frameworks, enabling investments, and coordinating planning efforts that accelerate RE deployment, modernise grid infrastructure, and promote energy efficiency.

1.1 Accelerate renewable energy deployment

- Set higher targets in the run-up to 2030 for replacing planned gas capacity expansion with solar and wind in the PDP, including specific targets for distributed energy resources
- Introduce a net billing programme for distributed PV systems in the commercial and industrial sectors, together with reforms to streamline permitting processes and interconnection requirements
- Adopt auction mechanisms for utility-scale RE projects, and reserve the feed-in tariff (FIT) scheme for non-mature, emerging technologies while ensuring regular updates of FIT rates to reflect actual project costs
- Accelerate the implementation of third-party grid access and scale up the direct power purchase agreement (DPPA) scheme
- Designate priority areas for RE development
- Plan the transition towards more cost-reflective tariffs to address market inefficiencies
- Simplify permitting processes for RE development projects to reduce lead times and transaction costs
- Conduct a feasibility study to explore Thailand's biomethane potential and the prospects for gas substitution in hard-to-abate sectors, building on current pilot projects and the IEA's preliminary biomethane assessment (IEA, 2025b)

1.2 Strengthen energy infrastructure and unlock power system flexibility

- Prioritise grid upgrades in national infrastructure investment plans and ensure grid development, including the roll-out of smart grid technologies and non-wires solutions such as battery storage, is aligned with RE development and electric vehicle (EV) growth plans
- Strengthen bilateral and sub-regional power interconnections while strengthening domestic readiness for deeper regional grid integration
- Enhance demand response programmes, especially in commercial and industrial sectors, to support grid balancing

- Bring up the target for battery energy storage system (BESS) deployment in the PDP by at least two years,[5] and ensure that key investment enablers (e.g., regulatory frameworks, market incentives, and financing mechanisms) are in place to attract private sector participation and accelerate deployment
- Harmonise grid and interconnection codes between EGAT, the Metropolitan Electricity Authority (MEA), and the Provincial Electricity Authority (PEA)
- Introduce regulatory mechanisms to facilitate the renegotiation and restructuring of existing PPAs and gas supply contracts, with the aim of reducing minimum off-take volume and incorporating provisions for remunerating flexibility and ancillary services (e.g., fast-ramping, load-following, voltage support, frequency response)

1.3 Reduce gas demand through energy efficiency gains and demand management

- Reinforce building codes, appliance standards, and energy performance labelling programmes to reduce electricity demand, which in turn helps to lower gas demand in power generation
- Strengthen industrial energy efficiency standards and support process optimisation and heat recovery to reduce direct gas consumption in manufacturing and other gas-intensive industries
- Enhance the policy and regulatory environment (e.g., streamlined procurement procedures) and financial mechanisms (e.g., on-bill financing, credit risk guarantees and insurance) for energy service companies (ESCOs)
- Incentivise energy savings through market-based mechanisms (e.g., white certificates) to encourage cross-sector efficiency gains that reduce gas use
- Develop public outreach and technical support programmes to drive energy efficiency adoption, especially for Small and Medium Enterprises (SMEs) and low-income households
- Establish national open-access energy efficiency databases and tracking systems that support broad stakeholder engagement, frequent updates, and efficient identification of energy efficiency opportunities

[5] By deferring BESS deployment to 2032, as proposed in the 2024 draft PDP, Thailand risks foregoing substantial financial benefits and grid modernisation opportunities associated with the rapid decrease in battery costs. Techno-economic analysis from BNEF (2025b) finds that in Thailand, new utility-scale solar paired with four-hour BESS (assuming a 50% capacity ratio between the battery and solar plant) can already deliver a lower LCOE (US$79/MWh) than that of new combined-cycle gas plants (US$82/MWh). Looking ahead to 2030, the LCOE of new solar+BESS plants is expected to fall even further to US$56/MWh. In parallel, modeling by Agora Energiewende (2024) shows that a cost-optimised capacity build-out for Thailand would require 6.9 GW of BESS installations by 2030, alongside a substantial increase in solar capacity well beyond the ambition of the latest draft PDP.

