LNG Outlook 2022: Any Relief in Sight?
LNG Outlook 2022: Any Relief in Sight?

Last year, robust summer demand in Asia and South America soaked up supplies, while Europe’s gas in storage depleted, exacerbated by tight pipeline supplies from Russia and Norway. As the Northern Hemisphere winter approached, a tug of war between Europe and Asia for LNG cargoes ensued and prices in both regions rallied to fresh highs. China became the world’s largest LNG importer, while the U.S. closed in on Australia and Qatar for largest export volumes.

In 2022, Refinitiv LNG Research forecasts demand growth in most major import markets, with China set to retain its new title as top importer. On the supply side, we expect the U.S. to lead the growth, with additional export capacity seeing it crowned the world’s largest LNG exporter. Based on our projections for global LNG demand and supply, we forecast the market surplus to grow by 9 bcm, which we expect to find a home in the balancing region of Northwest Europe.

However, balancing factors remain sensitive and uncertainties over China’s economy could trigger swings in the country’s appetite for gas, potentially tipping the market balance for Northwest Europe. Together with Europe’s low storage and geopolitical tensions around pipeline supplies, these factors could further influence the direction of prices and alter our forecast for cargo arrivals into Northwest Europe this year.

Contents

A look back at 2021 .......................................................................................................................... 3
Demand outlook .................................................................................................................................. 4
Supply outlook ....................................................................................................................................... 10
Market balance ..................................................................................................................................... 14
Risks to the market balance .................................................................................................................. 14
Price dynamics ....................................................................................................................................... 15
A look back at 2021

Northeast Asian spot price at record high

The extremes of the last two years saw the Northeast Asia LNG spot price average a record $18.3/MMBtu in 2021, up from the lows of 2020 when prices averaged just $4.4/MMBtu – a staggering 316% rise year-on-year. High prices were maintained through much of the year due to several factors, while an extreme jump in Q4 – doubling the Q3 average – pulled up annual prices further.

At the start of 2021, a cold snap led to a sharp increase in Asian LNG demand, causing prices to spike. Further, supply disruption – both planned and unplanned – and shipping constraints disrupted LNG flows, placing sustained upward pressure on prices. This was exacerbated by congestion around the Panama Canal – an increasingly vital route for flows into Asia – and high charter rates, culminating in LNG spot prices averaging $17.7/MMBtu for January.

Although the price level diminished in subsequent months, summer proved volatile. Asian players moved to purchase additional spot cargoes to support restocking ahead of the winter season. This weighed heavily on the market, and spot prices rose quickly. At the same time, gas-starved Europe fed demand and prices but struggled to secure much needed LNG volumes, with Asian buyers ensuring the arbitrage to Asia remained open.

Underlying storage concerns persisted in Europe in the run up to Autumn amid lower-than-expected pipe flows from Russia – ensuring competition for cargoes remained fierce. Additional uncertainty around the start-up of the now completed 55-bcm/yr Nord Stream 2 pipeline added further upward pressure to prices. Interdependent, the Northeast Asian and European prices continued to track each other. But by early winter, the arbitrage to Asia closed, and Europe started to receive a large influx of cargoes as full storage facilities in Asia dampened demand. Over the third and fourth quarters, spot prices averaged $17.8/MMBtu and $35.3/MMBtu, respectively, with prices peaking in December.

Supply

Last year, global LNG supply rose by 7.5% from 2020 levels to 520bcm, led by the U.S., which saw a remarkable 49% – or 32.5bcm – increase in exports to 98bcm. From a low base, Egypt saw a five-fold year-on-year increase in exports to 8.8bcm, with spot prices incentivising exports and the restart of the Damietta facility after nine years, supporting the increased output. In the Pacific, Australia’s exports grew by about 5% – or 5.4bcm – to around 110bcm, despite issues at the Gorgon and Prelude projects. Production issues elsewhere resulted in year-on-year declines from Nigeria, Norway and Algeria.

Demand

Global LNG demand, excluding Northwest Europe, rose by 8.6% from the previous year to 473bcm. China surpassed Japan to take the top spot as world largest LNG importer as imports jumped more than 18% – or 17bcm – from the previous year to 108.5bcm, on the back of strong economic performance. While Japanese imports were largely unchanged at 101bcm, South Korea registered a 14% – or 7.7bcm – year-on-year increase to 63bcm on post-pandemic economic recovery.
In South and Southeast Asia, imports grew by 5.6% year-on-year to around 75bcm where higher demand from Bangladesh, Pakistan and Thailand compensated for Indian declines, where import volumes fell by 5.3% – or 1.8bcm – from previous year to 32.5bcm.

LNG demand in the Americas jumped 48% – or 9.3bcm – year-on-year to 28.7bcm, boosted by demand from Brazil, which saw an almost three-fold increase in imports to reach 10.7bcm, as a severe and prolonged drought led to a significant reduction in hydropower generation.

In Europe, excluding the northwest, LNG demand fell by 4% to almost 60bcm where Italy saw year-on-year declines of around 20% – or 2.5bcm – to 9.5bcm. In the balancing region of Northwest Europe, LNG imports fell by 11% – or 5.7bcm – from the previous year to around 45bcm as strong demand and favourable pricing from Asia drew cargoes away from the region.

**Demand Outlook**

Global LNG demand—excluding the Northwest Europe balancing region—rose by about 8.6% last year to reach 473bcm. In 2022, we expect global demand, excluding Northwest Europe, to rise by 5.1% – or 24bcm – to reach 497bcm. For Northeast Asia, imports to China are the main contributor, but we expect a slowdown in imports from the strong growth rates seen last year. Meanwhile, for South and Southeast Asia, we foresee a notable uptick in LNG demand. However, we anticipate Brazilian imports to drop significantly as we assume the country’s hydrological balance returns towards normal levels.

