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News Analysis

Phasing Out Russian Gas was Perhaps a Correct Political Decision but is not Painless For Europe



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*By Spyros Paleoyannis**

Introduction

After more than 50 years of continuous supply, Russian gas flows to Europe via Ukraine stopped on January 1st, 2025. As expected, the Russian invasion of Ukraine inevitably resulted to the non-renewal of the Gas Transit Agreement between the two warring countries.

The Ukrainian gas transportation corridor had been developed during the Cold War era, as an attempt not only to create an economic relationship, but also as a “real-politic” mean to promote peace and regional cooperation between Europe and the Soviet Union. For decades, both parties enjoyed the fruitful results of this mutually beneficial approach: Europe had access to a cheap gas source to fuel its economic growth and the USSR initially and then Russia secured significant annual revenues stream due to gas exports.

Not surprisingly, Europe has been heavily and very often criticized for its high dependency on Russian gas (nearly 40% in 2021), especially by the US which argued that Europe should be much more worried about its energy security since Russia could, and in some cases already did, use gas as a weapon against the West.

The New European Gas Landscape

Today, amid the Russian-Ukraine war and following Europe’s political reaction to phasing-out Russian gas, the situation in the European gas market (EU plus UK) has become quite different. Gas demand dropped from 489 bcm in 2021 by an impressive amount of 100 bcm (!!!) to only 390 bcm in 2024, while (non-storage) gas imports fell from 421 bcm (out of which 154 bcm of Russian origin) to only 305 bcm the same period.

It is worth mentioning that the most important change referred to the structural gas supply and flow pattern: in 2021 Europe imported 353 bcm of piped-gas and 95 bcm in the form of LNG, while in 2024 imported only 191 bcm of piped-gas (mainly from Norway) and 114 bcm LNG (mainly from the US). In other words, as correctly noted by Timera Energy, “*today gas arrives in Europe from the west (LNG) and flows east*”, exactly the opposite till 2021 (1). In 2024, Russian gas exports to Europe via both the Ukraine route and the Turkish Stream were just 28 bcm, 80% less compared to 2021 ones. On the contrary, Russian LNG exports increased the last years and reached 21 bcm in 2024 (from 16 bcm in 2021).

Another important structural change has to do with the pricing mechanisms that are included in the supply contracts for gas deliveries to Europe. Regardless of whether these contracts refer to piped gas or LNG and/or to long-term or spot ones, their vast majority (80%) has now price formation mechanisms indexed to TTF forward curves. That is particularly important because of TTF's high sensitivity and volatility, not only to market fundamentals and signals (which are acceptable under normal market operation conditions) but also due to other externalities (i.e. geopolitical instability, price manipulation by certain non-gas players, etc.).

Figure 1: Major Gas Pipelines from Russia and Caucasus to the EU



Source: DW

The New Reality in the European Gas Supply

The end of transit via Ukraine on Jan 1st is going to cause a further 55% fall of the Russian gas flows to Europe in 2025, since the only pipeline in operation will be the Turkish Stream. Although the volume of 15 bcm of piped gas transported via Ukraine in 2024 represents only a marginal 5% of the total gas imports and therefore doesn't pose an immediate supply security risk for Europe, its loss will physically tighten the market and increase its LNG import requirements to substitute it.

However, despite the EU's official assurances, the implications due to the Ukrainian transit cessation might prove to be much more important for all the parties involved for quite different, however, reasons for each of them:

- for Ukraine because it will lose about \$0,8 billion annual transit fees, mainly because the gas transit cessation will cause a loss of substantial revenues to its enemy Russia

- for Russia because the above loss is estimated to reach \$6,5 billion annually from gas not sold to Europe (2) and
- for Europe because of its limited supply-side flexibility from pipeline imports in combination with the decline of domestic gas production, as well as because of the increased gas withdrawals from underground storage facilities (3).

Let's dive a little bit deeper into the latter issue because of its direct importance to European energy security and competitiveness as well.