1.4 Advance gas transition and decarbonisation efforts across sectors

- Assess and identify gas-use cases where fuel switching through electrification, renewable-based hydrogen, and other viable alternatives are available,[6] while highlighting areas of inefficient gas consumption
- Develop sector-specific transition roadmaps (i.e., phased roadmap for gas use decline) with clear goals for electrification, fuel switching, and the replacement of fossil-based feedstocks as well as consideration for social equity measures
- Introduce a moratorium on new gas-fired power plants given Thailand's excessively high power capacity reserve margins, ensuring that any future projects align with sector-specific transition roadmaps
- Deploy policy instruments to promote the adoption of low-carbon technologies for heating and as feedstocks in the industrial sector (e.g., through fiscal incentives, tax relief, and auctions for green products)
- Establish new industrial zones in areas with high RE potential to support emerging low-carbon industries such as green chemicals (ammonia, fertilisers, and methanol) and mitigate costs associated with low-carbon hydrogen infrastructure for industrial use
- Retrofit existing industrial parks into green industrial zones by mandating eco-friendly infrastructure upgrades, circular economy practices, and RE integration where feasible
- Expand support for the development of EV charging networks while laying the groundwork for smart EV charging (e.g., standardise data protocols and ensure interoperability)
- Promote innovation funding and public-private partnerships for alternative technologies and fuels (e.g., industrial heat pumps, biomethane)

6 This assessment should prioritise alternatives that are already economically viable but also consider emerging options that demonstrate strong potential to become cost-competitive in the near term.

Strategic Pillar 2:
Mitigate international LNG market risks and cost impacts

While Thailand can and should pursue structural shifts that reduce LNG dependence, it must also confront the reality of residual exposure to LNG imports during the transition. In this context, exposure to volatile global LNG markets poses significant risks to energy affordability, security, and financial stability, not only for households and businesses but also for state-owned importers like EGAT that operate under public mandates. While private sector players (e.g., Gulf, B. Grimm) can operate with greater agility, their commercial interests may not necessarily align with national resilience objectives. Policymakers therefore play a critical enabling role in shaping rules, oversight mechanisms, and institutional capabilities that ensure import strategies are robust, diversified, and risk-informed. At the same time, given that not all risks and cost impacts can be avoided, safeguards to support consumers during price spikes are equally essential.

2.1 Encourage diversification and favourable contractual terms

- Incorporate resilience metrics and multi-dimensional diversification targets into oversight frameworks, ensuring that procurement decisions weigh supplier reliability, contract duration, price indexation mechanisms, and volume flexibility alongside cost considerations
- Require LNG shippers (entities licensed to import LNG) to periodically report to the Energy Regulatory Commission of Thailand (ERC) on supply diversification and emergency preparedness strategies
- Increase the percentage of contracted volumes towards 2030 to at least 65%[7,8] of total LNG demand (after accounting for demand reduction potential identified through measures under Pillar 1), prioritising flexible short- and medium-term contracts while avoiding overreliance on long-term agreements (i.e., those exceeding 10 years) that constrain responsiveness to market and demand shifts
- Promote the use of destination- and volume-flexible LNG contracts

[7] This recommendation should not be interpreted as endorsing a 35%-65% spot-to-contract ratio as optimal for Thailand. Instead, it seeks to underscore the need to address the country's anticipated spot market overexposure in the coming years (as demonstrated in Figure 6). Structural procurement barriers, including those that hindered PTT from finalising a number of favourable medium-term contracts negotiated during the pre-COVID buyers' market environment, must be resolved to enable market-responsive, timely procurement.

[8] Among major LNG importers, the share of term volumes varies widely: Europe currently maintains approximately 55%-60% of total LNG demand under term contracts, while China has over-contracted beyond domestic requirements. While a higher proportion of term volumes offers greater supply stability, it also introduces risks related to reduced flexibility to respond to market changes as well as uncertainty in future demand. These risks are compounded by a country's ability to efficiently on-sell excess LNG, which is an area where Thailand remains less developed compared to leading importers such as Japan, China, and Europe. Taking these factors into account, and assuming successful implementation of the Pillar 1 recommendations, this paper recommends a relatively conservative target of at least 65% contracted volumes by 2030, with prioritisation given to flexible short- and medium-term contracts.

