

## ENERGY

# LNG: a controversial hero

Liquefied natural gas (LNG) is the new king of global energy and consumption is expected to skyrocket by 50% by 2040. To meet this demand, more than 150 projects are in the works around the world. **BY BERTRAND BEAUTE**

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yiv has spoken. As promised by Volodymyr Zelenskyy, the gates to the Bratstvo (meaning "brotherhood") gas pipeline were closed on 1 January. As a result, not a single molecule of Russian gas will travel through Ukraine to reach Europe, whereas 14.65 billion cubic metres of methane (the real name of the gas) travelled this pipeline in 2023. Two years after the sabotage of the Nord Stream 1 and 2 pipelines in September 2022, the gas supply to Europe is limited to two options: the TurkStream pipeline, which transports Russian gas via Turkey, and imports of liquefied natural gas (LNG).

LNG is methane cooled to under  $-161^{\circ}\text{C}$  so it then becomes a liquid.

The big advantage over natural gas is that LNG can be transported by sea via gas tankers. In its liquid state, natural gas is 600 times less voluminous than in its gas state, which allows for efficient transport of large quantities. As a result, many areas that do not have access to pipelines can receive LNG, and in Europe, provide an alternative to pipelines coming from Russia.

## LNG imports were up 60% in Europe in 2022

In 2021 before the war, 45% of natural gas imported to the European Union came from Russia, but that number dropped to 18% by June 2024, according to a report on the state of the energy union. At the same time, "sales of liquefied natural gas (LNG) have shot up since the beginning of the Ukraine war in 2022", said Roberta Caselli,

strategist in sustainable investing in the raw materials sector at Global X ETFs Europe. According to a report by GIGNL, LNG imports were up 60% in Europe in 2022 compared to 2021, reaching 120 million tonnes.

And the market will continue to grow. According to a Shell study published in February 2024, the global demand for LNG is expected to increase 50% by 2040, reaching between 625 and 685 million tonnes per year during



↑ Escorted by tugboats, the liquefied natural gas (LNG) carrier "Arctic Lady" brings a cargo of LNG to the Deutsche Ostsee terminal in the port of Lubmin, Germany, in April 2024.

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this time, compared to 401 million tonnes in 2023. "The war in Ukraine fundamentally altered the LNG market, as Europe

was forced to replace Russian gas, leading to a strong increase in demand," said Alessandro Valentino, product manager at VanEck. "Furthermore, emerging markets such as China and India are also stimulating demand. In the short term, this growth is expected to continue."

The primary beneficiaries are the United States, which has become the top global exporter after being only third in 2022, with a 21% market share in 2023 (4.5 million tonnes exported), and then Australia (19.8%), Qatar (19.5%), Russia (7.8%) and Malaysia (6.7%). Donald Trump's return to power is likely to further accelerate exports of US gas. Indeed, in January 2024, the Biden administration established a moratorium in approving new liquid gas pipelines for environ-

mental reasons, which brought any growth for the industry virtually to a halt. But the game has changed with Donald Trump. In his inauguration speech on 20 January, the US president promised: "We will drill, baby, drill," in order to "export American energy to the entire world".

"With Donald Trump back in power, the United States' energy trajectory will change radically," said Valentino. "Trump's energy policy was always in favour of →"

fossil fuels, focusing on energy domination and deregulation. His administration is likely to fast track approvals of liquefaction projects, simplifying the approval process and reducing administrative formalities. It signals a new era of American ambition in terms of LNG, with the expansion of infrastructure to meet growing global demand. Trump's approach is to use LNG as both an economic driver and geopolitical tool."

**Is it too late to invest? "No, the LNG market is not a bubble about to burst"**

Otmare Jai, head of Investments at MJ & Cie

And the United States isn't the only country investing heavily in LNG. Around the world, there are many liquefaction terminals in export countries and re-gasification terminals in import countries. According to a report from the NGO Reclaim Finance, published in December 2024, companies in the industry plan to build 156 liquefied natural gas terminal projects globally by 2030. This is incredible business for many of the companies active in the sectors of liquefaction (QatarEnergy, Cheniere, Energy, ExxonMobil, TotalEnergies), engineering and construction (Bechtel Corporation, Technip Energies, McDermott Interna-

tional), maritime transport (Golar LNG, Flex LNG) and re-gasification (Engie, Eni, Uniper, Exxcelerate Energy).

"Increased LNG production and infrastructure development have created considerable opportunities for companies all across the value chain, from liquefaction to re-gasification and maritime transport," said Valentino of VanEck. As a result, many companies active in this sector have seen their share prices skyrocket since the start of the Russia-Ukraine war. The share price of US company Cheniere Energy rose nearly 130% between January 2022 and January 2025,

↑ France is Europe's biggest importer of liquefied natural gas (LNG). Here, the FBRI Toscana LNG carrier disembarks in the port of Marseille in June 2024.

and share prices of Technip Energy and Golar LNG were up 125 and 230% respectively over the same period. Is it too late to invest? "No," said Otmare Jai, head of Investments at MJ & Cie. "The LNG market is not a bubble about to burst. It has plenty of growth outlooks, with jewel companies all along the value chain." For private investors, it would also be interesting to take a look at lesser-known companies that benefit from the rise in LNG consumption in the sense that they supply key components to the industry, such as French group GTT and Swiss



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company Burckhardt Compression (see inset below).

