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Now is Not the Time to Build More LNG Import Terminals in Asia

Price-Sensitive LNG Buyers Risk Being Pushed Out of the Market by Volatile Prices, Leaving Import Assets Stranded

Introduction

Global liquefied natural gas (LNG) markets are experiencing a period of extreme volatility, which many will undoubtedly attribute to Russia's invasion of Ukraine. Surely, prices will stabilize soon—or so the thinking goes.

However, unpredictability and energy insecurity are fundamental, not fleeting, characteristics of LNG markets. LNG price volatility began well before the Russian invasion and will have longer-term ramifications after the dust settles.

Europe's role as a balancing market for LNG is changing as it weans itself off Russian piped gas, indicating potentially greater competition with Asia for LNG volumes. Significant new LNG supply capacity is not expected online until the middle of the decade, while unplanned outages at existing facilities have reached record levels. This means that price-sensitive LNG buyers in Asia could be squeezed out of a tighter global market. Meanwhile, a renewed threat of cuts to Russian gas and LNG supply to Europe looms large, and the global macroeconomic picture is fundamentally more unstable than energy crises in recent memory.

Uncertainty in LNG markets has never been higher.

As a result of extreme price fluctuations over the past two years, developing countries, in particular, have faced difficulty securing fuel supplies, causing fuel and power shortages. Such energy insecurity often has the most detrimental impacts on economically vulnerable communities least responsible for decisions to import higher levels of expensive fossil fuels.

Uncertainty in LNG markets has never been higher.

Volatility also complicates planning horizons for energy sector planners. It can often result in an expensive reallocation of resources and reversion to other fossil fuels like coal and oil rather than facilitating a step forward in the transition to clean energy.

The formation of reliable national budgets also becomes more difficult, especially in developing countries where large portions of government budgets go to fuel subsidies. These subsidy allocations expose governments to significant budgetary risks when global commodity prices spike. In markets where fuel costs are passed through to end-users, households and businesses are unfairly exposed to price volatility in global markets.

Yet, the natural gas industry and gas exporting governments are pushing the narrative that LNG projects will lower energy costs, improve energy security, and grease the wheels of the energy transition by facilitating the integration of new renewable energy sources.[1]

As a result, many policymakers, project developers, and financiers in Asia are doubling down on new LNG import projects and gas-fired power projects. But the Russian invasion of Ukraine demonstrates that LNG will not only be more expensive than alternative, domestically-sourced energy options, but also significantly more unpredictable.

Investors in Asia Are Doubling Down on Imported Gas Projects Despite Clear Economic and Financial Risks

According to data from Global Energy Monitor, there are US$379 billion of ongoing gas infrastructure investments throughout Asia, including power plants, pipelines, and LNG import terminals.[2] Nearly 80 million tonnes per annum (mtpa) of LNG import capacity are expected to be completed in Asia in the next two years (see Figure 1). If terminals are completed in Vietnam and the Philippines, both countries will become new entrants into LNG markets.

[1] IEEFA. U.S. push for LNG in the Philippines paints unrealistic picture of global prices and market viability. September 23, 2021.
[2] Global Energy Monitor. Asia's Gas Lock-In. October 2021.

Figure 1: LNG Import Terminals in Asia with Targeted In-Service Dates Between 2022-23