2.2 Strengthen procurement and financial risk management capabilities

- Establish an LNG shipper consortium for coordinating imports during crises or high-demand episodes, which can also serve as a knowledge exchange platform during stable periods
- Encourage or support collaboration between LNG shippers, especially newer market entrants, and technical experts to enhance capabilities in market risk analysis, procurement negotiation, and contract portfolio management
- Require contract terms to be reviewed on a periodic basis under a national energy risk framework, particularly for long-term contracts
- Mandate LNG shippers to develop internal risk management policies, including assessments of exposure to LNG price shocks
- Clarify the regulatory treatment and governance of financial hedging instruments, including explicit rules on how gains and losses will be recognised, reported, and treated under Thailand's gas pricing framework[9]
- Establish a structured sandbox and advisory mechanism to support EGAT and other importers with limited hedging experience in exploring hedging strategies under the guidance of technical partners, providing a foundation for subsequent pilot programmes

2.3 Improve inventory management and credit resilience

- Set inventory guidelines to prevent overcapacity while ensuring seasonal adequacy
- Explore opportunities for regional inventory coordination and bilateral strategic LNG reserve arrangements with other LNG-importing countries in the region, potentially leveraging technical and financial support from international organisations, such as the Asian Development Bank (ADB), the World Bank (WB), the International Energy Agency (IEA), and the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP)
- Facilitate the refinancing or restructuring of EGAT's existing debt to improve liquidity and credit metrics which can help EGAT secure more favourable contractual terms

[9] Provisions to ensure that governance and regulatory frameworks explicitly accommodate the possibility of short-term losses are important for maintaining confidence in hedging as a tool to manage price volatility during the transition towards a diversified energy system with reduced LNG reliance.

2.4 Mitigate cost impacts and enhance consumer protection

- As transport electrification progresses, gradually reallocate a portion of funds earmarked for transport sector fossil fuel subsidies (together with other politically feasible revenue sources) into a pre-funded LNG cost stabilisation reserve[10] to protect vulnerable consumers during future LNG price spikes
- Consider widening the toolkit of consumer protection measures beyond tariff reductions and subsidies to include complementary approaches such as energy vouchers, bill credits, or targeted tax relief (e.g., for SMEs)[11]
- Revise the fuel adjustment charge (Ft) calculation methodology to reflect actual historical costs (i.e., preceding four months) rather than forecasts,[12] which would reduce the risk of over- or under-recovery of costs, ensure tariffs are more closely tied to real market conditions, and enhance transparency

Strategic Pillar 3: Align the domestic LNG value chain with a transitioning energy landscape

As Thailand redefines the role of LNG within its energy transition, ensuring that the domestic LNG value chain is efficient, proportionate and fit-for-purpose becomes a strategic priority. Current infrastructure, operational rules, and market structures risk entrenching inefficiencies, distorting market access, and suppressing competition. Left unchecked, overcapacity and institutional bottlenecks could result in stranded assets, suppressed competition, and inflated costs for end consumers. Rather than expanding LNG-related infrastructure on outdated demand assumptions, policymakers should prioritise optimising existing assets, avoiding overinvestment and advancing a transparent, rules-based market governance that fosters a competitive and level playing field for all market participants.

3.1 Right-size LNG infrastructure and optimise existing asset utilisation

- Discourage capacity expansion of Terminals 1, 2, and 3 (including number of tanks) beyond what is clearly justified by updated, robust demand forecasts and transition-aligned planning
- Given current overcapacity risks, ensure any future expansion deemed necessary, such as additional tanks, will be pursued strictly as a commercial investment (i.e., outside the regulated asset base) to avoid passing on associated costs to consumers

[10] The reserve is to be drawn down only during periods of extreme LNG price spikes and should be targeted towards the most vulnerable consumer groups. Transparent reporting of contributions, balances, and disbursements would be required to maintain accountability and public trust.

[11] These measures can help promote energy efficiency, provide flexibility, and enhance the fairness and effectiveness of support.

[12] Currently, the calculation method relies on forecast energy demand and estimated fuel prices averaged over a four-month period (Agora Energiewende, NewClimate Institute, & Energy Research Institute, 2024).