**NORtheast ASIA**

In 2021, imports to Northeast Asia exhibited a staggering 10% growth rate year-on-year, supported by robust demand in China and South Korea. This year, we forecast import growth to slow down to about 5.1%, to reach 314bcm. We expect some modest growth rates for Japan and South Korea, amid somewhat lower nuclear availability in Japan and anticipation of a continuation of restrictions on coal-fired generation in South Korea. For China, we forecast intake of LNG to grow by a healthy 9% rate.

We expect Chinese LNG imports to slow down from last year’s 18% growth rate to a still-healthy 9% year-on-year, to reach some 118bcm – up 10bcm from 2021. Last year’s phenomenally strong economic growth during the first quarter and low winter temperatures fed demand. However, throughout the year, economic output slowed down significantly and prospects for a notable rebound in 2022 look uncertain. On the supply side, further ramp-up of the 38-bcm/yr Power of Siberia pipeline from Russia and continuing growth in domestic production points to a slowdown in LNG import growth.

In Q1-21, economic growth in China came in at a record 18.3% following a strong rebound from the Covid-19 crisis, buoyed by solid export demand and policy support. However, the brisk growth has since slowed down with China recording an 8.1% year-on-year economic growth in 2021. China’s growth prospects look increasingly uncertain amid the risk of additional Covid outbreaks and the need to rein in the country’s real-estate sector. Several financial institutions have revised down their 2022 growth expectations, with GDP growth rates fluctuating from 4.3% to 5.6%.

Domestic gas demand has remained strong despite the slowing economy. Last year, implied gas consumption
(domestic production, pipeline and LNG imports combined) was 13.5% higher year-on-year, although demand slowed from H1 to H2 – from 16% to 11%, respectively – mirroring the weaker economic activity. On the bright side, over the last months, there have been numerous long-term LNG contracts signed by Chinese companies, likely driven by expectations of healthy growth in natural gas demand, but also amid lofty spot LNG prices. In this context, Beijing’s ambitious country-wide coal-to-gas/electricity switching for the residential sector along with the aim to limit the country’s power and industrial sector’s coal-burn, natural gas and LNG will play important parts in China’s energy transition plan. Hence, despite several economic indicators showing signs of a pullback, we expect Chinese gas demand to grow by an average rate of 9%.

Figure 5

In 2021, we saw a notable recovery in pipeline imports to China, increasing by 22.8% - or almost 11bcm - to a total of 57.6bcm. Additional to the ramp-up of volumes through the Power of Siberia pipeline from Russia, imports from China’s largest exporter, Turkmenistan, recovered significantly as oil-indexed pipeline gas has become more attractive compared to spot LNG procurement. Under the expectations that spot LNG prices will stay at relatively elevated levels for most of 2022, pipeline imports from Central Asia will likely continue at high levels. Moreover, imports through the Power of Siberia pipeline reached 10.25bcm last year and we expect flows to reach at least 15bcm in 2022. In total, we foresee Chinese pipeline imports to reach 63bcm this year.

Last year, China’s state-owned oil and gas producers PetroChina, Sinopec and CNOOC continued ramping up their natural gas production in a bid to meet strong domestic demand. In 2021, domestic production grew by a healthy 8.7%, almost in line with the previous year’s growth rate. For this year, we assume similar robust growth rate as it remains a top political priority by Beijing to enhance energy security.

Figure 6

To arrive at LNG imports, we take the simplistic approach of regarding LNG as the residual after pipeline imports and domestic production have been accounted for. Based on our assumption that implied domestic demand will grow at a rate of 9%, domestic production at almost 9% and pipeline imports up by 5.5bcm, we expect LNG imports to grow by 10bcm or 9%, taking total LNG imports to about 118bcm for 2022.

At the start of 2022, China’s receiving capacity was estimated at 102Mt/yr. And, following plans for new terminals and expansions, the total capacity may reach 123Mt/yr or 167bcm/yr by the end of 2022. Hence, the country should have more than sufficient receiving capacity to accommodate our forecasted import volume.

In 2021, Japan’s LNG imports totalled 101.6bcm - up by 0.3bcm. Despite higher nuclear generation, demand was supported by a severe power shortage in January coupled with economic recovery from Covid-19 pandemic. Nuclear generation averaged 6.7GW in 2021 (Jan-Sep), up by 0.9GW year-on-year. In 2022, we anticipate imports to climb by 2.5bcm, primarily due to expectations of lower nuclear availability.

Figure 7
We foresee significant fluctuations in nuclear power generation, starting the year with almost double the available nuclear capacity compared to the same period last year. Between April and October, we expect nuclear power generation to drop below last year’s levels amid extensive planned maintenance schedules. This is assumed to boost gas for power demand. Moreover, we assume no nuclear restarts this year, meaning a total of ten nuclear units have the authorisation to operate. The Mihama #3 reactor, which failed to put in place sufficient anti-terrorist measures on time, will have to remain offline until the end of October 2022.

Last year, South Korean imports totalled 62.7bcm - up 7.7bcm - or almost 14% from the previous year supported by post-pandemic economic recovery and restrictions to coal-fired power plant availability. In 2022, South Korean LNG imports are projected to increase by a modest 2% - or 1.3bcm. We foresee a rise in gas demand due to expectations of continued restrictions on coal-fired generation and general economic growth. However, this will be mitigated by an uptick in nuclear availability as the Shin Hanul #1 reactor is scheduled to start commercial operation in April 2022, increasing South Korean nuclear generation capacity by 6% to a level of 24.6GW.

In recent years, the South Korean government decided to close numerous coal-fired plants to reduce air pollution which resulted in strong uptake of gas in the power sector. The government has decided to continue this policy and announced a temporary closure of up to 16 coal-fired plants between December and February this winter while the remaining coal-fired plants will run at 80% capacity or less. Moreover, the government is expected to temporarily close additional coal-fired power plants in March and encourage restrictions during the summer season. In our forecast, we assume that the South Korean government will pursue a similar emission and pollution reduction policy as last year. However, we identify this assumption as a risk to our LNG import forecast.