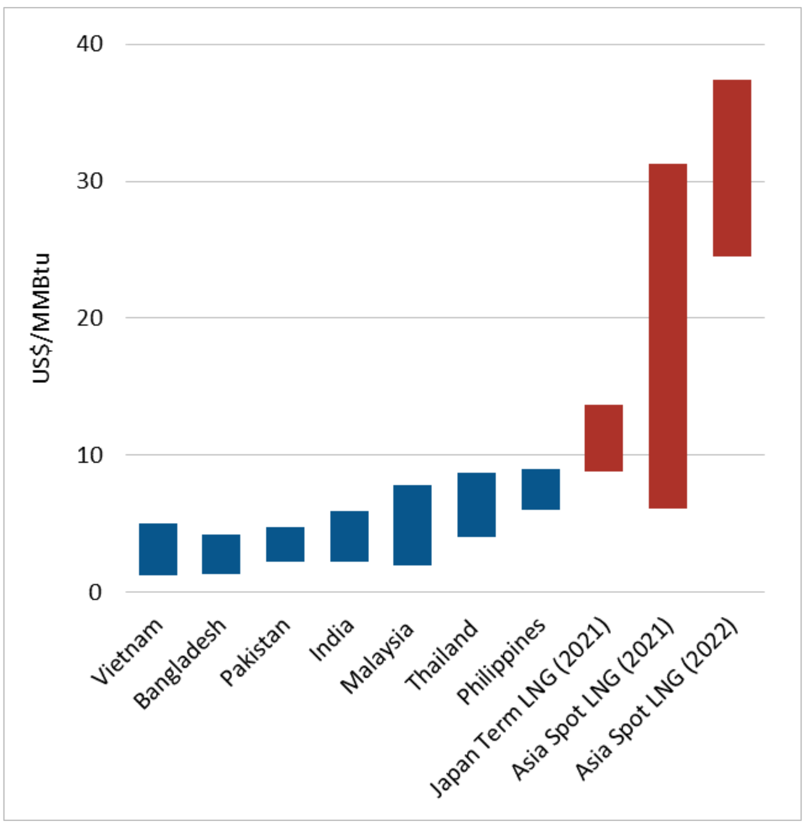
Country	Terminal Name	Target In-Service Year	Capacity (mtpa)	Owners	Type
China	Zhangzhou LNG	2022	3	PipeChina (60%); Fujian Investment and Development Co (40%)	Onshore
China	Binhai LNG (Phase 1)	2022	3	CNOOC (76%); Huainan Mining Group (24%)	Onshore
China	Guangzhou LNG	2022	1	Guangzhou Development Gas Investment Co. Ltd. (100%)	Onshore
China	Hebei Caofeidian LNG	2022	5	Hebei Construction & Investment Group (100%)	Onshore
China	Longkou LNG (Phase 1)	2022	5	PipeChina (60%), Nanshan Group (40%)	Onshore
China	Wenzhou LNG	2022	3	Sinopec (41%); Zhejiang Group (51%); Local firms (8%)	Onshore
China	Yueyang LNG	2022	1.5	Guanghui Energy (50%); China Huadian (50%)	Onshore
India	Jafrabad LNG Port	2022	5	Swan Energy (63%), Gujarat Government (15%), Mitsui (11%), GSPC (11%)	Floating
India	Dhamra Port	2022	5	TotalEnergies (50%); Adani Group (50%)	Onshore
India	Karaikal LNG	2022	1	Atlantic Gulf & Pacific (100%)	FSU with Onshore Regas
Japan	Niihama LNG	2022	0.5	Tokyo Gas (50.1%); Shikoku Electric Power (30.1%); Other Japanese Partners (19.8%)	Onshore
Thailand	Nong Fab LNG	2022	7.5	PTT LNG (100%)	Onshore
Vietnam	Hai Linh LNG	2022	1	Hai Linh Co. (100%)	Onshore
Vietnam	Thi Vai LNG	2022	1	PetroVietnam Gas (100%)	Onshore
Philippines	Pagbilao LNG	2022	3	Energy World Corporation (100%)	Onshore
Philippines	Philippines LNG	2022	3	Atlantic Gulf & Pacific (100%)	Floating
Philippines	Batangas LNG	2022	3	First Gen (80%); Tokyo Gas (20%)	Floating
Hong Kong	Hong Kong LNG	2022	4	CLP Power Hong Kong (49%); HongKong Electric Co. (51%)	Floating
China	Chaozhou LNG	2023	1	Sinoenergy (55%); Huafeng Group (45%)	Onshore
China	Longkou Nanshan	2023	5	PipeChina (100%)	Onshore
China	Yangjiang LNG	2023	2	Guangdong Yudean Power (100%)	Onshore
China	Tianjin (Beijing Gas)	2023	5	Beijing Gas (100%)	Onshore
China	Tianjin (Sinopec, Phase 2)	2023	5	Sinopec (98%); Tianjin Nangang Industrial Zone Developemnt Co., Ltd. (2%)	Onshore
India	Chhara LNG	2023	5	HPCL (50%); Shapoorji Pallonji (50%)	Onshore
		Total	**78.5**		

Source: International Gas Union (2021), IHS Markit, IEEFA. Note: These figures do not represent IEEFA's view on project feasibility or likelihood of completion by targeted in-service date.

Historically, power systems in Asia were planned around large baseload generators fuelled by coal. Now, amidst the global push for decarbonization, governments view natural gas and LNG as the most convenient alternative.

Proven reserves have been relatively easy to exploit compared to newer exploratory prospects, and countries have paid very low prices as a result. Costs of domestically produced gas have hovered between US$3-4 per million British thermal unit (MMBtu), reaching as low as US$1-2/MMBtu in some countries. Now, however, many countries in the region face imminent declines in domestic gas reserves, fuelling a shift to imported LNG. This leads to an uncomfortable reality that incremental LNG supplies will be a costly transition (Figure 2).

Figure 2: Historical Prices of Domestic Gas Pale in Comparison to LNG Costs



Source: IEA, Lantau Group, IEEFA analysis, IHS Markit for ranges of monthly average LNG prices.

