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War in Ukraine will impact long-term EU energy policy

Project Finance



Scope Ratings

The profound impact the Russia-Ukraine war has already had on European energy markets will have a knock-on impact on long-term EU policies for energy infrastructure and architecture.

Gas prices, and as a direct consequence, power prices in Europe were already high; the sharp increase starting in the second half of 2021 due to the combination of demand rebound and various supply constraints. Among supply issues, reduced deliveries from Russia during 2021 played a part in creating a tight gas market. Before the war began, the expectation was for a degree of price moderation once seasonal winter demand eased.

The unsurprising increase in gas prices after Russia's invasion reflects concerns about a potential severe reduction in the supply of Russian gas to Europe, especially during a period characterised by high restocking needs.

Figure 1: Natural gas prices (TTF, April 2022 delivery, EUR/MWh)



Source: Macrobond, ICE, Scope

No direct supply impact from Nord Stream 2 suspension but transit through Ukraine remains necessary

Germany's suspension of the certification process for the Nord Stream 2 pipeline as part of the first wave of measures, will not have a direct impact on Gazprom's ability to supply gas to Europe, because existing pipeline capacity is sufficient to meet demand. But if there is disruption to any of the major existing pipeline routes, most notably the Ukrainian network, the remaining routes would have insufficient replacement capacity to fill the gap.

Russia has been consistently reducing gas exports through Ukraine (transfer points to Poland, Slovakia and Hungary, see Figure 2 below), and in 2021 shipped less than 40bcm, which is well below its nameplate capacity of about 100bcm. Nordstream 1 to Germany (55bcm), as well as Turkstream (31.5bcm) and Bluestream (16bcm) to Turkey are running near maximum capacity. Although the Yamal pipeline, which runs through Belarus and Poland, has seen reduced deliveries since October 2021, on an annual level its 33bcm total capacity would also be insufficient to replace Ukraine.

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Figure 2: Russian pipeline routes



Source: Scope, S&P Capital IQ

The Turkstream pipeline, which became operational in 2020, provides an alternative supply route to Southeast European countries. In October 2021 Croatia and Hungary also started to receive gas from the southern route rather than from Ukraine. Together with TurkStream, from Gazprom's perspective the completion of Nord Stream 2 would have meant additional capacity to Central Europe and thereby Ukraine no longer representing a crucial link.

Figure 3: Ukraine transit volumes (in mcm/d)



Figure 4: Country breakdown (in bcm, 2021)



Source: Scope, Macrobond, Gazprom

Source: Scope, Oxford Institute for Energy Studies

Turkstream pipeline an alternative supply route to Southeast Europe



Europe would struggle to cope with major supply disruption but the likelihood remains low

While the United States has banned the import of Russian oil, LNG, and coal, and the UK announced the phase-out of energy imports from Russia by the end of 2022, the European Union's sanctions have fallen short so far on impacting Russia's energy exports but the EU did announce an ambition to significantly cut its natural gas imports from the country. Crucially US financial sanctions included a four-month waiver on energy-related transactions. Russia continues to deliver natural gas and other key commodities meeting existing contractual obligations, and it would not be in its economic interest to act otherwise. Nevertheless, since Q3 2021, Gazprom has significantly reduced uncontracted hence discretionary gas volumes offered on its electronic sale platform (ESP). That is likely to continue.

Full scale supply disruption can Considering the widely reported mutual dependency between Europe and Russia for gas be avoided supplies and government revenues, respectively, at this point our base-case scenario remains that full scale supply disruption can be avoided, either by way of sanctions or Russia halting its gas supply to Europe to exert political pressure.

> Nonetheless, if there was a complete disruption to gas supplies without significant demand curtailment, Europe would not be in a position to find an alternative to Russia in the short to medium term at least. Russia met roughly 35% of Europe's gas demand in 2021 (including about 20bcm LNG on the top of the 142bcm pipeline gas).

There is not enough LNG available on the global spot market to fill such a massive gap and enable Europe to meet demand for 2022/23 winter, especially considering the current low level of gas storage. Most LNG is shipped under long-term contracts mainly to Asia. China, Japan, South Korea and India combined represent 60% of the purchases in the spot LNG market. LNG market fundamentals will not change significantly until 2025, when more meaningful capacity will come online, primarily from Qatar, the US, and Australia.

It is also worth noting that LNG from Russia accounted for 17% of Europe's total LNG imports in 2020. These volumes can be disrupted even in the absence of sanctions on energy flows, as a result of the ban of Russian vessels from European ports delivering gas from Yamal LNG. The UK has already implemented a ban on Russian vessels and the EU is also considering such move.

Restricted supply for some period of time is a more plausible scenario, either because of physical damage to Ukrainian delivery routes because of the war, or Russia putting pressure on European markets while meeting its existing supply commitments. In the case of a halt to Ukrainian routes, the countries most exposed would be Slovakia, Austria, Slovenia, and Italy.

The likelihood of major physical damage that would completely suspend exports through Ukraine for a prolonged period of time is considered remote given the already low level of utilisation and the vast size of the network with various alternative routes; for example two major pipeline routes in Eastern Ukraine where fighting may represent risk, as well as connection between Belarus and Western Ukraine.