- Push back against ambitions to position Thailand as a regional LNG trading hub considering that such aspirations are largely driven by anticipated infrastructure overcapacity rather than demonstrable market demand and competitive advantages
- Improve utilisation of LNG terminals, regasification facilities, and pipelines by introducing shared or pooled access arrangements such as virtual inventory models, especially considering the current imbalanced utilisation of Terminals 1 and 2
- Strengthen regulatory oversight of LNG terminal send-out-rate rules and asset reservation practices, such as those favouring PTT, to ensure capacity is allocated efficiently and fairly

3.2 Manage and mitigate risks of stranded LNG assets

- Develop frameworks for early identification and monitoring of potential stranded assets through scenario analysis and stress testing aligned with energy transition pathways
- Establish mechanisms for financial risk-sharing or compensation, such as government-backed transition funds or asset write-down guidelines, to reduce financial impacts on importers and consumers
- Encourage flexible contract terms with suppliers and lenders that allow for renegotiation or exit in the case of demand shortfalls or policy shifts
- Where technically and economically feasible,[13] design any new or upgraded LNG infrastructure to be "hydrogen-ready" (e.g., selecting materials, safety systems, and configurations that could support a future hydrogen value chain)

3.3 Foster a competitive and liberalised gas market [14]

- Revise the third-party access (TPA) and transmission system operator (TSO) codes to eliminate embedded advantages for incumbents and ensure fairer access for all market participants
- Involve an independent technical or regulatory entity in revising access codes, rather than leaving this responsibility solely to the market incumbent (i.e., PTT)
- Separate the operational and commercial roles of the incumbent (i.e., PTT) to reduce conflicts of interest and foster fairer market access (i.e., the entity controlling key infrastructure should not also be shaping access rules)
- Continue efforts to liberalise the gas market, including at the retail level, by reducing entry barriers, facilitating customer switching, and introducing other level playing field measures (e.g., anti-discrimination rules)

13 Evidence indicates that converting existing LNG infrastructure for use with hydrogen or its derivatives (e.g., liquid hydrogen, ammonia) is only feasible in limited cases and typically only if hydrogen-readiness was incorporated from the design and construction phase (Riemer, Schreiner, & Wachsmuth, 2022). In most existing assets, retrofitting for hydrogen use would require extensive replacement of critical components and would not be economically comparable to purpose-built hydrogen facilities. The pursuit of "hydrogen-ready" design should be cautious and proportionate, guided by credible long-term hydrogen uptake scenarios and transition pathways, rather than by generic expectations of easy or cost-effective conversion.

14 Liberalisation of the gas market requires complementary power market reforms. While this paper touches on a number of key power sector reform measures under Pillar 1, a full exploration of the necessary power market transformation is beyond its scope. For a comprehensive treatment of this topic, see Electricity market designs in Southeast Asia: Harnessing opportunities for renewable energy growth in Indonesia, Thailand, Viet Nam and the Philippines (Agora Energiewende, NewClimate Institute, & Energy Research Institute, 2024).

- Support the participation of newer private entrants through regulatory certainty, especially through a clear timeline for the introduction of phase 3 of gas market liberalisation
- Ensure clearer enforcement mandates for ERC in monitoring and adjudicating access disputes

3.4 Improve transparency, data access, and monitoring

- Require standardised reporting of asset reservations and usage to regulators, and publish aggregated data where possible without undermining commercial confidentiality
- Establish a centralised digital platform for real-time monitoring of LNG flows, infrastructure utilisation, and market behaviour to inform planning and oversight
- Enable ERC to actively track system-wide performance and identify bottlenecks or imbalances in real time

Final reflections & key takeaways:

Why structural reforms away from gas must lead

Not all policy measures carry equal weight. While risk management and LNG value chain reforms are necessary, the single most critical priority is the structural shift away from gas and LNG dependence envisioned under Pillar 1. Unlike Pillars 2 and 3, which operate within the constraints of a gas-dependent model, Pillar 1 directly tackles the core vulnerabilities of Thailand's energy system. Unless Thailand confronts the systemic drivers of gas demand across power generation, industry, and buildings, the country will remain structurally exposed to volatile global markets, with profound energy security and cost implications.

