



THE CONTINUING EVOLUTION OF THE ASIAN LNG MARKET

The global LNG markets are evolving. In this piece, authored jointly by HFW Singapore partner Dan Perera, together with S&P Global Commodity Insights' Eric Yep and Shermaine Ang, we examine the drivers behind the shift, and how LNG market dynamics are changing in Asia.

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Returned (relative) stability

In HFW’s December 2022 article, *The LNG market and energy security in Asia*¹, we discussed the development of new LNG receiving terminals under construction across Asia, as many states in the region looked to turn their backs on the burning of coal for energy following the COVID-19 pandemic. LNG previously intended for those new receiving terminals was instead making its way to Europe, together with some of the floating storage and regasification units (FSRUs) which their infrastructure had intended to rely on.

Several months later, we have seen global demand for LNG – and the prices attaching to it – normalise somewhat, after the previous 18-month-long wild ride in the markets. As new sources of supply came on stream, and as storage capacity across Europe filled up and did not rapidly deplete - thanks in part to a mild winter - a semblance of calm has now returned to global LNG markets. For how long that situation may prevail, however, is anyone’s guess – geopolitical tensions continue to have an impact.

We have now reached the stage where a number of LNG receiving terminals previously under construction have been completed and successfully commissioned.

Examples include those in Vietnam and the Philippines, which are now successfully receiving LNG and feeding into their respective national grids. As such, the LNG market in Asia has indeed continued its ongoing evolution, on its journey to become a major hub for the consumption of LNG – an interim fuel of choice for several states in the region, as a move towards sustainable energy transition slowly plays out.

Demand outstripping regional supply in Southeast Asia

Southeast Asia is expected to rely increasingly on LNG imports due to several factors. Chief among these is the long-term decline in domestic gas production and the difficulties faced by the national oil companies in rejuvenating their upstream assets, even as their economies continue to grow and energy demand continues to rise.

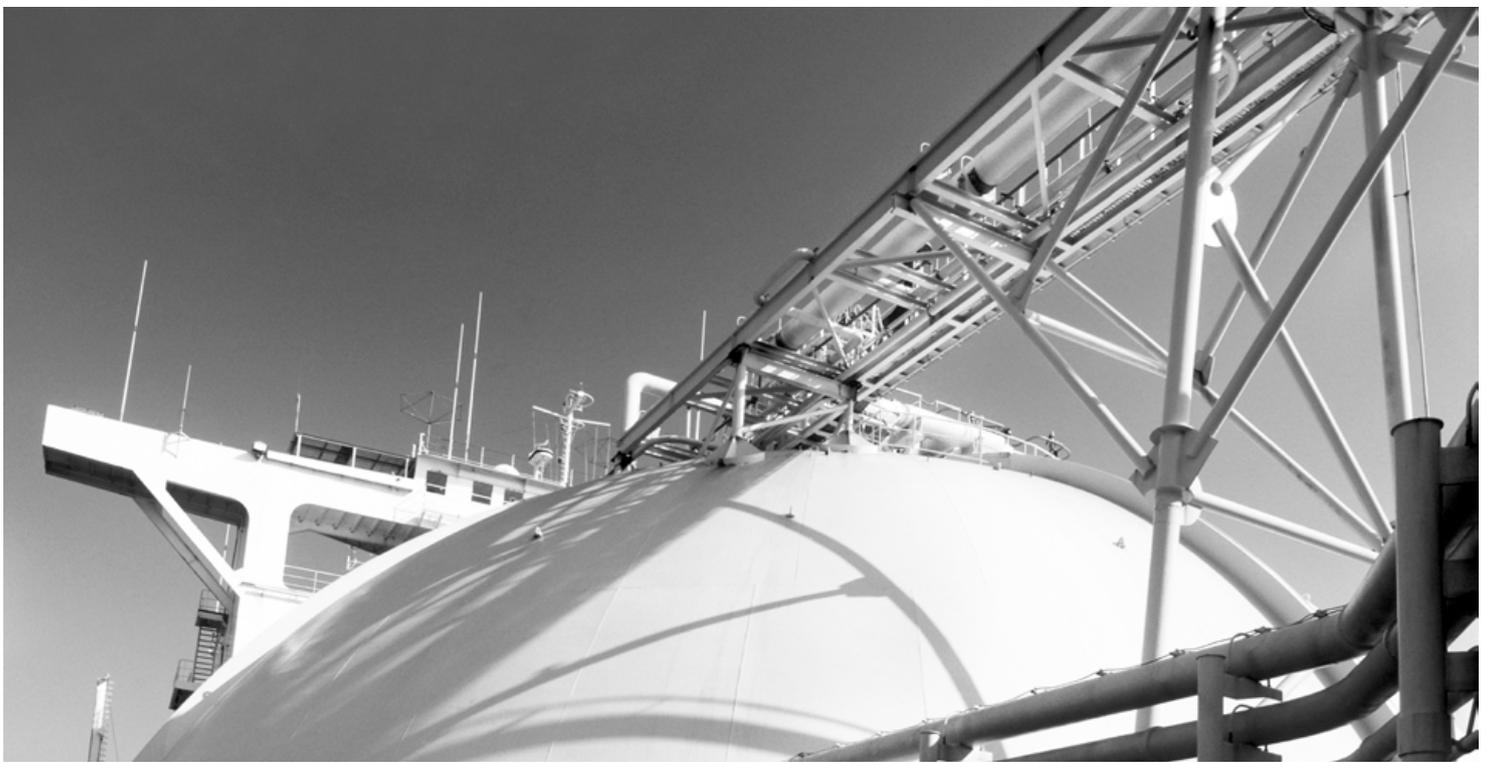
Singapore, Indonesia and Malaysia are expected to see their LNG imports continue to rise, especially Singapore, where LNG will remain a source of energy security due to the lack of viable alternatives. In June 2023, Singapore’s Sembcorp Industries signed a new piped gas contract with Indonesia’s Medco Energi Internasional, and the Energy Market Authority is separately evaluating a tender for a dedicated FSRU in the