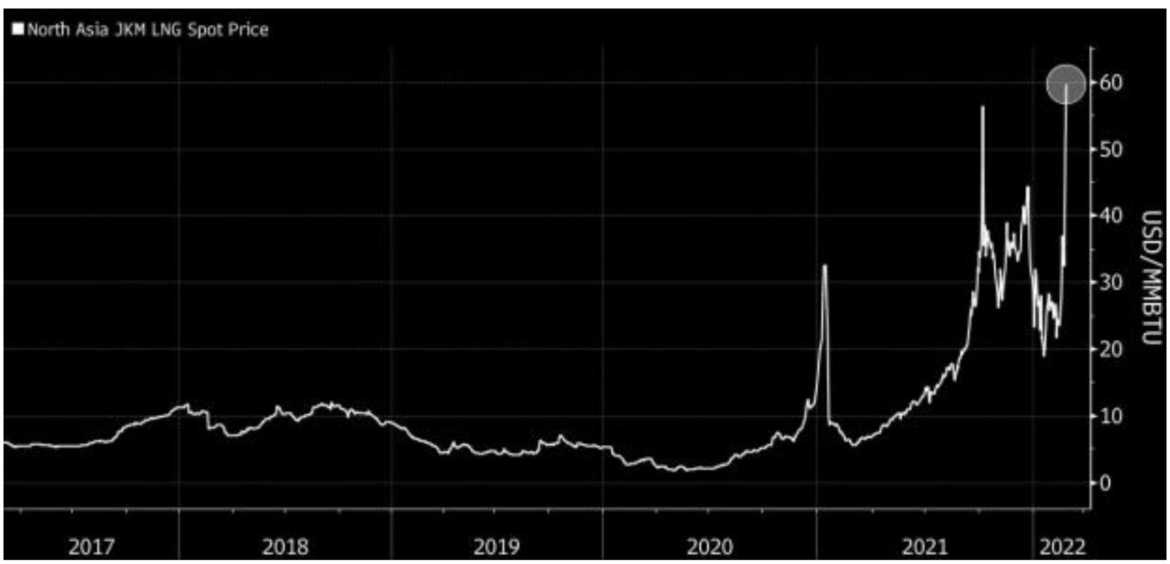
Despite the lack of a compelling economic rationale, many national energy plans still envision a larger role for LNG, treating the fuel and its accompanying infrastructure as something they can procure rather than develop. In Thailand, for example, the government is targeting a 53% share of gas in electricity generation, up from a previously planned 38%. IEEFA estimates that nearly nine gigawatts (GW) of gas-fired power plants are under construction, while renewables development has slowed considerably since 2018. Yet, Thailand has enough natural gas reserve to last only 4.4 years at current production rates.[3]

Similarly, the Philippines Energy Plan envisions gas-fired power capacity rising to 24GW and accounting for 40% of the country's electricity generation mix in 2040. This is higher than the previous plan's forecast, in which 18GW of gas-fired capacity accounted for 19% of power generation. And in Bangladesh, the government scrapped ten coal-fired power plants in 2020, but now aims to replace several of them with LNG-fired plants.[4] Domestic natural gas reserves in both countries are enough to last just 4-5 years.

However, rather than simply replacing one form of gas for another, the shift to LNG will involve a steep, structural increase in fuel costs, which may completely negate economic arguments for gas-fired power generation versus cleaner, domestically-sourced renewables. This is true even when considering the potential additional investment costs for grid enhancement.

LNG prices in Asia before the Russian invasion of Ukraine traded for roughly US$38/MMBtu, a stark contrast to the days of sub-US$10/MMBtu domestic gas. Immediately following the invasion, prices in Asia skyrocketed to a record US$59/MMBtu. This was just US$3 higher than the previous record set in October 2021 (Figure 3).

Figure 3: Japan-Korea Marker LNG Spot Market Prices (2017-2022)



Source: Bloomberg.

In emerging markets that already import LNG, the financial and economic impacts are clear. Bangladesh, for example, has ramped up LNG imports since 2018. The government initially tried to buffer the increase in costs through subsidies, which

[3] BP. Statistical Review of World Energy, p. 34. 2021.
[4] Financial Express. Five coal plants set to run on gas. June 25, 2021.

have jumped from US$936 million to US$2.33 billion since FY2018.[5] But the subsidy burden has become too much to bear. Following the largest ever retail gas tariff increase in 2019, regulators proposed another 50% tariff increase in gas prices in 2021, along with a 66% increase in power prices, sparking protests.[6]

In Pakistan, LNG prices have reached an average of US$15/MMBtu, compared to historical wellhead prices of just US$3.50/MMBtu. Due to artificially repressed gas prices that spur inefficient consumption, tariff increase delays, and gas leakage throughout the pipeline network, midstream companies have been unable to earn enough revenue to repay state-owned LNG importers, Pakistan LNG Ltd. and Pakistan State Oil. As a result, both companies have defaulted on payments to LNG suppliers in the last two years.

Throughout Asia, increases in imported commodity prices prior to the Russian invasion of Ukraine had already led to higher power prices,[7] food shortages,[8] inflation,[9] and political instability,[10] while threatening to undermine economic recovery from the COVID-19 pandemic. Experts fear that further price spikes in the wake of the invasion could have decade-long impacts, similar to major commodity price shocks in the past.[11]

LNG Prices Are Likely to Remain Volatile Through at Least 2023

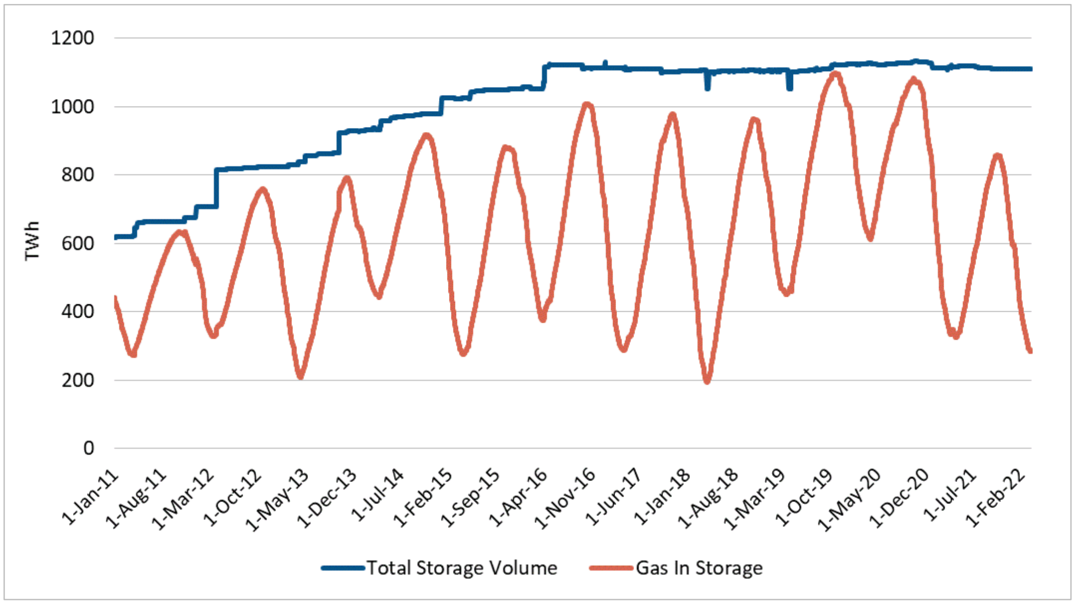
Volatility in LNG markets is likely to continue over the next 1-2 years at least, due to a confluence of factors, including:

1. **European draft regulations mandate that gas storage facilities achieve 80% capacity by November 1, 2022.**[12] The European Commission is expected to propose new rules in April 2022, which require European Union (EU) countries to maintain high storage levels to mitigate the impact of future volatility on consumer energy prices. As of March 14, 2022, Europe had 286 TWh of gas in storage, or the equivalent of 29.27 Billion cubic meters (Bcm).[13] To reach 80% capacity, it would require an additional 603 TWh, or 62 Bcm (48.3 million tons). The European Commission has said that an additional 50 Bcm of LNG could be imported annually from non-Russian

[5] The Financial Express. Bangladesh's power subsidy to hit Tk 200b. November 17, 2021.
[6] The Financial Express. 66pc hike in power tariff proposed following move to double gas price. January 26, 2022.
[7] The Financial Express. Bangladesh government plans price rises of power, gas, fertiliser at one go. December 23, 2021.
[8] Manila Standard. PH in for grim outlook, braces for hard impact. February 25, 2022.
[9] Al Jazeera. Gas shortage hits Pakistan’s exports, adding to economic stress. January 3, 2022.
[10] Nikkei Asia. Soaring fuel prices drag on Thai economy, spark protest. November 26, 2021.
[11] The Guardian. Unless we act, escalating commodity prices will cause a decade of global turmoil. March 19, 2022.
[12] Mandatory storage levels are expected to increase to 90% in subsequent years.
[13] Gas Infrastructure Europe. Aggregated Gas Storage Inventory. March 20, 2022.

suppliers, such as Qatar, the United States, Egypt, and West Africa.[14] Another 10 Bcm could come from alternative pipeline gas suppliers, such as Azerbaijan, Algeria, and Norway.[15] It is not yet clear that such additional volumes are available from the market, at least not without spawning a price war.

Figure 4: European Gas Storage Levels (January 2011-March 2022)



Source: Gas Infrastructure Europe, Storage Data.

2. **Limited LNG supply additions in the near-term**. Europe's plan to increase non-Russian LNG imports by 50 Bcm—equivalent to 38.9 million tons of LNG—will necessarily require pulling existing LNG capacity from elsewhere, rather than simply soaking up new LNG supply. This is because only 17.2 million tons of new non-Russian LNG supply are optimistically expected to come online in 2022,[16] increasing the total global liquefaction capacity to 464 mtpa. In the United States, there is little to no liquefaction capacity expected online until 2024 at the earliest. Qatar's mega-LNG expansion of 32 mtpa of additional capacity is not expected to be completed until 2026. Construction lead times average roughly 4-5 years for new export projects.

   Even if Europe bought all 17.2 mtpa of new LNG capacity this year, it would still have to pull 21.7 million tons of LNG capacity from other regions—likely from buyers unable to compete on price—to meet the 38.9 mtpa target. Notably, this would still be well below volumes needed to achieve the mandated 80% storage levels. Moreover, the International Energy Agency

[14] European Commission. Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions. March 8, 2022.
[15] Ibid.
[16] International Gas Union. World LNG Report. 2021.

expects LNG demand in China and India to grow by 8% each in 2022, further tightening interregional competition for cargoes. Interregional competition reflects the shifting role of Europe in LNG markets from a buyer of oversupplied cargoes to a direct competitor with Asian buyers, a shift that could have longer-term implications on LNG prices.

For perspective, 21.7 million tons is more LNG than Pakistan, Bangladesh, and Thailand imported in 2021 combined. Markets in emerging Asia were already unable to afford the record high LNG prices experienced even before the Russian invasion of Ukraine. Now, additional European requirements for non-Russian LNG alternatives threaten to push these countries further out of the LNG market.