In 2021, LNG imports to Taiwan rose by an impressive 10% - or 2.5bcm - with gas demand supported by robust industrial activity and strong gas-fired power generation. In June last year, the 985 MW Unit 1 of the Kuosheng nuclear power plant was taken offline, six months ahead of schedule, as part of Taiwan’s move to end the use of nuclear power. Moreover, fluctuations in renewable energy supply and a drought last autumn also contributed to a stronger dependence on gas for electricity generation. This year, we expect gas burn in the power sector to grow further, supported by the government target to increase the share of gas in the power mix. Assuming normal weather conditions, we expect LNG imports to grow by 6% to reach 28bcm this year.

**SOUTH ASIA & SOUTHEAST ASIA**

In 2021, South and Southeast Asia imported 75.6bcm of LNG, a 5.6% increase from 2020 levels. Although India registered a dip in import volumes, this was offset by robust demand in other import countries like Bangladesh and Thailand. For 2022, total LNG import for the region is projected to grow by almost 12% - or 9bcm - to around 84.5bcm driven largely by demand recovery, new import facilities and liberalization of gas markets. The region also anticipates that Vietnam and the Philippines will start importing LNG this year.

![STEADY GROWTH FOR SOUTH AND SOUTHEAST ASIA Economic recovery lifts demand](image)

**Figure 8**

India’s LNG imports contracted by 5.3% - or 1.8bcm - to 32.5bcm last year as the second wave of Covid-19 and higher LNG prices curbed demand. In 2022, we expect the country’s LNG demand to rebound and rise by 10% - or 3.2bcm, bringing total imports to around 35.7bcm. This will be largely driven by new import capacities while an anticipated recovery in the economy with better management of Covid-19 outbreaks will bolster demand in the city gas distribution and industrial sectors.

India is expected to increase its LNG import capacity this year, with the possible addition of four new import terminals. After some delays, the Jaigarh and Jafrabad offshore terminals are expected to start receiving cargoes around Q2 this year. Over on the east and southern coast, the Dhamra and Karaikal onshore terminals are also expected to be ready around the second half of the year. However, despite the increase in regasification capacity, a lack of pipeline infrastructure and project completion delays will likely continue to undermine capacity utilization at some import terminals.

In 2022, India’s city gas distribution (CGD) sector is expected to grow further as the economy recovers, fuelling demand in the industrial, transport, commercial and residential segments. Favourable government initiatives...
have also increased the participation of both public and private gas companies to help expand the coverage of city gas networks.

Domestic natural gas production in India rose steadily last year largely due to fresh supplies from the KG-D6 block developed by Reliance and BP. In 2022, however, growth in domestic production is expected to slow due to delays in gas field development projects. This could lead to more demand for LNG, although pricing would be a key determinant. Current high LNG spot prices are likely to deter buyers over the first quarter of this year, but more buying interest could emerge as prices typically ease over the shoulder period going into summer.

In 2021, Pakistan’s LNG imports increased by 13% - or around 1.3bcm - to 11.3bcm as the economy recovered from Covid-19 related demand disruptions. For this year, we expect total LNG imports to rise further by about 1.7bcm - reaching close to 13bcm, with anticipated steady economic growth boosting gas demand in the power and industrial sectors. Pakistan is also likely to seek more LNG to offset declining domestic gas production due to depleting gas reserves from existing fields. Despite this, plans for new LNG terminals are unlikely to materialize this year.

In Bangladesh, we expect total LNG imports to grow by 20% - or around 1.5bcm - to 9.3bcm this year. Increasing consumption in the power and industrial sectors amid declining domestic gas production is expected to drive demand for LNG. Importers could seek more cargoes in the spot market after long-term suppliers Qatargas and Oman Trading International reportedly reduced the supply of committed cargoes for 2022.

In Thailand, LNG imports rose by 20% to 9bcm last year and we expect steady demand growth by about 2bcm to 11bcm this year, driven largely by the country’s power sector. Thailand is also expecting to see its first increase in LNG import capacity this year with the start-up of the Nong Fab terminal in the second quarter. Furthermore, LNG import licenses have been granted to several private sector companies in a bid to liberalize the LNG market and keep power generation costs competitive. Thailand will also look to LNG to meet rising demand amid stagnant domestic gas production and pipeline imports from Myanmar.

In 2022, we expect Indonesia’s LNG demand to be largely unchanged at around 5bcm as its economy gradually recovers from the impact of a second wave of Covid-19 outbreak last year. Over in Singapore, we anticipate LNG demand to grow by 10% - to 6bcm, while neighbouring Malaysia could see a moderate increase of 0.5bcm - to 3.5bcm. Both countries have allowed more third-party access to import terminals and gas distribution networks.

**Myanmar** has stopped importing LNG since April 2021, according to Refinitiv’s LNG flows assessments. Operations at the Thilawa and Thaketa LNG power plants in Yangon have reportedly been suspended since July last year, mainly due to high LNG costs and financial constraints on the regime’s part. It is unlikely that Myanmar will be able to resume imports this year.

On the other hand, **Vietnam and the Philippines** are looking to start LNG imports this year with the commissioning of new receiving terminals. Vietnamese private oil company Hai Linh has completed construction of its LNG import terminal since last year and is currently still undergoing testing, while state-owned PetroVietnam Gas expects to start operations at its Thi Vai LNG terminal in the second half of 2022. The Philippines is potentially looking at three projects to start up this year. The Philippines LNG (PLNG) import and regasification terminal, developed by AG&P, is expected to be ready in Q2. Two other projects by Energy World and FG&EN are expected to be ready in the second half of the year. Imports by each country are projected at around 0.5bcm this year.

**EUROPE EXCLUDING NORTHWEST**

In 2021, European LNG demand, excluding Northwest Europe, declined by 4% - to 60bcm. Poland and Portugal were the only countries that witnessed an increase in LNG imports. Croatia's newly installed terminal also saw a ramp-up of flows. The other countries relied to a larger extent on regional pipeline gas to meet demand amid global competition for limited LNG supplies and record high spot LNG prices. In 2022, we anticipate a return to growth for LNG, at around 6.5% - to 63.8bcm - as economies continue to recover from the pandemic, supporting additional industrial and LDZ consumption, and as spot LNG prices soften.