city-state. These actions are driven by uncertainty over pipeline gas supply from neighbouring Indonesia and Malaysia, as legacy pipeline contracts expire, and the supplier states themselves face rising gas demand.

Indonesia and Malaysia, the stalwarts of Southeast Asia’s oil and gas production, are gradually turning into importers of LNG, forcing national oil companies Pertamina and Petronas to find a balance between meeting supply commitments to long-term LNG customer markets, such as Japan, and the urgency of domestic demand. Indonesia’s Tangguh LNG terminal is already a key supplier of cargoes to the domestic market, and Malaysia has seen a jump in LNG imports in Pengerang. Both countries are working on upstream projects to reverse production declines, but it remains a challenge, and for Indonesia the start-up of flagship LNG projects like Abadi and Indonesian Deepwater Development (IDD) still appears to be several years away.

On 2 October 2023, Italy’s Eni announced that its Geng North-1 deepwater exploration well in the Kutei Basin offshore East Kalimantan had discovered significant amounts of gas and condensate, estimated at around 5 Tcf of gas in place with 400 million barrels of condensate. Geng North-1 is believed to be the

1. <https://www.hfw.com/LNG-Bulletin-December-2022>



largest discovery in Indonesia in at least two decades, although further appraisals will be needed, according to S&P Global Commodity Insights. The immediate route to commercialise Geng North would be to utilise available capacity at the Bontang LNG liquefaction plant, and also supply the domestic market. So, there is still a chance that Southeast Asian gas production decline can be arrested, amid broader constraints on new oil and gas investment.

For Vietnam and the Philippines, the two new LNG importers of 2023, LNG is also needed to replace the lack of domestic gas supply and, in the case of the Philippines, the depletion of the Malampaya gas field. It is understood that LNG importers in both countries are still awaiting regulatory certainty on downstream electricity market regulations before they can commit to execute LNG Sale and Purchase Agreements (SPAs). Rigid state-owned power purchasing utilities in both countries do not have a mechanism to deal with prices of electricity generated from LNG, resulting in the lack of power purchase agreements or PPAs. The absence of PPAs mean that the power producers cannot sign long-term agreements with gas importers, who in turn are unable to sign long-term LNG deals with international suppliers.

Thailand is still struggling with production declines at its largest gas fields, including Erawan and Bongkot, and uncertainly in pipeline gas supply from neighbouring Myanmar. It emerged as one of the most stable spot market LNG importers in Southeast Asia, despite much price volatility following the Ukraine crisis, mainly because Thailand is fairly insulated from higher costs as electricity tariffs are adjusted every four months.

Before Vietnam and the Philippines, Myanmar was one of the fastest new LNG developments to come to market, having set up a complex LNG import and power production supply chain, while the rest of the world was dealing with COVID-19. Myanmar's LNG import project navigated logistical issues, such as the low draft at the Yangon River, and conducted small-scale LNG carrier shipments to feed power plants in Yangon. However, it has now been impacted by the higher cost of LNG and recent political turmoil. Prices remain a major challenge in making LNG affordable.

