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SEE ENERGY BRIEF:

Monthly Analysis

LNG Market Dynamics and SE Europe



Introduction

Since the start of the year, there is so much LNG arriving in Europe that cargoes of the super-chilled fuel are being offered at a discount to regional benchmark rates. LNG imports in Europe approached record levels in January, prompting traders to slash cargo prices due to the lack of slots at import terminals and as supply exceeds demand.

The discounting is a turnaround from a few months ago, when LNG imports commanded a premium amid concerns of a winter fuel shortage. Benchmark gas futures have since plummeted from a record high in December 2021 as LNG arrivals increased and China, the biggest buyer of the fuel, offered to sell dozens of cargoes this year to European buyers.

Barring a severe cold snap or escalating geopolitical tensions involving Russia, the winter peak for gas prices in Europe and Asia has already passed. The discounting situation is not new, though after European gas prices more than tripled over the past year, the magnitude of the reductions is deeper. During a wave of LNG imports in late 2019, shipments were priced at a discount as traders struggled to find demand for cargoes in northwest Europe. The present wave of LNG is likely to continue as prices make US exports more profitable to Europe rather than in Asia in March, April and May, according to several energy analysts.

Strong LNG Imports to Europe Offset Lower Russian Gas Flows

A flurry of LNG cargoes heading to Europe are likely to offset an anticipated decrease in natural gas imports from Russia in the coming months, with robust supply available for power generation until the end of the heating season, analysis by S&P Global Platts showed on January 20, 2022 (1). Gas imports from Russian-state controlled Gazprom have dropped considerably this winter, driving prices on the benchmark Dutch TTF hub to record highs, as shown in Figure 1, with peak prices reaching €166.8/MWh on December 21, 2021.

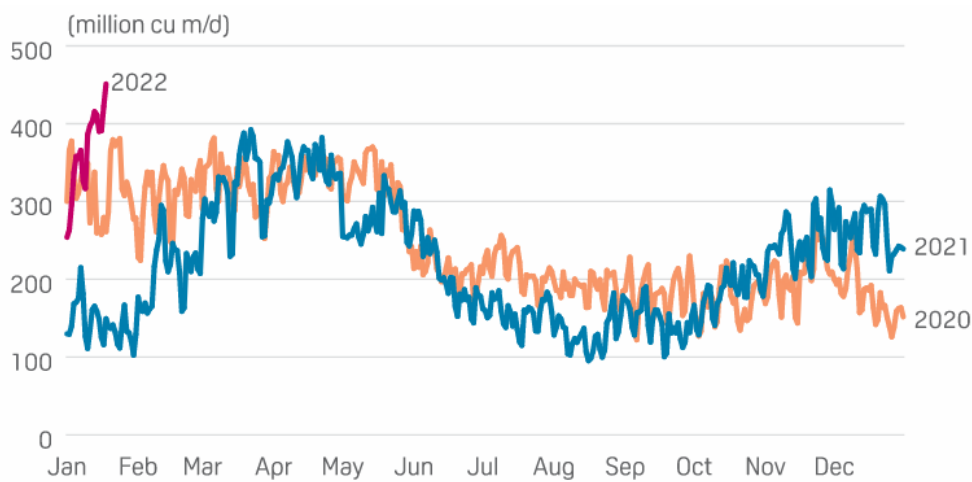
Figure 1: Dutch TTF Gas Futures Over the Last 3 Months



Source: ICE

However, weak demand in Asia has kept the S&P Global Platts JKM contract - the benchmark for spot-traded LNG delivered to Northeast Asia - subdued, with a sizeable number of LNG cargoes now approaching European shores, attracted by higher prices. European regasification hit record levels in mid-January, with LNG sendout in Belgium, France, Italy, the Netherlands, Poland, Portugal, Spain and the UK rising to 451 million cubic metres on the January 19 gas day, the highest ever level, data from Platts Analytics and the National Grid showed. LNG regasification averaged 363 million cubic metres per day over the January 1-19 gas days, an increase of 142% on the year and higher than the 351 million cubic metres per day seen in November 2019, the current record month for LNG regasification in Europe, based on data provided by S&P Global Platts.

Figure 2: European LNG Regasification



Source: S&P Global Platts

Change in Market Dynamics

Strong netbacks driven by record-high prices in end-user markets in Europe and Asia last fall and during early winter incentivized exporters, especially in the US, to stretch capacity to the limits to produce more LNG. When inter-basin spreads turned negative and shipping rates fell sharply, many of those cargoes were pointed or diverted to Europe from Asia. The spread between the JKM and the TTF is often used as a sign of arbitrage potential between the Atlantic and Pacific basins.

