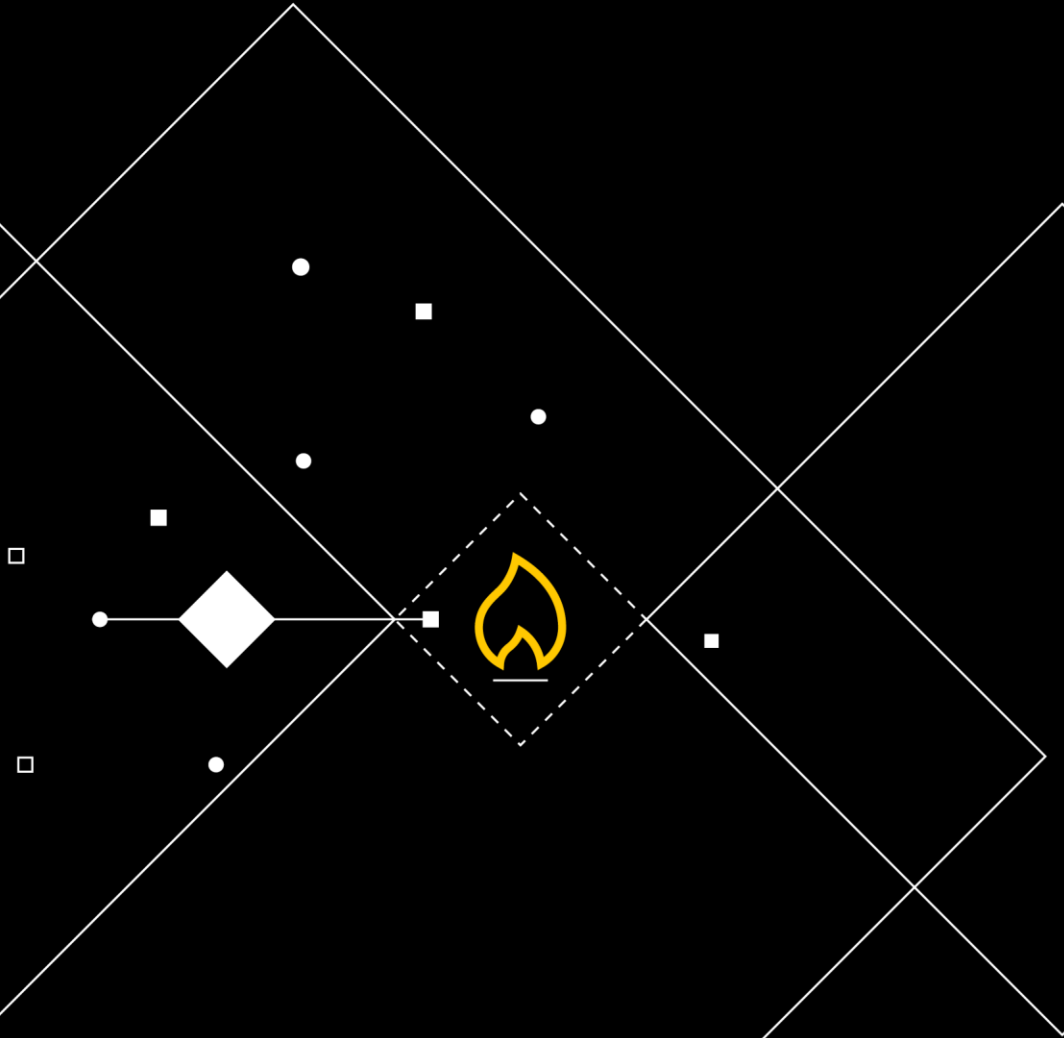


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NATURAL GAS & LNG



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Ukraine Crisis and Europe's Natural Gas Market

The war taking place in the heart of Europe following the Russian invasion of Ukraine and the response from the international community will shape the region's gas market for decades to come.