Given that:

- the Norwegian piped gas supplies being very close to the country's maximum production capacity (~ 350 MMcm/day),
- the Azeri gas already supplies slightly above the maximum nominal capacity of the Trans Adriatic Pipeline (33 MMcm/day) and
- only marginal flexibility can be offered by the North African pipelines (mainly to Italian and Spanish Markets), either due to the pipelines' capacity constraints or due to gas production issues in Algeria and Libya (4),

the end of Russia-Ukraine gas transit agreement will further limit gas supply flexibility since deliveries will be reversed only via the Turkish Stream, to South-Eastern and Central European markets. The most vulnerable country due to the Ukraine transit cessation is Slovakia and secondarily Austria, Hungary Czechia and Italy (5).

Figure 2: An increasing amount of gas is delivered to Europe via LNG



Source: IEA

In addition, domestic gas production in Europe is continuously declining over the last several years, and thus cannot offer any noteworthy flexibility, especially after the stoppage of gas production at the Dutch Groningen gas field.

Thus, Europe's dependence on LNG imports (mainly from the US) is set to increase further in the years to come. To avoid potential energy security issues and gas supply shocks due to increased global competition in the race to secure LNG cargoes, European buyers might be forced to enter long-term contracts with US and/or other LNG producers and thus to pay higher prices, while, at the same time, they will lose the possibility of taking advantage of opportunities in the global spot market.

Implications for European Economic Security, Competitiveness, Energy Transition and Society

The market has already discounted this 15 bcm loss of gas supply-side flexibility from the Ukrainian corridor. This gas was the "marginal pricing" for the European gas supply-demand equilibrium and along with some other concurrent circumstances prevailing this period (outages in Norwegian gas production, relatively low level of gas storage and cold and «Dunkelflaute» weather conditions in Northern Europe) the TTF forward prices increased dramatically by more than €25/MWh during the second half of 2024 and the first months of 2025, exceeding €55/MWh in the week which started on February 10.

As has been repeatedly and persistently underlined by several energy analysts and high-level industry executives (6), affordable energy costs are key for both economic security and competitiveness. The bitter reality for Europe is that electricity and gas prices are fourfold to the ones paid by its competitors, i.e. in the US. So, gas prices spike (also because of the end of the Russian gas transit via Ukraine) will further worsen the competitiveness of the European industry and the cost of life for the European households, while, simultaneously, will put additional pressure on the Eurozone's financial performance in favor of the US, China and other global competitors.

To prevent a further worsening of the situation, the EU should urgently find a way to balance its economic growth and energy transition targets by adopting effective industrial and decarbonization strategies to support both its competitiveness and domestic production, as well as a realistic transition roadmap to carbon neutrality. Otherwise, today's soaring gas prices would inevitably lead to large-scale relocations of industrial plants outside Europe and to cancellation, or at least a delay, in the EU's climate crisis mitigation plans because of consumers' choice to shift to cheaper but more polluting fuels wherever this is possible (e.g. in transport fuels, in industrial uses, etc.).

Furthermore, it is worth mentioning that apart from the above-mentioned economic and environmental risks, there are also other associated social, political and geopolitical risks which should also be tackled simultaneously. Greece cannot be an exemption in avoiding any of the above-described implications from the new reality in gas supply and flow patterns in the new gas market landscape. Although the country has succeeded to develop sufficient

crucial and of strategic and regional importance gas supply infrastructure, able to support well-differentiated gas imports, it has still both a high dependence on Russian gas, as well as a very high share of gas used for power generation. In addition, considering the general socioeconomic situation of Greece, along with its energy sector pathogens and vulnerabilities, it must be stressed that high energy costs are seriously undermining the country's economic security and competitiveness, creating substantial risks for its industrial and agricultural sectors as well as for its households' wellbeing.

**This analysis was contributed by Spyros Paleoyannis, an IENE Partner, Industrial Chemist, MBA, Managing Partner at MEDGAS & MORE SERVICES LTD and Former Vice Chairman and CEO at DEPA SA*

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