Beyond reducing exposure to international LNG volatility, policy measures proposed under Pillar 1 would enable Thailand to build a more resilient, domestically anchored energy mix that can significantly enhance the country's economic competitiveness. Just as importantly, these measures can help unlock powerful system-wide synergies: modernised grids can integrate higher shares of renewables, electrified transport reduces reliance on imported oil, and efficiency gains shrink overall energy demand. Together, these shifts have the potential to create a virtuous cycle of diversification, innovation, and investment in clean technologies. At the same time, Pillar 1 measures can help to align Thailand's energy security with its decarbonisation commitments, ensuring that efforts to safeguard affordability and resilience also strengthen the country's credibility in meeting climate goals and attracting sustainable investment.

Policy success will rest on mobilising the most consequential levers to drive systemic change. First, market reforms to accelerate RE deployment are essential to displace planned gas capacity and unlock private investment. This includes auction-based procurement for utility-scale projects, streamlined permitting and interconnection process for distributed PV, and expanded access to DPPAs and third-party grid connections. Second, to ensure renewables can be reliably integrated and scaled, Thailand must simultaneously modernise its grid infrastructure and enable system flexibility. Battery storage deployment, incentives for operational flexibility, and demand response programmes, particularly in commercial and industrial sectors, are critical to balancing variable generation and reducing peak gas reliance. Third, reducing structural gas consumption in industry and buildings will require sector-specific transition roadmaps and targeted incentives for electrification, fuel-switching, and low-carbon technologies. Establishing green industrial zones in RE-rich areas and retrofitting existing parks can further anchor new demand around clean energy and help Thailand position itself as a regional leader in sustainable manufacturing. Finally, improving energy efficiency across sectors, especially through strengthened building codes and appliance standards, offers a high-impact pathway to reduce demand. Complementary policy and regulatory support for energy service companies can help scale implementation and unlock additional opportunities for cost-effective savings.

Charting an integrated path forward

Thailand's growing reliance on LNG, born out of short-term necessity amid falling domestic gas output, now presents long-term risks that demand urgent policy recalibration. Together, the three strategic pillars introduced lay the foundation for a future in which LNG will not become the cornerstone of Thailand's energy trajectory, but instead occupies a clearly defined, adaptable role within a diversified and resilient energy system.

First and foremost, by reducing structural dependence on LNG and, more broadly, gas, Thailand can shift its energy system onto a more resilient and sustainable footing, centred around RE, flexible infrastructure, and smarter demand management. Second, by systematically managing exposure to international LNG market risks and mitigating cost impacts through diversified procurement, strengthened risk management capabilities, and consumer protection measures, the country can enhance resilience against global price volatility and enable more strategic engagement with the global LNG market. Finally, by aligning the domestic LNG value chain with the country's energy transition, policymakers can help avoid overinvestment in LNG infrastructure, reduce stranded asset risks, and address gas market distortions that could hinder Thailand's long-term energy goals.

Taken together, these dimensions form an integrated approach that not only addresses the symptoms of overdependence on gas and LNG but also reshapes the structural conditions that gave rise to it. As Thailand continues to revise its PDP and energy regulatory frameworks to meet its climate commitments, this policy blueprint can serve as a foundation for bold, forward-looking decisions that align with the country's energy security and sustainability aspirations.

Appendix A

Priority timeline for implementation of policy measures under Strategic Pillar 1

Reduce LNG demand through system-wide transformation			
Strategic Pillar 1	**Near-term (1-3 years)**	**Medium-term (4-6 years)**	**Long-term (7+years)**
1.1 Accelerate renewable energy deployment	• Set higher targets in the run-up to 2030 for replacing planned gas capacity expansion with solar and wind in the PDP, including specific targets for distributed energy resources • Introduce a distributed PV/net billing programme for commercial and industrial consumers, together with reforms to streamline permitting processes and interconnection requirements • Adopt auction mechanisms for utility-scale RE projects, and reserve the feed-in tariff (FIT) scheme for non-mature, emerging technologies while ensuring regular updates of FIT rates to reflect actual project costs • Accelerate the implementation of third-party grid access and scale up the direct power purchase agreement (DPPA) scheme • Simplify permitting processes for RE development projects to reduce lead times and transaction costs	• Designate priority areas for RE development • Plan the transition towards more cost-reflective tariffs to address market inefficiencies • Conduct a feasibility study to explore Thailand's biomethane potential and the prospects for gas substitution in hard-to-abate sectors, building on current pilot projects and the IEA's preliminary biomethane assessment (2025b)	*This sub-category emphasises market activation measures that are necessary within the next few years to boost deployment of renewables. Long-term measures should focus on further scaling up capacity installations while ensuring their effective integration.* *Also, if biomethane proves to be technically and economically feasible in Thailand, especially as a substitute for fossil gas in hard-to-abate sectors, then follow-up policy measures should focus on scaling up production, securing offtake, and integrating biomethane into existing infrastructure and markets.*