Globally, Europe is only the second smallest consuming region of gas, behind the Middle East and Africa, North America and Asia-Pacific – only coming ahead of South America. However, unlike the top gas consuming regions, Europe is extremely reliant on imports to meet its needs.

A natural gas-fed economy, around a quarter of Europe's energy consumption is met by the fuel. But while the region is heavily dependent on gas, its production is in structural decline. This means most European markets are severely import-dependent, while a handful of markets are dependent on just a single source of gas – Russia – which accounted for 35% of Europe's imports last year.

The gas relationship between Russia and Europe is mutually dependent. Russia's economy depends on its oil and gas revenues, and although it has made efforts to diversify its customer base, there is no immediate alternative market to which Russia can supply its natural gas. It is constrained by its own rigid infrastructure, which directs the vast majority of its production for export to Europe.

That has seen Russia become Europe's biggest and most long-lived supplier of gas. It has repeatedly pointed to its pride in ensuring supplies were never halted even through the height of the Cold War. That was until 2009, when Russia first stopped supplies for a number of days over tensions with Ukraine – rare temporary stoppages have occurred in the years since.

The response to Ukraine Crisis so far – a gas perspective

Germany – Russia's most important gas buyer – has outlined plans to transform its energy policy approach:

- Cancels 55-bcm/yr Nord Stream 2
- Creates strategic gas reserve and strategic coal reserve
- Will buy more non-Russian gas
- Supports development of country's first LNG import terminals

Removing Russia from SWIFT could have serious consequences for the balance of payments for gas contracts. However, the International Community is planning to carve out energy-related payments.

UK effectively blocks LNG imports from Russia, following an announcement by the country's Transport Secretary, Grant Shapps, forbidding the arrival of Russian vessels at British ports. In 2021, the UK imported some 3.2 bcm from Russia's Yamal LNG – more than 10% of the project's output. Russia was the UK's third biggest supplier of LNG in 2021, accounting for around 5% of the country's gas consumption.

UK Foreign Secretary Liz Truss calls on G7 leaders to cap Russian oil and gas imports – the first such figure to call for this measure, while Ukraine Minister of Foreign Affairs Dmytro Kuleba is calling for a complete embargo on Russia's gas.

Russia's oil and gas industry is starting to see severe fallout:

- The UK's **BP** announced it is exiting its 19.75% stake in state-owned Rosneft, including exiting all JVs. BP estimates a potential non-cash charge of up to \$25 billion relating to the move
- **Shell**, too, has said it will divest its Russian assets, including a 27.5% stake in the Gazprom-controlled Sakhalin II LNG facility, which produces some 11 mmt/yr, predominantly delivered to Northeast Asia. At the end of 2021, Shell said it had

- around \$3 billion in non-current assets in these ventures in Russia. It will also relinquish its 10% shareholding in 55-bcm/yr Nord Stream 2, which will lie dormant after Germany refused to certify the pipeline
- **ExxonMobil**, which has a significant gas upstream and midstream position in the country, announced it will exit its operatorship of Sakhalin-I, the only major gas and oil production centre under IOC operatorship. It has also committed to no future investments in the country
- Pressure is likely to increase for other major partners in Russia's oil and gas space, particularly on France's **TotalEnergies**, which owns a 19.4% stake in Russia's biggest private gas player Novatek, including a 20% stake in the 19 mmt/yr Yamal LNG export facility and 10% stake in the 20 mmt/yr Arctic 2 LNG, which is due to begin production next year. So far, the company has only committed to no future investments, rather than exiting existing commitments
- **Top trader Glencore** has announced it is reviewing its interests in Russia, including its stake in Rosneft. Commodity houses have partnered extensively with Russia and typically have much higher geopolitical risk appetite than the majors, but we could see more traders start to distance themselves
- **Norway's** sovereign wealth fund to divest its Russian assets (~\$3 billion), while its energy champion **Equinor** will also divest its Russian assets (~\$1.2 billion)

Market impact

[**Please see our Europe Gas morning report \(subscription required\) for daily assessment of gas market prices and flows**](#)

Russian flows to Europe have increased since the attack began, due to extremely high spot prices incentivising deliveries from long-term contracts, with contract holders nominating more Russian imports rather than buying at spot price levels.