In 2022, we expect Spain’s LNG imports to increase on expectations of slightly higher domestic demand as the economy continues to recover and gas to power increases. This represents a reversal from the previous two-year decline following record-high imports delivered in 2019. The loss of the Maghreb pipeline will also support LNG flows. Last year, Algeria stopped exporting gas via the Maghreb pipeline, which runs through Morocco, and onto Spain, at the end of the transit deal. Maghreb flows made up 38% - or 6bcm - of Spain’s total pipeline imports in 2021, proving to be a major source of supply. While Algeria intends to meet its obligations to Spain via the existing Medgaz pipeline, which will expand from 8bcm/yr to 10.5bcm/yr, we forecast a need for additional LNG with total imports growing 10% - to 22.6bcm. Over in Portugal,
we also expect to see an increase in LNG imports, which inched higher last year to reach 5.9bcm. This year, imports could surpass the 6bcm level to help meet domestic demand and potentially higher piped export volumes into Spain.

In 2021, Italy’s LNG imports declined by around 20% - to 9.5bcm. During the final quarter, two of Italy’s three terminals (OLT and Panigaglia) did not receive a single cargo. Most of the country’s gas requirements were primarily met by Russian and Algerian pipeline imports, representing 46% and 34%, respectively. The TAP pipeline, which was commissioned at the end of 2020, also supported flows. Italy’s plans to phase out the use of coal in electricity generation by 2025 could provide additional growth in gas consumption over the coming years. We anticipate TAP will continue ramping up this year, and recovery of LNG imports will help meet rising demand. Our forecast for LNG is an increase of around 9% - reaching slightly more than 10bcm. In Greece, piped volumes received via the TAP pipeline will weigh on LNG imports, with flows expected to remain relatively flat compared to last year, reaching 2.7bcm.

Along with the other major importing countries in Europe, Turkey witnessed a decline in total LNG imports in 2021. The country instead relied on more competitive pipeline gas for its demand needs. However, Turkey was forced to purchase additional spot LNG after a drought cut hydropower output, and gas to power demand surged to record levels. There has since been some recovery in the hydro balance, which could alleviate the need for substantial volumes of spot LNG this year, but some risk remains. Due to the high cost of gas, overall gas demand likely will be impacted by the government’s decision to increase energy prices this year. Nonetheless, LNG imports will remain integral, reaching 13.7bcm - a slight decline compared to last year.

Last year, Poland’s LNG imports continued its upward trajectory, rising by 4% - to 3.9bcm. Most of the cargoes were sourced from Qatar under an existing long-term contract, but US exports to Poland also stepped up significantly, rising 52% - to 1.6bcm. At the same time, total pipeline imports decreased for the fourth consecutive year as Poland continued its drive to reduce reliance on Russian pipeline gas. The startup of the Baltic pipeline, scheduled for October 1, 2022, will support additional pipeline flows to Poland, but we foresee a continued rise in LNG imports, potentially reaching over 4bcm. We expect power and non-power demand to increase this year, with the industrial sector remaining the largest consuming gas sector amid sustained economic growth. Lithuania could also witness an uptick in imports following a slight decline last year. The country will continue to play a significant role in supporting transit gas flows, with Poland expected to import LNG from Lithuania via the newly built GIPL pipeline. We forecast total LNG imports reaching 2bcm compared to 1.7bcm last year.

The unloading program for Croatia indicates an expectation for higher volumes of LNG imports this year, reaching 2.1bcm. It represents a total utilization rate of 81% at the Krk Island terminal, up from 65% last year. LNG imports will be used to meet growing domestic gas demand. Further south, Malta is expected to continue importing LNG under its existing contract with Shell. Malta’s FSU delivers LNG to the onshore regas plant feeding natural gas to the 200 MW power station at Marsaxlokk, with import volumes amounting to around 0.5bcm annually.

## The Americas

In 2021, LNG demand in the Americas region rose by around 48% - to 28.7bcm, mostly driven by a sharp increase in arrivals to Brazil amid low hydropower reserves. In 2022, we expect a decline in imports of 6.5bcm, mainly due to weaker imports to Brazil and reduced LNG demand in Mexico and Chile, where pipeline gas from the US and Argentina, respectively, will continue to displace LNG deliveries.

Last year, imports to Brazil rose by a phenomenal 213% - or 7.3bcm - to reach 10.7bcm. The country was hit by a severe drought that began at the end of 2020 and continued throughout 2021. This led to a significant reduction in hydropower generation, resulting in a sharp increase in gas demand within the power sector. In recent months, reservoir levels have improved significantly. We expect the hydro balance to return to normal levels over the coming months, leading to a notable reduction of gas for power demand. Nevertheless, there are several factors supporting gas demand in Brazil. Later this year, three new LNG import terminals are anticipated to come online.
Together with the recently established New Gas Law in Brazil, which facilitates third-party access to LNG terminals, this may boost the demand for gas in the country. The three facilities - Suape Port LNG, Terminal Gás Sul LNG, and Celba LNG - will not only act as LNG-to-power projects but supply neighboring areas with gas.

On the supply side, the construction of the Route 3 gas pipeline, connecting Brazil’s Pre-salt gas reservoirs to the coast, will likely boost the supply of domestically produced gas. However, despite problems with the onshore part of the pipeline, we expect Route 3 to be operational at half of its 6.6bcm/yr capacity by mid-2022. Meanwhile, we expect to see a reduction in flows from Bolivia due to maturing fields in the country. Accounting for the different gas supply and demand drivers, we expect LNG imports to decline by 6.4bcm compared to last year.