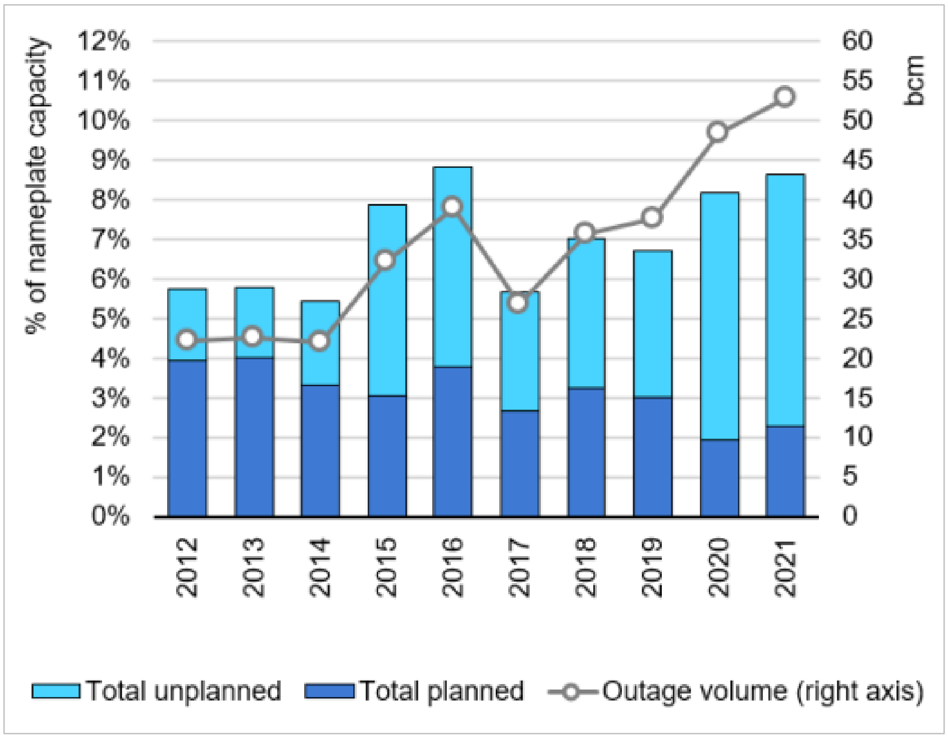
Figure 5: LNG Liquefaction Facilities Under Construction

Country	Terminal Name	Target In-Service Year	Nameplate Liquefaction Capacity	Owners
United States	Calcasieu Pass LNG T1-T18	2022	10	Venture Global LNG*
Indonesia	Tangguh LNG T3	2022	3.8	BP*; CNOOC; JOGMEC; Mitsubishi Corp; Inpex; JX Nippon Oil and Gas; Sojitz; Sumitomo; Mitsui
Mozambique	Coral South FLNG	2022	3.4	Eni*; ExxonMobil; CNPC; ENH (Mozambique); Galp Energia SA; Korea Gas
Russia	Arctic LNG 2 T1	2022	6.6	Novatek*; CNOOC; CNPC; Total; JOGMEC; Mitsui
United States	Sabine Pass T6	2023	5	Cheniere Energy*
Mauritania	Tortue/Ahmeyim FLNG T1	2024	2.5	BP*; Kosmos Energy; Petrosen; Société Mauritanienne des Hydrocarbures
Russia	Arctic LNG 2 T2	2024	6.6	Novatek*; CNOOC; CNPC; Total; JOGMEC; Mitsui
Mexico	Energía Costa Azul T1	2024	3.25	Sempra*
United States	Golden Pass LNG T1-2	2024	10.4	Golden Pass Products*; Qatar Petroleum; ExxonMobil
Nigeria	NLNG T7	2025	8	NNPC (Nigeria)*; Shell; Total; Eni
Canada	LNG Canada T1-T2	2025	14	Shell*; Petronas; Mitsubishi Corp; PetroChina; Korea Gas
United States	Golden Pass LNG T3	2025	5.2	Golden Pass Products*; Qatar Petroleum; ExxonMobil
Mozambique	Mozambique LNG (Area 1) T1-T2	2026	12.88	Total*; Mitsui; ONGC (India); ENH (Mozambique); Bharat Petroleum Corp (BPCL); PTTEP (Thailand); Oil India
Qatar	QatarGas North Field East Expansion (T1 – 4)	2026	32	Qatargas*; Qatar Petroleum
United States	Driftwood LNG (Phase 1)	2026	11	Tellurian*
Russia	Arctic LNG 2 T3	2026	6.6	Novatek*; CNOOC; CNPC; Total; JOGMEC; Mitsui
		Total	**141.23**	

Source: International Gas Union (2021). "" refers to the plant operator. Note: These figures do not represent IEEFA's view on project feasibility or likelihood of completion by targeted in-service date. Several projects—including Artic LNG 2, NLNG T7, and Mozambique LNG T1-2—face large barriers to completion.*

3. **Continued outages at LNG liquefaction facilities**. In 2021, outages at LNG liquefaction facilities reached 53 Bcm—the highest level on record—highlighting the unreliability of global LNG supply. According to the IEA, 50% of the volumes lost to unplanned outages in 2021 were due to upstream issues that limited the availability of feedgas to liquefaction facilities. For example, the 14.8 mtpa Atlantic LNG facility in Trinidad and Tobago closed indefinitely in 2021 due to a feedgas shortage. Output from Nigeria LNG decreased by 20% in 2021 due to insufficient feedgas.