This has resulted in Germany importing gas via the Yamal-Europe pipeline for the first time this year. It has relied exclusively on Nord Stream volumes up to now.

However, gas does not appear to be flowing at levels through some interconnections that we would normally anticipate with the current market indicators. We don't believe this is down to under delivery by Gazprom; rather it is potentially due to buyers pre-empting political and shareholder pressure to minimize Russian offtake and failing to maximise nominations.

UK utility Centrica is among buyers that have said it will exit its gas supply agreements with Russian entities. It currently has a term contract with Gazprom's UK subsidiary Gazprom Marketing and Trading. While it has been reported that offtakers from Novatek-led Yamal LNG are considering their exposure to lifting LNG volumes from Russia biggest liquefaction facility.

European gas prices have supported a narrowing of the arbitrage window to Asia, which typically encourages **LNG flows** from the Atlantic into the Pacific. This will likely see additional LNG carriers diverted to Europe's shores. It's important to note, however, that any drop in Russian supply might not immediately give room for much more LNG, particularly to Northwest Europe, which accounts for the bulk of Europe's import capacity, as the levels of send-out we have seen recently have been close to maximum.

The **Gas TSO of Ukraine** (GTSOU) has stated it will attempt to ensure continued transit of Russian gas into Western Europe: "stopping gas transmission services would cause needless suffering downstream from Ukraine and undermine our position as a reliable European partner". Indeed, after a sharp reduction in transit volumes immediately following the start of the war, flows returned to recent norms.

- An explosion in the city of Kharkiv near the Russian border over the weekend was related to Ukraine's transit system, however, GTSOU said pressure measurements do not indicate any major disruption.

What next?

A decade since Russia first stopped gas flows to Europe, decisions are now being made in European capitals, particularly in Berlin, that set the scene for a transformation in the region's gas supplies.

Germany's new Chancellor, Olaf Scholz, appears to be breaking with what has been the country's settled position of largely treating its reliance on Russian gas as a separate consideration to other geopolitical concerns by transforming its energy policy approach.

Among a number of other announcements over the weekend aimed at isolating Russia and reducing Germany's dependency on its key gas supplier in the longer term, Scholz said Germany will not certify the Nord Stream 2 pipeline, while it plans to buy more non-Russian gas and will commit to supporting the development of two LNG terminals. It would also create a strategic gas reserve and a strategic coal reserve. A new gas storage law would require storage levels of 80% capacity by the 1 October – the start of the gas year – and 90% by 1 December. These levels are above recent seasonal injection norms. It appears

Germany will stick to existing plans to phase out nuclear this year and coal by 2030 – although there is clear upside risk to both dates. All proposals will need to be approved by Germany's parliament.

Stade LNG and German LNG – which have a total proposed capacity of 20 bcm/yr – are the only LNG terminals currently being considered in Germany. However, the renewed government support for LNG, could also see previous projects rekindled, such as Uniper's FSRU-based Wilhelmshaven. A floating storage and regasification unit would have the benefit of a much shorter lead time than onshore-based options, likely a critical consideration.

Supporting the decision making will be the huge hike in gas bills Germany – and the wider European market – has seen in the last year, with countries spending tens of billions of dollars more on Russian gas in 2021 than just a couple of years previously, likely easing some concerns around large LNG investments.

The only major European market yet to have an LNG import terminal, Germany still regularly receives RLNG (regasified LNG) via neighbouring markets. A smaller proposed LNG import facility, to be used for bunkering demand and co-sponsored by Russia's largest private gas player Novatek, was only cancelled in October last year.

The potentially strategic pivot by Germany reflects a similar move by **Poland** – historically another major gas market for Russian supply. Poland has already said it will not extend its 9 bcm/yr contract with Russia, due to end this year, while it is constructing new pipeline infrastructure with Norway and has rapidly upscaled its LNG imports, including the provision of RLNG – or equivalent piped gas volumes – to Ukraine. Poland still maintains a transit contract with Russia.