Market liberalisation driving demand

Across most of the Southeast Asian region, gas market and power market liberalisation is a critical theme that will underpin future gas demand, in

the form of pricing policies as well as third party access to LNG terminal infrastructure. New LNG importers are waiting in the wings to dislodge the national oil companies which have to date monopolised imports. In September, on the first day of the Gastech 2023 conference in Singapore, major LNG trader Gunvor announced a 0.5 million mt/year LNG SPA with Hin Kong Power, a joint venture between Gulf Energy Development and Ratch Group. Hin Kong Power was among the first private companies to sign a term LNG supply contract for Thailand, although power utility EGAT has been supplementing PTT's procurement efforts in recent years, and several others are awaiting their turn.

Small parcel cargoes

One of the more subtle developments in the region has been the development of downstream LNG distribution infrastructure to supply smaller volumes, break large cargoes into smaller parcels and conduct LNG bunkering or reloading activity. An increasing number of LNG receiving terminals like Pengerang, Melaka, Bintulu, Map Ta Put, Arun and Singapore have built out these capabilities over the years. China's LNG importer JOVO has been splitting LNG cargoes into smaller parcels at Subic Bay in the Philippines for several years, and

Term	Standard
Basis and location	Thailand considered basis of assessment, prices of LNG spot cargoes delivered into Singapore, Philippines or Vietnam may be normalised.
Timing	Delivery in third, fourth, fifth and sixth half-month cycles forward from date of publication. SEAM monthly assessment based on average of the two DES Southeast Asia LNG half months that match the JKM delivery month period.
Delivery window	Typically three days long, buyer's option to narrow to a one- or two-day delivery window by 30 days before first day of traded delivery window
Loading location	Seller's option to nominate base loading port, may substitute loading port up to 30 days prior to first day of traded delivery window
Quality	GHV of 1,000-1,150 Btu/Scf. Platts may normalize information with other ranges for quality.
Quantity	3.4 TBtu plus/minus 5% operational tolerance, at seller's option
LNG ship	LNG ship sizes of above 135,000 cu m

Singapore and Cambodia both have existing capability to distribute LNG in small ISO tanks for a variety of industrial purposes, expanding LNG consumption beyond just power generation. This is a space that will continue to evolve as gas markets find a firmer footing.

Decarbonisation drive

Perhaps the most significant long-term trend that impacts LNG is the evolution of Southeast Asia's energy mix amid growing pressure to decarbonise. Vietnam has been promised around US \$15.5 billion under a Just Energy Transition Partnership with wealthy nations, in return for setting up an energy transition roadmap to decommission coal-fired power plants. Indonesia has been promised around US \$20 billion under the same programme. Reaching Southeast Asia's latest decarbonisation targets will call for extensive transformation of its power generation sectors, and local governments are stepping up renewables targets to meet power needs, targeting around 68 GW of wind and solar capacity additions from 2021 to 2030, according to S&P Global analysts.

The rise of zero carbon fuels will be a challenge for LNG demand. The Singapore energy regulator, EMA, is proposing to require all new and

repowered power generation units to be at least 30% volume hydrogen compatible, with the ability to be retrofitted to become operationally 100% hydrogen compatible in the future. Tan See Leng, second minister for trade and industry, announced recently at the Gastech 2023 conference in Singapore. A few weeks ago, Malaysia launched its Hydrogen Economy and Technology Roadmap (HETR) to guide the development of its hydrogen economy.

Overall, however, Southeast Asian energy companies are still seeking more LNG and demand will most likely continue to grow in coming years.

New Southeast Asia price marker

The establishment of new LNG markets in Southeast Asia in particular has also led to the development of a new regional LNG pricing benchmark, in the form of the S&P Global Commodity Insights' DES Southeast Asia LNG Marker launched on 23 October 2023. This complements S&P Global Commodity Insights' existing Asia offerings, such as Platts Japan Korea Marker (JKM), and Platts West India Marker (WIM).

The Platts Southeast Asia Marker, or SEAM², reflects the value of spot LNG cargoes delivered into Southeast Asia. These assessments are published as

a differential to Platts JKM as well as on an outright basis.

In the past 2 years, Southeast Asian (Thailand, Singapore, Philippines, Vietnam) LNG imports have grown to 14.3 million MT year to date as of 16 October 2023. This growth has been led by Thailand, with imports jumping by 24.7% in 2022 from 2021. Year to date import figures in Thailand and Singapore have also exceeded its 2022 imports by 13.6%.

With the start-up of new receiving terminals in Vietnam and Philippines, LNG imports into the region are expected to increase further and play a crucial role in the nations' decarbonisation efforts.