Figure 6: Outages at LNG Export Facilities (2012-2021)



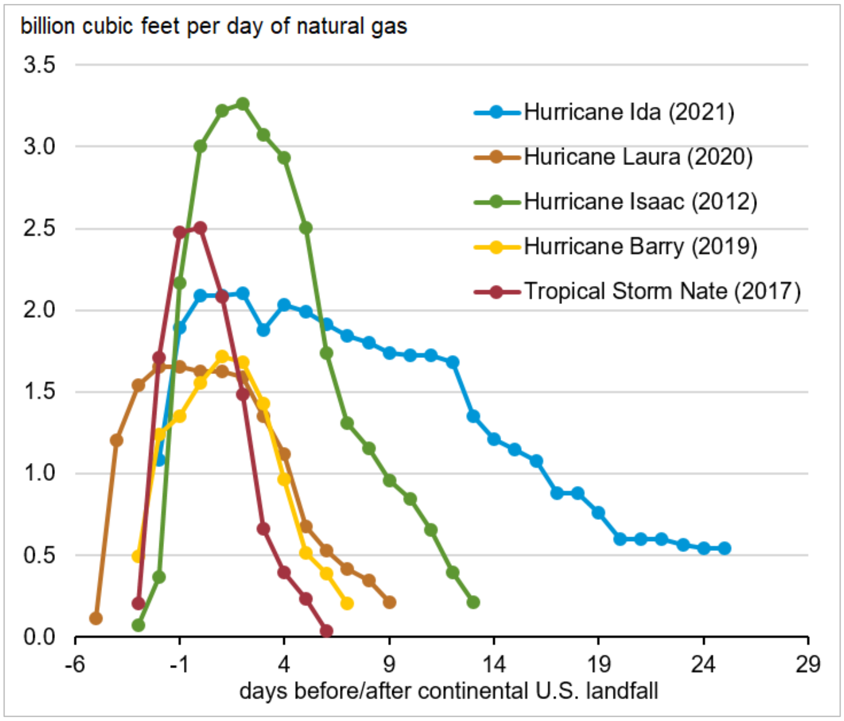
Source: International Energy Agency. Gas Market Report, Q1-2022. January 2022.

Other outages occurred at Shell's Prelude floating LNG facility in Western Australia. Though the company was recently granted approval to restart the 3.6 mtpa facility, Shell has not yet provided a timeframe for doing so.[17] [18] Norway's 4.3-mtpa Hammerfest LNG facility has been offline since a fire broke out in September 2020. The facility is targeting a restart in May 2022.[19] In December 2021, Train 2 at Chevron's Gorgon LNG shut down following outages at Trains 1 and 3 in 2021. As of January 2022, the operator

[17] Offshore Engineer. Shell Gets Approval to Restart Production from Prelude FLNG. March 21, 2022.
[18] Energy Voice. Positive news for Asia LNG as Shell gets green light to restart Prelude FLNG. March 22, 2022.
[19] Natural Gas Intelligence. Covid-19 Pushes Hammerfest LNG Restart Into Spring. January 31, 2022.

had not confirmed when Train 2 would come back online.[20] In the United States, hurricane season from June to November typically removes some gas production capacity in the Gulf of Mexico, exacerbating volatility (see Figure 7 below). Early forecasts suggest the 2022 hurricane season could see above-average activity.[21]

Figure 7: Duration of U.S. Gulf of Mexico Production Shut-ins



Source: *U.S. Energy Information Administration*.

4. **The renewed threat of reduced Russian supply**. Although Russian gas exports to Europe ironically increased in the aftermath of the invasion,[22] the risk of a suspension of exports has increased. Russian officials have threatened to suspend gas deliveries through the Nord Stream gas pipeline.[23] Regardless of whether the threats are credible,[24] such threats add uncertainty to LNG markets, pushing up price premia. A Russian decision to follow through on a gas export ban would send gas markets into further chaos. Europe would be forced to secure additional LNG supplies

[20] Natural Gas Intelligence. LNG Production Outages Continue to Test Tight Global Natural Gas Market. January 25, 2022.
[21] New York Post. Experts provide first glimpse of potentially another busy Atlantic hurricane season. March 9, 2022.
[22] Bloomberg News. War Is Raging, But Russia Is Still Paying Ukraine for Gas Flows. March 22, 2022.
[23] The Embassy of the Russian Federation to the United Kingdom of Great Britain and Northern Ireland. Statement by Deputy Prime Minister of the Russian Federation Alexander Novak March 07, 2022. March 7, 2022.
[24] Center for Strategic and International Studies. The Energy Weapon—Revisited. March 18, 2022.

from the spot market, putting even greater upward pressure on prices and potentially diverting more cargoes away from price-sensitive buyers in Asia. Moreover, calls are increasing on Europe to sanction Russian energy supplies.[25] [26] Any cuts to the Russian supply of gas to Europe could push Europe further into LNG markets, tightening the demand-supply balance and boosting prices.

There is speculation that buyers in Asia may purchase Russian energy supplies at discounted prices. However, this will depend on whether buyers can secure the necessary letters of credit for fuel purchases, develop the infrastructure needed for transport, and find alternative payment channels to avoid sanctions. Moreover, Russian exports to Asia may be limited by geography and existing infrastructure, which was built mainly to export energy supplies to Europe. With the exception of Sakhalin, most of Russia's oil and gas production is in western areas.[27] Asian countries may sign short-term discounted deals, but complete dependence on Russian energy supplies is unlikely to be a secure, credible long-term procurement strategy.

5. **The ongoing global recovery from the COVID-19 pandemic**. Many countries are still emerging from economic slowdowns caused by the outbreak of COVID-19. Over the last two years, countries around the world have injected huge stimulus packages to support economic recoveries, and global debt has reached record levels as a result (see Figure 8 below). More than 80% of the debt burden added in 2021 came from emerging markets.[28] COVID-19 spending could limit funds available to pay for higher cost, volatile fuel imports.