Ukraine itself has historically been the most important transit route for Russian gas. But diversification of Russian transit routes into Northern and south-eastern Europe, as well as European diversification of supply sources in recent years, has diluted the route's critical importance and many European markets have become comfortable with sourcing gas – from Russia and elsewhere – that bypasses Ukraine.

In part, this has been due to the EU's response to the previous stoppages in gas supply from Russia. Among other measures, this saw the bloc commit to making significant investments in cross-border infrastructure aimed at developing robust interconnections between neighbouring markets, strengthening the region's supply flexibility.

In part, that has also supported Ukraine as it has steadily integrated into the European gas market – expedited in recent years following the 2014 annexation of Crimea and the halt in direct imports from Russia since 2015. This has seen reverse flows between Ukraine and Hungary, Slovakia and Poland, and in periods of oversupply, Ukraine's large underground storage capacity has also been increasingly used by European traders.

Indeed, the current crisis, is likely to renew European assessment of **underground storage** needs, with gas storage likely to be seen more as a strategic resource, which would see an increased regulatory approach to ensure its use in the face of a market approach, which has often failed to incentivise storage use.

The region most exposed to Ukraine transit volumes is **Southeast Europe**. Markets here include Italy, Hungary, Austria, Croatia, Slovakia, Czech Republic and Slovenia. And while these markets have seen recent diversification in their own supply, including piped gas from Azerbaijan and new LNG import capacity in Croatia, it is unlikely to be sufficient to offset significant constraints in Russian pipeline flows. In the short term, the region can probably mitigate the worst impacts of reduced Russian supply, potentially by calling upon the EU's solidarity mechanisms that come into effect in the event of an extreme gas crisis – although these have never been seriously tested. But through the medium term, the affected markets will have to commit – politically and financially – to significant infrastructure development and long-term contracts with alternative gas and LNG suppliers to account for reduction in Russian supply.

Could Japan's Fukushima nuclear disaster provide a roadmap for Europe's gas markets?

In the months and years following the Fukushima nuclear incident of March 2011, which saw Japan's entire nuclear fleet shut down, LNG demand grew significantly to fill the gap.

We saw an initial rapid diversion of LNG cargoes globally to meet the immediate increased demand. This was followed by a huge structural shift in LNG trade. In 2010, Japan consumed 71 mmt; in 2011 this grew 11% to 79 mmt. In the first full year following the nuclear meltdown, it was 88 mmt – some 24% higher than pre-Fukushima levels. Most of the additional volumes were met by existing liquefaction – rather than any new production.

Immense political and corporate cooperation, backed by long-term contracts and more than a little goodwill from suppliers saw the biggest restructuring of LNG trade flows the market has ever seen.

Potentially, until now. Unlike, the majority of Japanese contracts, though, European contracts are largely flexible, meaning sellers and producers aren't necessarily committed to delivering to Europe. This would require a shift in buying practice from consumers, possibly facilitated by regulatory or policy support.

In the longer term, too, it would necessitate European buyers becoming comfortable once again with committing to longer term contracts to support new liquefaction.

It would likely also require additional import infrastructure. A number of expansion projects have recently been committed to in Northwest Europe, but these are not scheduled to come online for a number of years. However, in the near term, we could potentially see the procurement of an FSRU to support rapid increase of LNG import capacity.

New liquefaction itself usually follows an arduous path of a number of years to final investment decision stage, followed by at least four years of construction. Brownfield supply, though, can come online sooner.

Going forward, it is likely to be political decisions just as much as the market, that influences the supply-demand dynamic and pricing environment. Fukushima helped instigate a boom in new liquefaction through the middle of the last decade and it is likely the current situation will be extremely bullish for LNG in the same way.

A refreshed policy approach may also see some revision to Europe's indigenous production expectations.

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