Appendix A

Priority timeline for implementation of policy measures under Strategic Pillar 1

Reduce LNG demand through system-wide transformation			
Strategic Pillar 1	**Near-term (1-3 years)**	**Medium-term (4-6 years)**	**Long-term (7+years)**
1.2 Strengthen energy infrastructure and unlock power system flexibility	• Enhance demand response programmes, especially in commercial and industrial sectors, to support grid balancing • Harmonise grid and interconnection codes between EGAT, MEA, and PEA • Bring up the target for battery energy storage system (BESS) deployment in the PDP by at least two years, and ensure that key investment enablers (e.g., regulatory frameworks, market incentives, and financing mechanisms) are in place to attract private sector participation and accelerate deployment	• Prioritise grid upgrades in national infrastructure investment plans and ensure grid development, including the roll-out of smart grid technologies and non-wires solutions such as battery storage, is aligned with RE development and electric vehicle (EV) growth plans • Strengthen bilateral and sub-regional power interconnections while strengthening domestic readiness for deeper regional grid integration • Introduce regulatory mechanisms to facilitate the renegotiation and restructuring of existing PPAs and gas supply contracts, with the aim of reducing minimum off-take volume and incorporating provisions for remunerating flexibility and ancillary services (e.g., fast-ramping, load-following, voltage support, frequency response)	*Establish a forward-looking grid modernisation strategy that includes digitalisation, AI-driven system operation, and integration of DERs into a decentralised grid management model.*

Appendix A

Priority timeline for implementation of policy measures under Strategic Pillar 1

Reduce LNG demand through system-wide transformation			
Strategic Pillar 1	**Near-term (1-3 years)**	**Medium-term (4-6 years)**	**Long-term (7+years)**
1.3 Reduce gas demand through energy efficiency gains and demand management	• Reinforce building codes, appliance standards, and energy performance labelling programmes to reduce electricity demand, which in turn helps to lower gas demand in power generation • Strengthen industrial energy efficiency standards and support process optimisation and heat recovery to reduce direct gas consumption in manufacturing and other gas-intensive industries • Develop public outreach and technical support programmes to drive energy efficiency adoption, especially for Small and Medium Enterprises (SMEs) and low-income households	• Enhance the policy and regulatory environment (e.g., streamlined procurement procedures) and financial mechanisms (e.g., on-bill financing, credit risk guarantees and insurance) for energy service companies (ESCOs) • Incentivise energy savings through market-based mechanisms (e.g., white certificates) to encourage cross-sector efficiency gains that reduce gas use	*Establish national open-access energy efficiency databases and tracking systems that support broad stakeholder engagement, frequent updates, and efficient identification of energy efficiency opportunities*

Appendix A

Priority timeline for implementation of policy measures under Strategic Pillar 1

Reduce LNG demand through system-wide transformation			
Strategic Pillar 1	**Near-term (1-3 years)**	**Medium-term (4-6 years)**	**Long-term (7+years)**
1.4 Advance gas transition and decarbonisation efforts across sectors	• Assess and identify gas-use cases where fuel switching through electrification, renewable-based hydrogen, and other viable alternatives are available, while highlighting areas of inefficient gas consumption • Expand support for the development of EV charging networks while laying the groundwork for smart EV charging (e.g., standardise data protocols and ensure interoperability) • Promote innovation funding and public-private partnerships for alternative technologies and fuels (e.g., industrial heat pumps, biomethane) • Introduce a moratorium on new gas-fired power plants given Thailand's excessively high power capacity reserve margins, ensuring that any future projects align with sector-specific transition roadmaps	• Develop sector-specific transition roadmaps (i.e., phased roadmap for gas use decline) with clear goals for electrification, fuel switching, and the replacement of fossil-based feedstocks as well as consideration for social equity measures • Retrofit existing industrial parks into green industrial zones by mandating eco-friendly infrastructure upgrades, circular economy practices, and RE integration where feasible • Deploy policy instruments to promote the adoption of low-carbon technologies for heating and as feedstocks in the industrial sector (e.g., through fiscal incentives, tax relief, and auctions for green products)	*Establish new industrial zones in areas with high RE potential to support emerging low-carbon industries such as green chemicals (ammonia, fertilisers, and methanol) and mitigate costs associated with low-carbon hydrogen infrastructure for industrial use*

