

Natural Gas: Prices in the EU are at Record Highs, But It is Not All About the War in Ukraine

BY ROBERTO CARDINALE

Abstract

The war in Ukraine is fueling the energy crisis in the EU, sparking concern for economic growth and political stability worldwide. However, war is not the only driver of the energy crisis. Its long-term causes originate in structural changes of world energy markets and the policy response to them.

The latest sabotage on North Stream I and II shows that energy is a fundamental component in the war between the Russian Federation and Ukraine. Despite the main causes of the war are geopolitical, the battle is increasingly fought also in the energy sector. This happens for a very simple reason: energy has extensive leverage in the relations between Russia and Europe, having created a deep interdependence among them. Therefore, players in the war attempt to use this tool to acquire strategic advantages.

The EU started to be dependent from Russian gas during the period of the Soviet Union, when Western European countries encouraged the realization of pipelines connecting Russian wells to European end markets. Interdependence increased in the last decades as a result of the competitiveness of Russian gas vis-à-vis supplies from other producers. As 2021, 45% of the EU total imports of gas, equivalent to 155 billion cubic meters (bcm), were supplied by the Russian Federation (IEA, 2022). Key Member States such as Germany and Italy imported from Russia up to 66% and 40%, respectively. However, from July 2021 to July 2022, imports seem to be reduced by 70%.

Reduction in supplies to Europe resulted mainly from Gazprom's deliberate cuts to countries who did not accept to open an account at Gazprombank for the conversion of euros into rubles, the new mechanism put in place by Gazprom to overcome international sanctions. However, reductions in the gas flows have been experienced also by countries who adhered to the

system of payment, either due to technical and maintenance problems caused by the sanctions, as argued by the Kremlin, or as a result of a deliberate strategy put forward by Moscow to induce EU governments to soften their diplomatic stance towards the Russian Federation in the ongoing conflict. As a result of progressive reduction of Russian gas supplies to the EU, price started to rise to unprecedented levels.

However, several elements suggest that the conflict between Russia and Ukraine is not the root cause of skyrocketing natural gas prices. The increase had already started in 2021, interrupting a long phase characterized by falling prices that culminated with prices at historic lows during the early stages of the pandemic. Already in mid-September 2021, prices in the Dutch hub TTF were around 70 €/MWh, while in October they exceeded 100€/MWh. After a new record of € 180 /MWh at the end of December, the conflict undoubtedly contributed to new increases, with a new peak of over € 200 /MWh and 300 /MWh between March and September 2022, before declining to about 100€/MWh in October.

This suggests that there is an extreme volatility of prices, which does not reflect the real levels of supply and demand, showing the existence of a structural fragility that affects the supply chains and physical flows of gas to Europe.

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Spot natural gas price trend at the TTF in €/MWh

Source: Trading Economics

Two other factors contribute to explaining these trends. One is structural and concerns the evolution of the world gas market over the last 10-15 years.

The other is attributable to the liberalization of the energy markets, which have reshuffled the previous European energy systems and their mechanisms of energy security and energy price stability.

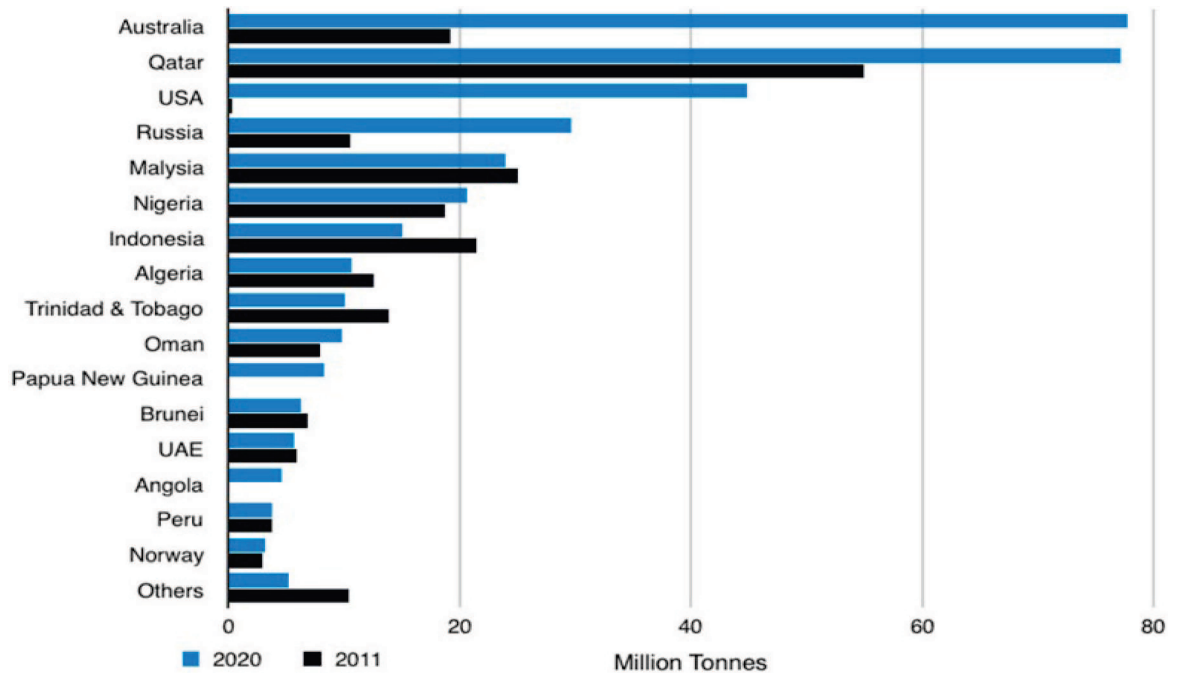
The world gas markets have undergone important changes in the last decade, starting with a reduction in supply due to a drastic