However there are still a few concerns: some analysts fear that building all this infrastructure will lead to short-term overcapacity. Since Russia's invasion of Ukraine, Europe has already increased its re-gasification capacities from 58.5 billion cubic metres of gas to reach a total capacity of more than 340 billion cubic metres in 2024, according to the European LNG Tracker from the Institute for Energy Economics and Financial Analysis (IEEFA). With terminal construction underway, European capacity is expected to

exceed 400 billion cubic metres as early as 2026.

The problem is that European LNG imports fell 18% in 2024 compared to 2023, according to a report by the International Energy Agency (IEA) published on 21 January 2025. And this trend is expected to continue, even as Ukraine's pipeline closure on 1 January "could increase the demand for LNG imports to the EU," according to the IEA: "2025 is expected to be the peak of LNG consumption in Europe," confirms Baptiste Leflaive, energy consultant at Colombus

Activists from the climate action group Ocean Rebellion, at Albert Embankment in London, 4 October, 2024. They are particularly critical of companies that present LNG as a green fuel.



Consulting. "After that, it will fall." The IEEFA predicts that European demand for LNG will be less than 100 billion cubic metres in 2030, which is notably a significant gap between re-gasification capacities (exceeding 400 billion in Europe in 2030) and consumption.

"The expansion of re-gasification in Europe was a strategic response to an energy crisis, but now we run the risk of over-investment in infrastructures that are not aligned with energy trends over the long term," warned Valentino. It is vital that we closely re-evaluate future needs."

Similarly, Shell believes that the gas peak (gas and LNG) has already passed in Europe and Japan, as early as the 2010s, and that demand will never return to pre-pandemic levels. This gas peak is expected to hit North America during the 2030s, and the rest of the world in the 2040s. The IEA believes that the highest gas peak globally will occur before 2030.

In this context, both IEA and Shell predict that most of the growing demand for LNG in the coming years will be from Asia. "European demand for LNG has probably reached its peak given the energy efficiency objectives, the development of renewable energies and decarbonisation goals," said Valentino. "Now, the

focus is on emerging markets. Asia, and particularly China and India, will stimulate demand in their shift from coal to gas – a cleaner energy. South-east Asia, with growing economies such as Vietnam and Thailand, is also increasing the need for more LNG imports.”

### “Gas creates pollution, but less so than coal and oil. It’s a transition energy”

Baptiste Leflaive, energy consultant at  
Colombus Consulting

But once again, the outlooks are uncertain. “The evolution of LNG consumption will depend on three key factors,” said Otmane Jai. “First, renewable energy policies: are we going to continue to support fossil fuels? Second: will the growth in Asia follow? If China returns to growth,

there will not be any overcapacities. Third: it will depend on the price of gas, as compared to the price of other energies. If LNG prices

are competitive, China and India will gradually replace their coal-fired plants with gas facilities that produce less pollution. That’s market law.” When the price of gas exceeds a certain level, demand in Asia decreases.

This scenario happened in late 2024. “Given the recent price spikes for LNG, which made the gas more expensive than oil, demand fell in Asia,” said Roberta Caselli of Global X ETFs Europe. “Several companies are now trying to resell their shipments of LNG to deliver by the end of winter.”

The last challenge is the environment. According to Reclaim Finance, “the new terminals, in addition to not being necessary, will have a devastating effect on the climate.” According to figures from the NGO, “the 63 LNG export terminals that are expected to be operational by 2030 could leak methane and therefore emit more than 10 gigatonnes of greenhouse gases (GES) by the end of the decade. This is nearly the equivalent of the annual emissions of all the

active coal-fired plants around the world. These terminals will lead to dangerous levels of pollution and health risks for local communities.”

But Alessandro Valentino puts these sombre predictions into perspective: “Increased production and consumption of LNG do not necessarily pose a significant threat to climate goals, as these goals are designed to be achieved sustainably and on a long-term basis. LNG is part of the transition towards reducing dependence on fossil fuels that create more pollution such as coal, particularly in emerging economies.”

Baptiste Leflaive agrees: “Gas creates pollution, but less so than coal and oil. It’s a transition energy. If China and India wish to reduce their emissions, they will need LNG to replace coal. The roadblock to this transition is the price of coal, which remains extremely competitive. As a result, China continues to invest very heavily in its coal-based infrastructure. The real risk is if LNG slows down the adoption of renewable energies.”

Released by the Danish army in September 2022, this photograph went viral around the world. Off the island of Bornholm, the Baltic Sea can be seen boiling after the Nord Stream 2 gas pipeline was sabotaged, leading to a huge gas leak.