Appendix B

Priority timeline for implementation of policy measures under Strategic Pillar 2

Mitigate international LNG market risks and cost impacts			
Strategic Pillar 2	**Near-term (1-3 years)**	**Medium-term (4-6 years)**	**Long-term (7+years)**
2.1 Encourage diversification and favourable contractual terms	• Require LNG shippers to periodically report to the Energy Regulatory Commission of Thailand (ERC) on supply diversification and emergency preparedness strategies • Promote the use of destination- and volume-flexible LNG contracts • Increase the percentage of contracted volumes towards 2030 to at least 65% of total LNG demand (after accounting for demand reduction potential identified through measures under Pillar 1) by 2030, prioritising flexible short- and medium-term contracts	• Incorporate resilience metrics and multi-dimensional diversification targets into oversight frameworks, ensuring that procurement decisions weigh supplier reliability, contract duration, price indexation mechanisms, and volume flexibility alongside cost considerations	*Policy measures under this sub-category are mostly procurement- and oversight-related, which are best addressed early and refined over time.*

Appendix B

Priority timeline for implementation of policy measures under Strategic Pillar 2

Mitigate international LNG market risks and cost impacts			
Strategic Pillar 2	**Near-term (1-3 years)**	**Medium-term (4-6 years)**	**Long-term (7+years)**
2.2 Strengthen procurement and financial risk management capabilities	• Encourage or support collaboration between LNG shippers and technical experts to enhance capabilities in market risk analysis, procurement negotiation, and contract portfolio management • Require contract terms to be reviewed on a periodic basis under a national energy risk framework, particularly for long-term contracts • Clarify the regulatory treatment and governance of financial hedging instruments, including explicit rules on how gains and losses will be recognised, reported, and treated under Thailand's gas pricing framework • Mandate LNG shippers to develop internal risk management policies, including assessments of exposure to LNG price shocks	• Establish an LNG shipper consortium to coordinate imports during crises or high-demand periods, which can also serve as a knowledge exchange platform during stable periods • Establish a structured sandbox and advisory mechanism to support EGAT and other importers with limited hedging experience in exploring hedging strategies under the guidance of technical partners, providing a foundation for subsequent pilot programmes	*None strictly long-term; all are actionable within a few years and designed to build foundational capacity.*

Appendix B

Priority timeline for implementation of policy measures under Strategic Pillar 2

Mitigate international LNG market risks and cost impacts			
Strategic Pillar 2	**Near-term (1-3 years)**	**Medium-term (4-6 years)**	**Long-term (7+years)**
2.3 Improve inventory management and credit resilience	• Set inventory guidelines to prevent overcapacity while ensuring seasonal adequacy • Facilitate the refinancing or restructuring of EGAT's existing debt to improve liquidity	• Explore opportunities for regional inventory coordination and bilateral strategic LNG reserve arrangements with other LNG importing countries in the region, potentially leveraging technical and financial support from international organisations	*Strategic reserves, once planned, may involve long-term operationalisation, but planning and early coordination should start in the medium term.*
2.4 Mitigate cost impacts and enhance consumer protection	• Consider widening the toolkit of consumer protection measures beyond tariff reductions and subsidies to include complementary approaches such as energy vouchers, bill credits, or targeted tax relief • Revise the fuel adjustment charge (Ft) calculation methodology to reflect actual historical costs (i.e., preceding four months) rather than forecasts, which would reduce the risk of over- or under-recovery of costs, ensure tariffs are more closely tied to real market conditions, and enhance transparency	• As transport electrification progresses, gradually reallocate a portion of funds earmarked for transport sector fossil fuel subsidies (together with other politically feasible revenue sources) into a pre-funded LNG cost stabilisation reserve to protect vulnerable consumers during future LNG price spikes	*Efforts should focus on adapting near- and medium-term measures to align with evolving energy system dynamics and demand patterns, such as the growing deployment of distributed energy resources (DERs). In the very long run, assuming successful implementation of Pillar 1 measures, the need to mitigate international LNG market risks and associated cost impacts would be significantly diminished.*