**Figure 10**

In 2021, Argentina witnessed an increase of 2bcm in LNG imports to meet its heating demand during the Southern Hemisphere winter season. For this year, we expect to see a similar import level despite efforts to improve the output from the giant Vaca Muerta gas field. Lack of sufficient takeaway capacity is limiting the consumption of domestically produced gas as the Néstor Kirchner pipeline project will not be completed this year. Nevertheless, increased domestic gas production during the peak demand season will likely replace dwindling gas imports from Bolivia. Between November and April, when the demand for gas decreases, the surplus of domestically produced gas will be used to fulfill recently authorized export obligations to neighboring Chile. In 2021, Chile imported 4.7bcm of LNG, which we expect will drop to 4.4bcm this year thanks to increased pipeline gas imports from Argentina.

Last year, Mexico’s LNG imports fell by 57% - to 1.2bcm - further displaced by pipeline supply from the U.S. In 2022, we foresee LNG imports dropping by 0.4bcm as Mexico increases its reliance on U.S. pipeline gas. Despite previous assurances, PEMEX has not managed to increase domestic gas production. In combination with growing demand for gas in the power sector and further expansion of pipeline infrastructure, this will likely result in higher pipeline imports from the U.S. However, Mexico will continue to import LNG into hard-to-reach areas such as Baja California Sur, where the newly built terminal will continue to supply power plants in the region.

In the Caribbean, additional LNG import infrastructure, coupled with increasing gas demand in the power sector could support an uptick in LNG imports of 0.7bcm. The BW Tatiana successfully arrived at Port of Acajutla and awaits the first cargo to be imported to El Salvador. Despite political difficulties and sanctions from the U.S., New Fortress Energy intends to launch its new LNG-to-power project in Nicaragua in the first quarter of this year. An increase in LNG imports to the region may also be induced by the decision of the National Energy Commission of the Dominican Republic (CNE), which granted the Karpowership a provisional concession for a floating 258MW natural gas-fired project. It is set to be located in Boca Chica in Santo Domingo province, next to Andrés LNG terminal. We also foresee higher gas demand in Panama, which has become a regional LNG distribution hub, thanks to the expansion of the Costa Norte LNG terminal with a truck loading station. Countries such as Ecuador, that do not yet have their LNG terminal, will be able to source gas to meet the demand in the industrial sector.

**MIDDLE EAST AND AFRICA**

In 2021, the Middle East region imported 10.1bcm of LNG, representing a small 2% decline from the previous year. Kuwait’s growing need for gas offset a 1.8bcm loss of demand across the region and made up 78% of the total LNG imports last year. This year, we expect to see an increase of more than 2.5bcm - to 12.5bcm - sustained mainly by demand from Kuwait. We might also see Ghana and Senegal enter the market for the first time.

In 2021, Kuwait’s LNG imports rose by 25% - to 7.9bcm, making it the only LNG importing country in the Middle East to increase volumes. The completion of the 30bcm/yr (22Mtyr) Al Zour LNG terminal in August 2021, supported flows. This comes as the Gulf state accelerates efforts to reduce the use of crude oil in the power sector while switching to cleaner sources, including gas. Work has been done to increase domestic gas production, which is also produced via associated gas at some of Kuwait’s major oil fields. However, oil production in Kuwait has been in
decline over the past three years, with more investment required to improve performance. We expect sustained growth in gas demand, with the need for LNG imports also growing. Our forecast is a further 30% increase to over 10bcm this year.

Over in the UAE, total LNG imports in 2021 declined to 1.9bcm - or 6% - mainly due to the startup of the much-anticipated Barakah nuclear plant. The first two units successfully began commercial operations while construction of the third unit was completed last year. Both units three and four will startup in 2023, according to the Emirates Nuclear Energy Corporation (ENEC). Ongoing plans to diversify the power mix and reduce electricity costs will also see the 2GW Al Dhaftra PV2 solar project, the largest single-site solar power project globally, become commercially operational this year. As such, our forecast for 2022 is a further 10% decline in LNG imports to 1.7bcm.

In 2021, Jordan did not import any LNG due to significantly high spot prices. The country released a buy tender for Q4 delivery, but it was not awarded. Jordan could again seek to utilize its regas capacity this year and purchase one or two cargoes during peak demand season; however, this will be price dependent. Israel also reduced its exposure to the spot LNG market, with total LNG imports reaching 0.3bcm - representing a 64% decline from 2020. We foresee further reduction in overall imports this year to 0.2bcm.

Supply Outlook

In 2021, global LNG supply grew by a healthy 7.5% to reach 520bcm. For 2022, we expect growth in supply to pick up 6.4% - or 33bcm - to reach 553bcm. The U.S. will once again be the single largest contributor, primarily owing to the start-up of Sabine Pass train six and the Calcasieu Pass projects. As the new U.S. projects ramp up, exports from the country will surpass the volumes out of Australia, and the U.S. will overtake the throne as the world’s largest LNG exporter. Other new projects readying to start exporting this year are Mozambique’s Coral South FLNG and Indonesia’s Tangguh train three. Both facilities are expected to come online in the second half of this year. Moreover, Norway’s Hammerfest facility is scheduled to be back in operation by the end of March, adding about 4.5bcm. And we also expect to see a rebound of exports from multiple African countries, which will likely yield a combined increase of 7.5bcm.

![Figure 12](image-url)

**2022 SUPPLY OUTLOOK**

**Expected growth of 33bcm or 6.4% YoY**

In 2021, the six major LNG export projects in the U.S. were operating at an average utilization rate of 83%, exporting a total of 98bcm of gas as LNG. We expect to see an increase in exports from the U.S. this year of about 14bcm - reaching 112bcm and yielding a somewhat higher estimated average utilization rate of 84%. This is primarily due to the start-up of the seventh major export facility, Global Venture’s Calcasieu Pass in Cameron Parish, Louisiana, and the sixth train of Cheniere’s Sabine Pass.