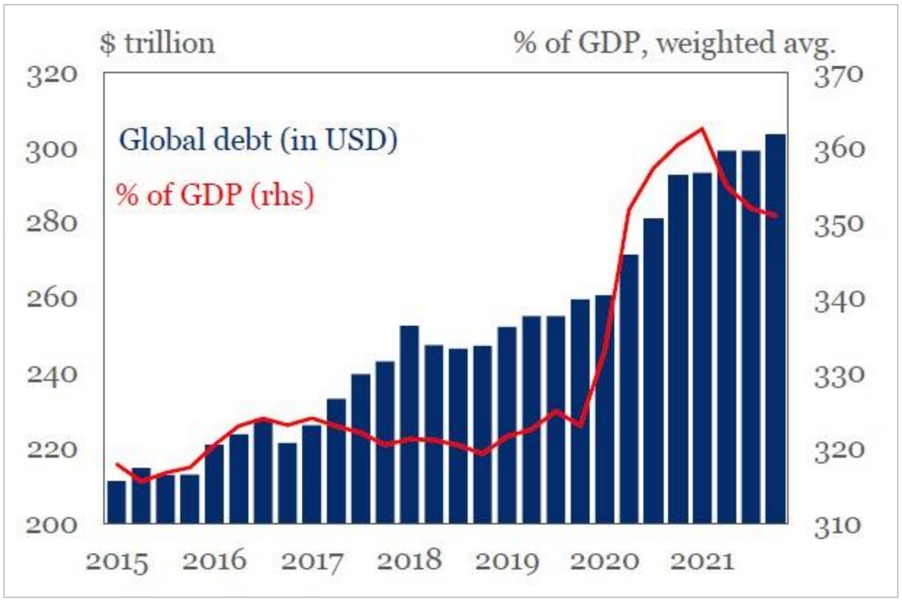
The Russia invasion of Ukraine is likely to jolt inflation.

Moreover, the Russian invasion of Ukraine is likely to jolt inflation, as both countries are major sources of goods such as grains and metals. But prior to the conflict, inflation was already at 40-year highs in many countries. In the United States, prices in February 2022 were 7.9% higher than the previous year,[29] and inflation levels of 5% in Europe were the highest on record.[30] Inflation prior to the Russian invasion was largely due to a rush of consumer

[25] Financial Times. Europe can help Ukraine by ending Russia's energy stranglehold. March 21, 2022.
[26] Vox EU. Cutting Russia's fossil fuel exports: Short-term pain for long-term gain. March 9, 2022.
[27] CNN Business. Russia's days as an energy superpower are coming to an end. March 24, 2022.
[28] Reuters. Emerging markets drive global debt to record $303 trillion – IIF. February 23, 2022.
[29] New York Times. We Were Worried About Inflation. Then Russia Invaded Ukraine. March 15, 2022.
[30] AA. Euro area annual inflation hits record high of 5% in December 2021. January 20, 2022.

buying in the COVID-19 recovery, the injection of fiscal rescue packages, and expansive monetary policies. Higher inflation could mean households and businesses have less money to spend, slowing economic growth. Such macroeconomic instability likely means longer-term uncertainty and volatility for LNG markets.

Figure 8: Global Debt Surpassed US$300 Trillion in 2021



Source: Reuters.

High Spot Market Prices Have Spillover Impacts on Long-term Contracts

High oil prices will mean that the cost of LNG under long-term, oil-linked contracts will also rise. Oil prices were already increasing rapidly prior to Russia's invasion of Ukraine. However, the invasion caused Brent crude prices to skyrocket to US$133.18 per barrel (bbl), the highest price since July 2008.[31] In the month before the invasion, Brent crude prices were US$97.13/bbl. Assuming an average long-term LNG contract price of 11% of the price of Brent crude, the delivered LNG price would be US$10.68/MMBtu.

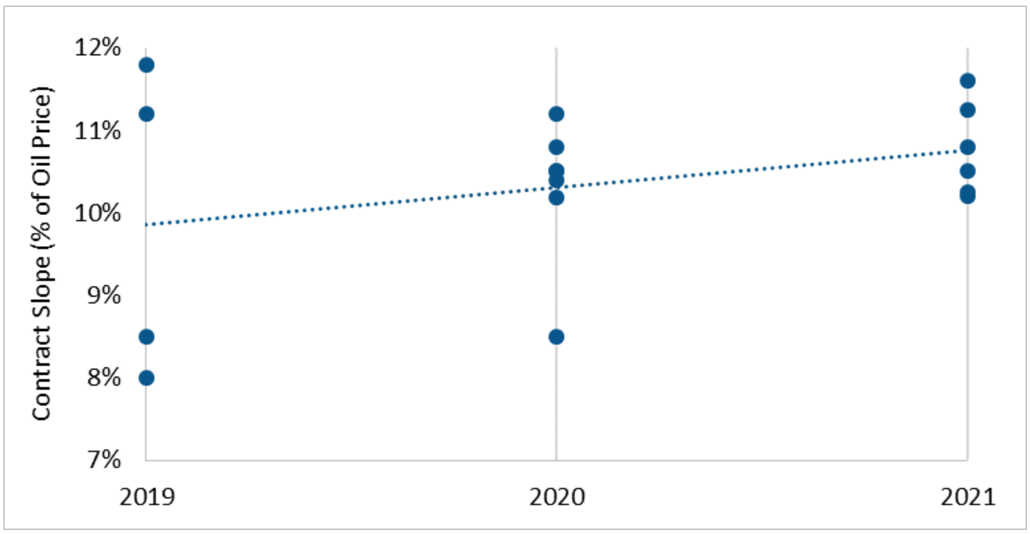
Market watchers will note that this is significantly less than current spot market rates. The next likely conclusion is that signing new long-term LNG import contracts can shield buyers from spot market volatility by guaranteeing prices linked to either the price of oil or a gas hub (e.g. Henry Hub in the United States).[32] Spot markets currently account for 30-40% of LNG traded globally.