Appendix C

Priority timeline for implementation of policy measures under Strategic Pillar 3

Align the domestic LNG value chain with a transitioning energy landscape			
Strategic Pillar 3	**Near-term (1-3 years)**	**Medium-term (4-6 years)**	**Long-term (7+years)**
3.1 Right-size LNG infrastructure and optimise existing asset utilisation	• Discourage capacity expansion of Terminals 1, 2, and 3 beyond what is clearly justified by updated, robust demand forecasts • Given current overcapacity risks, ensure any future expansion deemed necessary, such as additional tanks, will be pursued strictly as a commercial investment (outside the regulated asset base) to avoid passing on associated costs to consumers • Push back against ambitions to position Thailand as a regional LNG trading hub considering that such aspirations are largely driven by anticipated infrastructure overcapacity rather than demonstrable market demand and competitive advantages • Strengthen regulatory oversight of LNG terminal send-out-rate rules and asset reservation practices, such as those favouring PTT, to ensure capacity is allocated efficiently and fairly	• Improve utilisation of LNG terminals, regasification facilities, and pipelines by introducing shared or pooled access arrangements such as virtual inventory models, especially considering imbalanced utilisation of Terminals 1 and 2	*A key objective of this sub-category is to prevent infrastructure overbuild now, based on updated demand trajectories that account for gas demand reduction potential from Strategic Pillar 1. Infrastructure decisions made in the near and medium term will lock in long-term outcomes, so the leverage is front-loaded.*

Appendix C

Priority timeline for implementation of policy measures under Strategic Pillar 3

Align the domestic LNG value chain with a transitioning energy landscape			
Strategic Pillar 3	**Near-term (1-3 years)**	**Medium-term (4-6 years)**	**Long-term (7+years)**
3.2 Manage and mitigate risks of stranded LNG assets	• Develop frameworks for early identification and monitoring of potential stranded assets through scenario analysis and stress testing aligned with energy transition pathways • Where technically and economically feasible, design any new or upgraded LNG infrastructure to be "hydrogen-ready"	• Encourage flexible contract terms with suppliers and lenders that allow for renegotiation or exit in the case of demand shortfalls or policy shifts	• Establish mechanisms for financial risk-sharing or compensation, such as government-backed transition funds or asset write-down guidelines, to reduce financial impacts on importers and consumers
3.3 Foster a competitive and liberalised gas market	• Revise TPA and TSO codes to eliminate embedded advantages for incumbents and ensure fairer access for all market participants • Involve an independent technical or regulatory entity in revising access codes, rather than leaving this responsibility solely to the market incumbent (i.e., PTT) • Ensure clearer enforcement mandates for ERC in monitoring and adjudicating access disputes • Support the participation of newer private entrants through regulatory certainty, especially through a clear timeline for phase 3 of gas market liberalisation	• Separate the operational and commercial roles of the incumbent (i.e., PTT) to reduce conflicts of interest and foster fairer market access (i.e., the entity controlling key infrastructure should not also be shaping access rules) • Continue efforts to liberalise the gas market, including at the retail level, by reducing entry barriers, facilitating customer switching, and introducing other level playing field measures (e.g., anti-discrimination rules)	*Policy measures to be implemented 7+ years from now will largely depend on the progress made in the coming years.*

Appendix C

Priority timeline for implementation of policy measures under Strategic Pillar 3

Align the domestic LNG value chain with a transitioning energy landscape			
Strategic Pillar 3	**Near-term (1-3 years)**	**Medium-term (4-6 years)**	**Long-term (7+years)**
3.4 Improve transparency, data access, and monitoring	• Require standardised reporting of asset reservations and usage to regulators, and publish aggregated data where possible without undermining commercial confidentiality	• Enable ERC to actively track system-wide performance and identify bottlenecks or imbalances in real time	• Establish a centralised digital platform for real-time monitoring of LNG flows, infrastructure utilisation, and market behaviour to inform planning and oversight

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