decrease in investments in oil and gas that began in 2014 and continued in subsequent years. The causes of this reduction in investments are attributable to a period of oversupply and low prices, caused also by the rise of the US as a major gas producer and exporter, but also to the policies of phase-out of hydrocarbons adopted by governments of many countries. Along with the reduction in supply, a new demand has gradually emerged, bringing together old and new consumers. The latter, particularly East Asian economies, have taken advantage of the cost reduction in the processing and transport of Liquefied Natural Gas (LNG) to meet their growing industrial consumption and diversify their energy sources.

In the face of growing international demand, EU policies have also incentivized investments in LNG, not so much to better compete with new consumers, but with the main objective of reducing dependence on current oligopolies, the Russian Federation above all, which historically supplies the EU via pipelines. In fact, while gas pipelines represent a binding bilateral commitment, LNG makes it possible to expand the diversification of suppliers. This would allow not only to increase competition between them, lowering the import price, but also to contribute to energy security.

However, while LNG mainly shows advantages in times of gas abundance, it also has some disadvantages in times of scarcity. For example, the increase in investments in LNG infrastructure in the EU and around the world has led, for obvious reasons, the pro-

ducing countries to also invest in this emerging market. The graph shows the growth from 2011 to 2020 of LNG production by the main exporting countries.



LNG production by country, 2011-2020

Source: Sassi (2022)

Growing production has initially increased competition between gas suppliers, primarily between the Russian Federation and the United States, reducing import prices. However, in the current phase of scarcity, LNG offers suppliers more alternatives for export. As a result, exporters are currently benefiting from the premiums triggered by the newly emerged competition between European and East Asian countries. Therefore, supplies to the EU that were traditionally guaranteed by pipeline are being questioned, driving up prices.

The policy of physical (infrastructural) divestment from traditional supply links, which in the EU took place by reallocating public financing towards LNG (and renewables projects) to the detriment of gas pipelines, was accompanied by a similar policy of phase-out at the contractual level, and particularly of long-term import contracts. The transition to flexible contractual forms, initially supported by EU energy policy and opposed by major suppliers, has made decisive progress. Although short-term or spot contracts have increased competition within the EU market, they have also contributed to exposing EU countries to international competition for the procurement of gas supplies that long-term contracts instead helped to limit. Therefore, short-term or spot contracts have also contributed to rising prices.

In this moment of emergency, the LNG plants active in the EU are playing a fundamental role in compensating for any reduction or cut in supplies, especially Russian supplies. Their role will increase consider-

ing the political will to progressively phase-out from Russian gas. However, in the long term it is not certain that the prevalence of LNG supplies over those via pipeline (currently existing also from routes alternative to those from Russia) is the optimal solution. Because it is true that in times of oversupply the availability of LNG plants makes it possible to purchase volumes of gas at discounted prices in the spot markets. But it is equally true that in the event of a contraction in supply, as in the current period, LNG can contribute to erode advantageous positions acquired over time thanks to geographical proximity, industrial collaborations and energy diplomacy. This is the case of the EU countries, which, thanks to these factors, have traditionally benefited from security of supply and price stability downward (Cardinale, 2019), despite the scarcity of domestic production.

For this reason, it is important to have a portfolio of infrastructures and contracts that is diversified and that considers the sudden changes in international markets, triggered both by factors strictly connected to the energy sector but also to the broader geopolitical context that is currently in rapid evolution.

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