In December 2021, the 6.8bcm/yr sixth train at Cheniere’s Sabine Pass export plant in Louisiana produced its first LNG cargo. According to the operator, the new liquefaction train is on track to enter commercial service in Q1 2022. In addition, Venture Global’s 13.5bcm/yr Calcasieu Pass has begun commissioning the first two blocks. The facility is being built using 18 modular trains and Global Venture plans for a phased start-up with full export operations reached in mid-2022. The facility has a peak capacity of

---

**MIDDLE EAST – LNG IMPORTS LARGELY IN DECLINE**

Kuwait is expected to remain the main growth area for 2022

**Source: Refinitiv**

**Figure 11**

In Africa, Ghana’s Tema LNG terminal and Senegal’s FSRU and powership facility have yet to import LNG cargoes. High LNG prices were likely a deterrent while Ghana’s gas for power requirements is adequately met by domestic supplies and pipeline imports from Nigeria. Should prices turn favourable, LNG imports are projected at 0.3bcm for each country this year.

**UNITED STATES – set to be world’s largest exporter**

In 2021, the six major LNG export projects in the U.S. were operating at an average utilization rate of 83%, exporting a total of 98bcm of gas as LNG. We expect to see an increase in exports from the U.S. this year of about 14bcm - reaching 112bcm and yielding a somewhat higher estimated average utilization rate of 84%. This is primarily due to the start-up of the seventh major export facility, Global Venture’s Calcasieu Pass in Cameron Parish, Louisiana, and the sixth train of Cheniere’s Sabine Pass.
16.3bcm/yr. Additional export volumes will also come from Cheniere’s Corpus Christi train three, which shipped its maiden cargo in December 2020. By the end of March last year, the train was fully commissioned. Both Corpus Christi and Sabine Pass have received permission from FERC to increase annual LNG production by 14% and 10%, respectively.

In February 2021, a severe cold snap triggered some operational disruptions, with several export plants hit hard. Although severe weather conditions may also occur this winter, a similar event is not anticipated in our forecast, hence our expectations of a somewhat higher utilization rate. In 2022, we expect to see an increase in export from the U.S. by 14bcm, taking the annual total to an estimated 112bcm.

**OTHER ASIA PACIFIC**

Throughout the first half of 2021, exports from Malaysia quickened amid improved spot price environment and the start-up of Petronas’ second floating LNG facility, the PFLNG Dua. Nevertheless, in August, Petronas started warning offtakers of possible cargo deferrals and cancellations following delays in bringing new gas fields into production and sustained problems at the Sabah-Sarawak Gas Pipeline (SSGP) supplying the Bintulu LNG complex with feedgas from the Sabah region. The Pegaga gas project, which was expected to start production in Q4 2021, has been delayed due to the discovery of mercury contaminants. According to the operator, Mubadala Petroleum, production start-up is targeted for the first quarter this year, and installation of a temporary mercury remover unit (MRU) at the Pegaga gas field is expected to reduce cargo cancellations. Moreover, Petronas is planning to resume operations at the SSGP in the second half of this year after full assessment and testing have been completed. While allowing for some delays to the start-up, we anticipate somewhat higher exports from Malaysia in 2022, reaching 35bcm - yielding an increase of about 1bcm.

Following the start-up of the ENI-operated Merakes offshore gas project in April 2021, exports from Indonesia saw some recovery. Gas from the field is partially sold to the domestic market and supports exports from the Bontang LNG facility, which has struggled with depleting supply assets. Last autumn, one of the Merakes five subsea wells suffered a production halt, likely caused by a sanding issue. Since the accident, exports from Indonesia have gradually recovered, and we expect the somewhat higher production level to continue into this year. During the latter part of this year, we anticipate further recovery of exports supported by the start-up of BP’s delayed 5.2bcm/yr Tangguh train 3. For this year we anticipate an increase in exports of about 1bcm, taking the total to 20.5bcm.

In 2021, exports from Brunei’s Lumut LNG facility declined by about 1.2bcm due to weaker flows from maturing fields and rising domestic consumption. Although Brunei seeks to promote deep-water exploration to support declining gas production rates, it may take some time before additional gas will fully compensate for dwindling production. For
2022, we foresee shipments reaching 7bcm - down 0.5bcm from last year.

Last summer, Russia’s Sakhalin project conducted a full maintenance shutdown for about a month and shipped a total of 13.7bcm over the year. As some of this turnaround work was originally planned for 2022, we expect to see somewhat higher exports from the plant this year and anticipate total shipments to be up by 0.5bcm, reaching 14.3bcm. For Papua New Guinea’s PNG LNG, we expect exports to be largely in line with last year.

AFRICA

In 2021, Egypt’s LNG exports grew more than five times compared to the previous year. High LNG spot prices incentivized exports via Egypt’s LNG facilities, Idku and Damietta, with the latter restarting in February 2021. Production levels have also risen over the last year, supported by production from Zohr and the startup of BP’s Raven field. Although domestic gas consumption increased as well, available supply was boosted by imports from Israel, which reached around 4bcm last year. For 2022, we assume steady output from Zohr will continue to support flows along with higher piped imports from Israel based on contractual obligations. Egypt will likely continue exporting piped gas to Jordan and is expected to send small volumes to Lebanon for the first time this year. While we anticipate further growth in domestic demand in the year ahead, supported by power and non-power demand, we foresee export levels reaching 9.5bcm.

LNG exports from Equatorial Guinea have been falling since 2018, in line with reduced output from the Alba field, which supplies the feedgas to the LNG plant. However, in 2021, LNG exports rose by 19.6% following the start-up of the new Chevron-operated Alen field in March. The Alen field is being used as a back-fill for the declining Alba field. The start-up of this new Alen field has also marked the beginning of new LNG offtakers from the plant, as the field is supported by a tolling agreement that allows the shareholders to lift LNG in proportion to their equity stakes. For 2022, our forecast is a further 17% rise in LNG exports to just under 5bcm based on steady production output from this new Alen field.