[31] U.S. Energy Information Administration (EIA). Europe Brent Spot Price FOB.
[32] LNG contract prices are typically expressed as a percentage, or slope, of either crude oil or gas hub prices. For example, an 11% slope at a Brent crude oil price of U$90 per barrel would

However, volatility in spot markets can have longer-term spillover impacts on contract markets in two important ways:

1. **High spot prices raise the slope of new oil-linked contracts**. Buyers may seek LNG contracts to lower prices, but recent price spikes at the end of 2021 showed that sellers will raise offered slopes when spot markets are in tight supply. When prices spiked at the end of 2021, a Reuters report noted, "Sellers are unwilling to agree to any deal below a 12% slope of current Brent crude oil futures prices, compared with the just over 10% slope in deals earlier this year."[33] Indeed, the pricing formulas of oil-linked contracts have tended to increase during the past two years of extreme spot market volatility (see Figure 9 below). Continued spot market volatility could likely encourage higher slopes for new oil-linked contracts.

Figure 9: Slopes for Oil-Linked LNG Contracts Signed Since 2019



Source: IHS Markit.

2. **High spot prices create a greater risk of contractual disputes**. When prices spike in LNG spot markets, sellers will face a greater incentive to minimize volumes delivered under long-term contracts, in order to realize higher profits by selling volumes in spot markets instead. Sellers can legally minimize term volumes by relying on "downward quantity tolerances," a legal provision in contracts that allows a seller to reduce volumes by a pre-established amount.

   Sellers can also illegally minimize term volumes by defaulting on term deliveries in what is known as a "willful default." In such cases, contracts typically require sellers to pay a percentage of the non-delivered cargo price. However, spot prices may be high enough to cover the default liabilities,

translate to an LNG price of US$9.9/MMBtu. However, contracts are rarely this straightforward on pricing calculations.

[33] Reuters. LNG sellers hold upper hand in long-term supply talks with buyers. October 19, 2021.

creating an incentive to "game" the contract by rerouting cargoes. This can have dire consequences for LNG importers' energy security. In Pakistan, LNG suppliers defaulted on cargo deliveries at least seven times during spot market price spikes between January 2021 and February 2022. On March 28, 2022, it was reported that commodity trader Gunvor defaulted on four additional term cargoes to Pakistan,[34] sparking immediate fears of a prolonged gas crisis.[35] There is significant speculation in Pakistani media that suppliers have defaulted to realize higher profits elsewhere, though allegations are unconfirmed.

In addition to these impacts, long-term contracts can also lock-in LNG purchase commitments for the long-term. Long-term take-or-pay requirements of LNG contracts can therefore hinder, rather than facilitate, countries' energy transition to cleaner, domestically-sourced energy supplies. And neither spot market nor long-term contracts will completely protect buyers from unpredictable global events that threaten LNG supply.

Conclusion

Volatility is an inherent characteristic of LNG markets. In this sense, price spikes resulting from the Russian invasion of Ukraine are indicative of a much more persistent problem that price-sensitive buyers may be ill-equipped to handle. Moreover, the conflict may fundamentally change the structure of global LNG trade, as Europe takes on a more active role in spot market procurement. And with significant new supply not expected online until after the middle of the decade, emerging markets that import LNG could be pushed further out of the market. As a result, LNG import infrastructure and gas-fired power plants could be stranded.

For price-sensitive LNG buyers, now is not the time to build new LNG import facilities in Asia.

Increasing dependence on LNG now would involve a massive structural increase in the price of natural gas for countries used to historically low-cost domestic gas. Such fuel cost increases could balloon government subsidy burdens. And when subsidy balloons burst, households and businesses will be left to pick up the check for expensive, volatile fossil fuel imports. Either way, the increased cost of energy will have a dampening effect on economic growth and post-COVID recovery.

Instead, countries can urgently revamp their national energy plans with an eye towards cheaper, more financially sustainable technologies that can help improve energy self-sufficiency. The goal should be to maximize renewable energy while minimizing the need for imported LNG as a fuel of last resort. Doing so will result in lower power prices, greater energy sovereignty, and a more resilient, stable economy.

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[34] S&P Global. Gunvor backs out of LNG deliveries to Pakistan for April-June deliveries: officials. March 28, 2022.
[35] The Statesman. Pakistan to witness gas crisis in summer. March 28, 2022.

About IEEFA

The Institute for Energy Economics and Financial Analysis (IEEFA) examines issues related to energy markets, trends and policies. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy. www.ieefa.org

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