European gas infrastructure will require major investments

The overall availability of natural gas is not the only problem Europe faces. Variations within Europe in terms of exposure to Russian piped gas and potential access to additional LNG sources represent logistical challenges. Although historically there has been some spare LNG regasification terminal capacity on a European level (utilisation

Insufficient LNG available in spot market

Logistical challenges from uneven access to LNG



increased significantly in the beginning of the year), regasification terminals are distributed unevenly, which hinders LNG access to countries potentially most impacted.

For example, almost a third of Europe's total terminal capacity is located in Spain (followed by the UK and France) with 61bcm regasification capacity. Facilities have relatively low average utilisation. But natural gas fed into the Iberian peninsula would face bottlenecks at the French border, where transmission capacity is limited to 7.2bcm.

Germany, the largest consumer of natural gas in Europe, does not have its own regasification terminal. At the end of February, the German Chancellor approved the construction of two new LNG regasification terminals on its North Sea coast. The fast-tracked revival of these long-discussed import terminals serves as a representative example for the beginning of a broader shift in focus for European gas strategy.

Figure 5: LNG import terminal capacity



Source: Scope, ENTSO-G Transparency platform

Dependency on Russian gas has long been recognised as a political and economic risk to Europe, but its price competitiveness made it more difficult for governments to commit to significant investment in infrastructure and procure alternative gas supply at a premium. Even if Russian gas supply remains broadly uninterrupted during this crisis, this political perspective is likely to change.

On one hand, the renewable build-out is likely to accelerate, but natural gas will remain important both for heating, industrial use, and for reliable and flexible power generation fuel as part of the energy transition. Key infrastructure investment areas that can potentially gain more support are LNG regasification terminals, LNG vessels, gas storage facilities, the improvement of cross-border transmission capacity; and the expansion of capacity for alternative import pipelines (e.g. Trans Adriatic Pipeline capacity expansion).

These investments require political support both for getting the necessary permits and licenses, and for regulated assets to be able to recover investment costs. It remains to be seen if the EU can drive a co-ordinated gas strategy that enjoys support from most member States, especially considering previous debates about the role of natural gas. But now would be the appropriate time to encourage investment in midstream infrastructure as completion of such projects could broadly coincide with a much better supplied LNG market as commented above.

Renewables built-out likely to accelerate but gas will remain important



We also expect the review of relevant regulations to strengthen security of supply. For example, the European Commission has announced a legislative proposal that will require gas storage operators to fill their facilities to at least 90% by October each year, in order to avoid the situation observed during the 2021/22 winter where Gazprom left its European storage facilities under-utilised.

Improving European security of supply and reducing Russian reliance will require significant investments across the natural gas value chain, and it will come at a cost; but there seems to be political momentum at present for the implementation of such a shift in gas strategy.

Power prices to remain higher for longer and benefit renewables

As highlighted in our 2022 Project Finance Outlook, power prices in most European markets follow closely the price of natural gas. Gas prices are likely to remain elevated for the rest of 2022 and beyond reflecting global and regional supply tightness and pricing in geopolitical risks. As Europe looks to shift away from Russian gas over time, more expensive alternative supply options will add pressure to gas-fired power plants' feedstock bills. We expect, therefore, that gas prices and thus power prices will remain high for a more extended period of time.

In countries with significant coal-fired capacity such as Germany and Poland, it would be in principle possible for coal-fired plants to remain on the grid for longer and operate at higher load factors if the relative price of coal remains supportive. However, a large portion of coal imports to Europe come from Russia (66% in 2020 according to the IEA), which may face supply or shipping problems, or be subject to voluntary "self-sanctioning" by some buyers, even if not officially sanctioned.

Logistically, it is possible to procure alternative supply, however at higher cost, especially considering the high quality of Russian coal, which has high calorific value. The recent sharp increase in the European coal benchmark demonstrates that power generation burning coal may also represent an expensive option if the conflict continues.

Figure 6: Hard coal prices (Rotterdam, April 2022 delivery, EUR/t)



Source: Macrobond, Scope

High power prices will benefit renewable power generators and we expect to see continued investment in this space. The current price environment is not only credit positive for partially or fully merchant transactions in the project finance universe thanks to higher cash flows.

Gas prices to remain elevated in 2022 and beyond

Coal-fired plants may remain on the grid for longer but feedstock costs are also high

high power prices

Renewables will benefit from



Figure 7: German baseload power prices (April 2022 futures, EUR/MWh)

Scope would also consider high power prices as marginally credit positive for renewables projects receiving fixed government subsidies (e.g. through feed-in tariff systems) which are not directly exposed to power prices. Because the underlying economic resilience of the asset would improve and the project would potentially benefit from higher recoveries in certain impairment scenarios (e.g. surrounding a reduction in government subsidies through a retrospective change).

For greenfield renewable projects, the current inflationary environment will represent challenges as well, and may increase risks during the construction period. In light of the risk of export restrictions or supply interruption from Russia as a major exporter of base and rare metals and construction materials, there will be increased risk of construction cost overrun for greenfield projects, in particular when the project is not constructed under a fixed price EPC agreement with a creditworthy contractor.

Source: Macrobond, Scope



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