In Cameroon, the Golar-operated 3.2bcm/yr Hilli Episeyo FLNG vessel has been operating at 50% of its name-plate capacity since LNG exports began from the facility in 2018. In July last year, Golar signed an agreement with Perenco...
and state-owned energy firm Société Nationale des Hydrocarbures (SNH) to boost the FLNG vessel’s production capacity by 17% - from 1.6bcm beginning from 2022. Thus, for this year, we expect an increase in LNG shipments of about 0.3bcm, in line with the expected increase in production capacity.

Since late 2020, oil production in Angola has dwindled due to a combination of low capital investment, tough fiscal terms, maturing fields, and technical and operational issues. In June 2021, oil exports plunged to a record low of around 1.1 million barrels. As most of the feedgas to the LNG plant at Soyo emanate from associated gas, LNG exports from the plant were affected by the lower crude oil production. In 2021, exports from the facility fell by a substantial 18% - to 5.1bcm. However, in recent months, there has been some progress in drilling and exploration work to stem the decline in oil production following the start-up of a couple of new extension projects and tiebacks. At least two of those projects - the Total-operated Clov 2 and the BP-operated Platina oil field - are part of the existing blocks 17 and 18, which supply feed gas to the LNG plant. For 2022, we expect an increase in the amount of associated gas supplied to the LNG plant which should correspond to a 16% increase in LNG exports.

At the beginning of this year, Mozambique’s 4.6bcm/yr Coral South floating LNG production vessel arrived in the Rovuma Basin, with first production set for the second half of this year. According to operator ENI, the FLNG is expected to reach full capacity within a few months following start up.

OTHER ATLANTIC

At the other side of the Atlantic, feedgas shortages have been a long-standing problem for Trinidad and Tobago, constraining output at the 20bcm/yr Atlantic LNG complex at Point Fortin. Since January 2021, the 4bcm/yr train one has been closed as several infill-drilling projects have failed to produce significant results. Last year saw the start-up of Shell’s Barracuda project and BP’s Matapal subsea development. Nevertheless, exports from the facility declined a notable 4.2bcm in 2021. To counteract dwindling feedgas supply from maturing fields, Shell plans to start production at its Colibri gas project later this year while BP is readying to commence its Cassia Compression project. thanks to the new feedgas projects, we expect to see LNG exports recover by about 1bcm - to reach 11.5bcm in 2022.

In 2021, Peru’s 6bcm/yr Melchorita export facility suspended operations on several occasions due to problems with a turbine and likely weak upstream production at the Camisea block 56, which feeds the export facility. Nevertheless, throughout the autumn, exports quickened, and we assume exports will stabilise around the levels seen prior to when production issues transpired. For 2022, we anticipate a recovery of about 1.5bcm in Peruvian exports, taking the total to almost 5bcm.

Further north in the Atlantic, Norway’s Equinor had to close the Hammerfest LNG facility in early October 2020 following a fire. The 5.8bcm/yr facility was supposed to resume operations in October 2021, but the revised start-up date is estimated to be 31 March 2022. Assuming a gradual ramp-up of the project, we expect Hammerfest LNG to ship about 4.5bcm of gas as LNG in 2022.

In 2021, exports from Russia’s 24.7bcm/yr Yamal project were up by an impressive 2.7bcm following less extensive maintenance compared to 2020 and the launch of a smaller fourth train with the capacity to produce 1.2bcm/yr. Following the start-up of the fourth train, the project has encountered some production interruptions. However, we expect to see more regular production in 2022 and expect total shipments from Yamal to reach 27bcm - yielding an increase of almost 1bcm.

THE MIDDLE EAST

In 2021, exports from Oman’s Kalhat facility increased by around 1bcm. Improved pricing conditions and increased gas production from the Gazheer gas project at the BP-operated Block 61 have contributed to the rise in shipments. Over the past years, Oman has also conducted de-bottlenecking operations at their export facility, enabling the country to export beyond the initial name-plate capacity. For 2022, we expect Oman to export about

![TRINIDAD & TOBAGO – EXPECT A MODEST RECOVERY](image-url)
14bcm - yielding an increase of 0.5bcm compared to the last year.

In the UAE, exports saw some increase from the previous year’s low-price environment. For 2021, we expect shipments to stay relatively unchanged. According to our trade flows data, Qatar exported almost 107bcm of gas last year, yielding a slight increase from the preceding year. For 2022, we do not foresee any material change in LNG exports from the country.

**Base-Case Market Balance**

For 2022, global LNG supply is expected to rise by 33bcm, driven primarily by a combination of two new U.S. projects starting up and a general recovery in exports from existing facilities. Firm demand (world excluding Northwest Europe) is forecast to grow by 24bcm this year, predominantly supported by growth in China and South and Southeast Asia.

However, in the current situation with an acute supply tightness in Europe, the price differentials between the Dutch TTF forward prices and the Asian swaps (see Price Dynamics section) signal that Europe is strongly pulling cargoes in the global market. This is in stark contrast to what we have previously observed. And, if the elevated price level persists or even escalates going forward, we may see continued muted demand from price-sensitive buyers in Asia, resulting in a higher volume of LNG arriving in Northwest Europe compared to our forecast.

Nevertheless, multiple factors may change our base-case forecast and some of these are discussed in the following section.

**Risks to the Market Balance**

As always, there are numerous risks and unexpected events which could alter the market balance. In the following, we will highlight some of what we consider the main risk factors, like Chinese gas and LNG demand, South Korean policy on coal-fired generation, and potential demand response from price-sensitive importers.

China – slowing economy hitting gas consumption growth?

As pointed out in our base case, we expect Chinese LNG imports to grow by 9% - or 10bcm in 2022. As we regard LNG imports as a residual after pipeline imports and domestic production has been accounted for, numerous plausible combinations will yield different forecasts for LNG imports.