Enter 2022 and a relatively mild winter in Europe and Asia, we had a decline in demand. The slots in Europe for prompt cargoes - those to be delivered in February - suddenly became elusive. “It is also a reflection of newly discovered elasticity in Asia-Pacific demand, with unprecedented tightness in Europe forcing it to price at a level that competes for flexible LNG, leading to switching and outright destruction of gas demand in spot exposed Asian importers,” Platts Analytics’ EMEA LNG Team Lead Luke Cottell said. European deliveries were boosted as a significant proportion of floating volume that had built up since October 2021 unloaded.

“Strong LNG sendout and seasonally normal temperatures have weighed on TTF balance-of-winter market prices, helping to offset low Russian pipeline supply,” Cottell said.

Price incentive for February and March

Strong LNG deliveries to Europe may continue for some time on the back of weak buying activity in Asia, according to Cottell. On the prompt, the TTF front-month is at an ample premium to the JKM, while DES Northwest Europe sits at a substantial discount to TTF front-month, pointing to strong demand for regasification capacity.

March price dynamics could also encourage LNG cargoes to head to Europe, as opposed to Asia. Platts assessed DES Northwest Europe for March at \$21.791/MMBtu on January 19, the lowest price since September 16, 2021. Platts assessed the US FOB Gulf Coast Marker (GCM) for March at \$20.20/MMBtu on January 19, which was the lowest GCM has been since November 1, 2021.

Recent market activity suggests that JKM premiums could return for April. Additional US supplies could trigger more volatility, with a seventh major liquefaction terminal - Venture Global LNG’s Calcasieu Pass - preparing to begin exports in the next few months. The timing of when Gazprom’s Nord Stream 2 gas pipeline becomes operational will also be a factor, with additional supplies to Europe possibly reducing LNG consumption. However, given the present state of play in Ukraine and continuing high tensions between Russia, NATO and the US, it is most unlikely that Nord Stream 2 will actually go into operation before May at the earliest.

The Case of SE Europe

Regardless of developments in Ukraine, LNG demand in SE Europe is expected to grow over the next few years, as the regional market keeps expanding. The rapid penetration of LNG in the region will be similar to the recent past such as Spain, Portugal, Italy, Greece and Turkey. It appears that LNG prospects in SE Europe and the East Mediterranean in particular are far better placed than they were five years ago, with the aforementioned new projects getting ready to progress and LNG clearly emerging as a priority fuel for several industrial consumer groups helped by lower prices and increased availability. (2)

In SE Europe, LNG seems to be a realistic alternative fuel as it increases security of supply through multiple and independent supply sources and diversified routes, especially as it provides the opportunity for new LNG suppliers (e.g. Australia, US, etc.) to export gas to the region and furthermore enhances pricing flexibility and safer gas transportation and can also support underperforming gas pipeline projects.

Greece, Croatia and Turkey are the only countries in the broader Black Sea-SE European region which at present possess LNG gasification terminals which are well linked and integrated into their national gas systems (see Map). It is thus anticipated that the SE European region, from Croatia to Turkey, will play a significant role in expanding LNG trade in Europe through the construction and operation of several new LNG regasification projects, with the prospect of feeding gas quantities into the Greek, Bulgarian, Serbian and Turkish gas systems, among others.

More specifically, Greece will add two more FSRUs until 2023, thereby strengthening its gas supply security and obtaining a strong role in transit by making the most of its strategic location and its new corridors for the supply of Europe and the Balkans. Greek energy groups want to make the most of the opportunity of gas being the bridge fuel on the way to clean energy, and of Balkan countries' need to diversify their sources and not be so reliant on Gazprom. They have therefore designed and are promoting infrastructure for their entry into the Greek LNG system. The fuel will use Greece's pipelines (the Trans Adriatic Pipeline (TAP), the Interconnector Greece-Bulgaria, currently under construction, and the planned interconnector with North Macedonia) in order to access neighboring countries and help them reduce their dependence on Russian gas, which is being transported via Turkey; which besides hosting pipelines has also invested in LNG infrastructure, making it an actual gas hub for SE Europe. Apart from the Revithoussa LNG terminal, off the coast of Attica, Greece is likely to obtain new FSRUs near Corinth and Alexandroupoli respectively.

The FSRU project at Alexandroupoli recently sealed its final investment decision (FID), which is the last and most important milestone, before entering the project's construction phase. Budgeted at €363.7 million, the project consists of a floating platform for the reception, temporary storage and gasification of LNG, and an underwater and land pipeline for the fuel to reach the national transmission system. The project is being developed by Gastrade, part of the Copelouzos Group, with the participation of Gaslog Investment, DEPA Commercial, gas grid operator DESFA, and Bulgartransgaz EAD. The Alexandroupolis FSRU is expected to be operational by the end of 2023.