Further to that, major international players have also indicated interest in trading or selling into Southeast Asia to tap into the new emerging buyers in the market.

The table above sets out the standard terms and specifications for SEAM.

Harmonising LNG pricing

LNG continues to be priced differently across key consumption markets globally. This is partly due to how the LNG market and shipping practices have evolved over years, taking account of important factors in transportation such as boil-off and loss of cargo across long sea voyages, and the previously standard market

2. <https://www.spglobal.com/commodityinsights/en/our-methodology/subscriber-notes/102323-platts-launches-des-southeast-asia-lng-seam-cargo-assessments>

dynamics of producers selling directly to end users. Those markets have now been significantly disrupted by a number of relevant factors, including:

- the arrival of many proprietary traders in the LNG space, which was previously the sole domain of the “tram lines” players
- a larger fleet of LNG carriers globally, permitting more capacity to be shipped
- global production capacity ramping up, with new projects coming on stream globally
- the development of LNG spot markets
- the ability to voyage charter LNG carriers
- technological developments, permitting increased compatibility between vessels and liquefaction plants and receiving terminals, including FSRUs.

more short-termism driving the price fundamentals, leading to shorter-term supply arrangements under traditional long-term SPAs linked to energy security, and an increase in trading individual cargoes under Master Sale and Purchase Agreements (MSPAs). Parties which will be beholden to LNG as a source of national energy security for the next decades have been pushed into considering purchasing the product under MSPAs.

These changes in market dynamics have even had an impact on previously critical issues in LNG, such as price review disputes under long term SPAs. More SPAs are now being entered into for shorter periods, with extension options which may be triggered, but with supply obligations falling away if a mutually acceptable price cannot be agreed. As such, we would expect to see fewer SPAs containing price review provisions in their traditional form going forward, and the market is moving towards a position which reflects the greater number of supply sources and sell-side market participants, and which is geared more towards short-termism than it has ever previously been.

All of the above is evidence of the move towards the commoditisation

of LNG, and greater standardisation globally regarding its handling and transportation. Together with greater commoditisation, comes the ability to price on a more standardised basis. This is an opportunity which S&P Global Commodity Insights have identified and utilised to propose the JKM Forwards assessments.

Along with a greater degree of standardisation observed in spot LNG trade, especially in North Asia, S&P Global Commodity Insights is also planning to launch a new price assessment for cargoes delivered one to three months after the front-month JKM assessment in the form of JKM Forwards.³

The launch was proposed after market participants expressed interest in price assessments that reflect the value of physical forward LNG cargoes, whereby a full physical cargo of LNG would be delivered if a company trades a defined number of physical forwards with another company in one direction for the same delivery period. Similar mechanisms exist in forward crude oil cargo markets in Asia and Europe.

The level of standardisation of contractual terms in Asian LNG markets has enabled this proposed innovation as terms of physical cargo deliveries upon convergence will be aligned with existing JKM standard terms.

With a launch date of 16 January 2024, companies will be able to trade April 2024 for the promptest Forwards month and this would increase transparency of physical cargo value on the prompt through differentials against the Forwards assessments and further down the curve as well. These new assessments will be additional to the existing JKM Market On Close (MOC) infrastructure, and the assessment method remains unchanged.

Key takeaways

The evolution of the LNG market in Asia brings with it a slew of new players to the space, including state-owned enterprises which will be feeding gas into national power grids for the first time. Developments such as the launch of the SEAM benchmark assist regional parties

to price their LNG on a basis which best suits delivery to their region and to their terminal. It will be important for many of the new LNG market participants in Asia to take note of such developments and to seek to use them to their advantage, when negotiating for the supply of LNG going forward. How such parties approach the drafting, negotiation and pricing of LNG at this juncture will be of critical importance to the shape of the future Asian LNG markets and should not be approached lightly. States and state-owned enterprises should be ready to negotiate properly and in an informed manner with suppliers – be they producers or traders – if critical issues of national energy security are in issue.

New developments in the global LNG markets including the recent trader influx, and the development of more accurate and contemporaneous pricing benchmarks, may significantly alter the future market dynamics of LNG in Asia. As the number of players in the space continues to increase; as technology improves; and as the product takes on more of a commoditised nature, we may expect to see a greater degree of harmonisation globally in the LNG space. Utilising all levers available to maximise one's position in the chain will be critical for those who wish to participate effectively.

3. <https://www.spglobal.com/commodityinsights/en/our-methodology/subscriber-notes/101923-platts-to-launch-jkm-forwards-price-assessments-on-jan-16-2024>

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