In our view, the largest uncertainty relates to growth in Chinese natural gas consumption. In the base-case forecast, we expect to see a slowdown in the Chinese...
economy, something which will likely translate into slower growth in gas demand. If the economic slowdown turns out to be more severe than projected in this forecast, implied gas consumption could drop from the anticipated 9% to 7%. While keeping our assumptions on domestic production and pipeline imports as in the base case, growth in LNG imports for this year will be reduced from 10bcm - to 2.3bcm - or yielding a meagre 2% growth.

On the other hand, if gas consumption should pick up, yielding a 12% growth rate and keeping the other assumptions as in the base case, LNG import will swell to 21bcm which represents an increase of 19%, slightly higher than the growth rate witnessed in 2021. Higher growth in gas consumption may be supported by a rebound in economic activity and a stronger push for coal-to-gas switching in the residential and industrial sectors.

The above illustrates the inherent uncertainty involved in forecasting Chinese LNG demand. The difference between the low and high scenarios is yielding almost 19bcm. As such, the various scenarios will have materially different impact on cargo arrivals to the balancing region of Northwest Europe.

South Korea – emission reduction policy

Over the last years, South Korean MOTIE (Ministry of Trade, Industry and Energy) has ordered temporary suspension of numerous old and less efficient coal-fired plants in a bid to reduce air pollution and emissions. One of the suspension programs has been running from December to February where a range of coal-fired plants had to be temporarily idled along with a cap on the utilisation rate for coal-fired plants in operation. Moreover, for March, the range of plants to be taken offline has been higher compared to the peak winter months. Last spring, MOTIE asked state-owned Kepco utilities to voluntarily restrict its use of coal in April-November to limit overall emissions. The ask was to restrict coal-burn by up to a quarter compared to the 2017-19 average.

Last autumn, South Korea decided to raise its goal to cut greenhouse gas emissions to 40% in 2030 from previously 26.3%. Moreover, the country is looking to include LNG in its taxonomy for green fuel, which will likely support gas burn in the power sector. On this backdrop, we have assumed similar restrictions to coal-fired generation for 2022 as we saw for 2021. Any significant change to the policy observed last year, could have an impact on South Korean LNG demand.

Price sensitive importers – demand response emerging?

Last year saw some unprecedented high Asian spot pricing environment and the elevated price level has continued into 2022. And, for countries and companies which rely partially or fully on spot procurement, the high prices have led to some switching to cheaper fuels or scaling down of businesses in general. One example is India, which saw its LNG imports dropping by 5.3% last year, while the country’s three-year average import growth rate stood at about 10%. During the high price environment, the petrochemical and refining sectors have switched from gas to liquid fuels and the power sector increased their coal-burn at the expense of gas. Although imports to Pakistan and Bangladesh came in at healthy rates last year, these counties have also taken measures to limit their gas burn. Moreover, two-tier Chinese importers primarily rely on sourcing LNG from the spot market. Over the recent months, they have been almost absent from the market as spot cargoes are competitive in the Chinese downstream market.

Hence, if we should see a significant drop in Asian spot prices, typically as winter gives way to spring, and with spot prices staying at relatively competitive levels throughout the year, we may see a notable demand response from price-sensitive importers as they are catching up with their latent LNG demand.

Price Dynamics

So far this winter, we have seen some remarkably strong dynamics in the LNG and global gas markets, going from a tug-of-war between Northeast Asian and European importers to Europe being the premium market. Based on the current forward and futures prices, TTF is trading at a premium to Asian futures prices for consecutive months into this year, a phenomenon which has never been observed before. This is likely reflecting the anticipations of a continued tight supply situation in Northwest Europe for the months to come. Also, the current forward and futures prices indicate that the tight relationship between the Dutch TTF and the Asian spot price will prevail throughout this year. As such, the price development in Europe will likely be critical in setting the spot price of LNG in Asia.
In the run up to this winter season, the Asian spot price traded at a premium to European hub prices driven by strong Asian demand. However, in early December, the arbitrage to the east closed amid muted Asian spot demand and a strong pull for cargoes into Northwest Europe amid record low gas storages and disappointing flows from Russia. As opposed to Europe, Northeast Asian importers have been well prepared for the heating season, sitting on healthy storage levels.

So far this winter, Northeast Asian temperatures have been close to the seasonal norm, and importers have by and large been able to cover their LNG demand from contractual delivery agreements and storage. Based on the current forward and futures prices, the Dutch TTF is trading at a premium to Asian futures prices for consecutive months into this year, a phenomenon that has never been observed before. We see this as a reflection of market expectations of a sustained tight market balance in Europe for the coming months. Nevertheless, given the relatively slim premium for TTF compared to Asian futures, this may quickly be eroded if we see consecutive weeks with colder than normal temperatures across Northeast Asia this winter, something that typically triggers demand for spot cargoes.

Although the price spread between the contracts varies throughout the year, the development in the European gas market will likely be critical in setting the LNG spot price in Asia, highlighting the integrated nature of today’s global gas market.

---

**AGGREGATED NORTHWEST EUROPE STORAGE (Gor, Fra, Nld, Bel)**

Figure 20

Towards mid-summer, the TTF forward curve dips below Asian futures prices. This may be explained by the anticipated start-up of Russia’s Nord Stream 2 pipeline and a pickup in Northeast Asian spot demand during the peak cooling season. Throughout the remainder of 2022, the spread between the two contracts widens amid Asian restocking demand during late autumn and demand for heating towards the end of the year. Under the anticipation that the arbitrage to Asia will stay open, the price spread will have to reflect the seasonal increase in transportation cost which is influencing the cost disadvantage of shipping Atlantic cargoes to Asia compared to Europe.
ANALYSTS

Anne Kat Brevik
Director, LNG Research
E-mail: annekatrin.brevik@lseg.com

Nnenna Amobi
Senior LNG Analyst
E-mail: nnenna.amobi@lseg.com

Marta Kufel
Senior LNG Analyst
E-mail: marta.kufel@lseg.com

Olumide Ajayi
Senior LNG Analyst
E-mail: olumide.ajayi@lseg.com

Hengky
Senior LNG Analyst
E-mail: hengky@lseg.com