Another gate of entry for natural gas into Greece will be the FSRU that refinery group Motor Oil is preparing in its facilities near Corinth. This will be an investment topping €300 million and bearing the name "Dioryga Gas". The unit will have a storage capacity of 210,000 cubic meters, and a gasification capacity of 132,000 MWhs per day, with the average annual demand estimated at 2.5 billion cubic meters. Its completion will increase the Greek gas system's storage capacity by 80%, boosting Greece's supply security.

In early 2021, Croatia gained access to the global LNG market as a new importer as its Krk FSRU came online. It began commercial operations following the arrival of the 1.9 MTPA FSRU LNG Croatia at the Krk terminal and completion of successful testing. Apart from Croatia, Turkey was the only other European market that

saw capacity addition in the past three years. Following the commissioning of a new 5.4 MTPA regasification terminal (Dortyol FSRU) in 2018, Turkey expanded capacity at the Etki terminal by chartering a larger-capacity 5.7 MTPA FSRU to replace the original unit, expanding the terminal’s total send-out capacity by 2.0 MTPA. Turkey’s fifth regasification terminal (Gulf of Saros) is currently under construction and is scheduled to be completed by 2022. Similar to Turkey’s third and fourth terminals, the Gulf of Saros terminal is also FSRU-based. This new FSRU will be used to supply LNG at the Dortyol import terminal in order to replace its existing FSRU before being deployed in the Gulf of Saros terminal. (3)

Map: LNG Terminals in SE Europe



Source: IENE

In July 2020, Cyprus’s first FSRU terminal officially started construction with a ground-breaking ceremony at the Vassilikos industrial area and it is expected to be operational by July 2023. This follows the contract award to China Petroleum Pipeline Engineering for the construction of Cyprus’s first LNG regasification terminal. Authorities announced last autumn that construction works had started on the ship “Etyfa Promitheas”, the vessel that will serve as FSRU, which will convert LNG into the fuel’s gaseous form to be burned for electrical power generation. Once delivered, the ship will berth off Vassilikos. Upgrades will allow the ship to also operate as an LNG carrier, able to navigate across the globe. (4)

As shown in Table, the total nameplate receiving capacity of existing LNG terminals in SE Europe currently stands at 26.6 MTPA. If we add both Gulf of Saros (7.5 MTPA) and Vassilikos (0.6 MTPA) FSRUs, combined with the planned Dioryga Gas and Alexandroupolis FSRUs (4 MTPA), which undoubtedly will increase

Greece’s capacity, we are talking about a total nameplate receiving capacity by 2030, which will reach more than 40 MTPA. Therefore, we can easily appreciate the important role LNG can play over the next years in SE Europe’s gas supply and its impact on European gas supply at large.

Table: Existing and Under Construction LNG Terminals in SE Europe

	Country	Terminal or Phase Name	Start Year	Nameplate Receiving Capacity (MTPA)	Owners	Concept
Existing	Turkey	Marmara Ereğlisi	1994	5.9	Botas (100%)	Onshore
		Aliaga Izmir LNG	2006	4.4	EgeGaz (100%)	Onshore
		Dortyol - MOL FSRU Challenger	2018	4.1	Botas (100%)	FSRU
		Etki LNG terminal - Turquoise	2019	5.7	Terminal: Etki Liman (100%), FSRU: Kolin Construction (100%)	FSRU
	Greece	Revithoussa	2000	4.6	DEPA (100%)	Onshore
	Croatia	Krk - Golar FSRU	2021	1.9	Terminal: HEP (85%), Plinacro (15%), FSRU: Golar (100%)	FSRU
Under Construction	Turkey	Gulf of Saros terminal – Ertugrul Gazi	2022	7.5	Botas (100%)	FSRU
	Cyprus	Vassilikos FSRU	2022	0.6	DEFA (100%)	FSRU

Sources: IGU, IENE

References

1. Savcenko, K., Weber, H. and Hornby, G. (2022), “Strong LNG imports to Europe offset lower Russian gas flows”, <https://www.spglobal.com/platts/en/market-insights/latest-news/natural-gas/012022-feature-strong-lng-imports-to-europe-offset-lower-russian-gas-flows>
2. IENE (2022), “SE Europe Energy Outlook 2021/2022”, *An IENE Study Project (M48)*, to be published in February 2022
3. IGU (2021), “2021 World LNG Report”, <https://www.igu.org/resources/world-lng-report-2021/>
4. Cyprus Mail (2022), “LNG project progressing despite nine-month delay”, <https://cyprus-mail.com/2022/01/21/lng-project-progressing-despite-nine-month-delay/>

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