

# The end of Russian gas transit via Ukraine and options for the EU

The EU should seek a common position on the upcoming end to the contract governing Russian gas transit through Ukraine

Ugnė Keliauskaitė, Georg Zachmann

On 1 January 2025, a major contract governing the transit of Russian gas through Ukraine will end, with significant implications for remaining Russian gas exports to some European Union countries. Despite the war in Ukraine, gas has continued to flow through a pipeline via the country and there has been no significant disruption to these gas supplies so far, even though Ukraine as part of its incursion into Russia's Kursk region has taken control of the only active metering station for the entry of Russian gas to Ukraine, at Sudzha (Figure 1) ([Łoskot-Strachota et al, 2024](#)).

The end of the transit contract will mark an important shift because gas via Ukraine governed by the contract currently accounts for half of Russia's remaining pipeline gas exports to the EU and a third of total Russian gas exports, including LNG (Table 1). The impact will be felt especially in Austria, Hungary and Slovakia, for which the Ukrainian transit route met 65 percent of gas demand in 2023 (IEA, 2024a). Overall, the share of Ukrainian transit in EU gas imports has dropped from 11 percent in 2021 to about 5 percent.

**Figure 1: Ukrainian gas transit**



Source: Bruegel on ENTSOG

**Table 1: EU gas imports, 2021-2024**

TWh	2021	2022	2023	2024*
Russian gas via Ukraine	409	193	140	112
Other Russian gas pipeline imports	1,080	472	140	115
Russian LNG imports	145	195	183	150
<b>Total Russian gas imports</b>	<b>1,634</b>	<b>860</b>	<b>463</b>	<b>377</b>
<b>Total gas imports</b>	<b>3,856</b>	<b>3,751</b>	<b>3,250</b>	<b>2,072</b>
<i>Ukrainian transit as % of EU imports</i>	<i>11%</i>	<i>5%</i>	<i>4%</i>	<i>5%</i>



Source: Bruegel EU natural gas import tracker. Note: \* = first eight months of year. The only other active pipeline through which Russian gas continues to arrive in the EU is Turkstream, which carries gas across the Black Sea to Turkey and on to Bulgaria, Serbia and Hungary.

The EU has a non-binding goal of stopping all Russian gas imports by 2027 (European Commission, 2022). The end of Ukraine transit could speed up this decoupling, and would also imply a loss of \$6.5 billion annually for Russia, unless it can redirect these flows to other pipelines or LNG terminals<sup>1</sup>.

However, Ukraine stands to lose fees equivalent to about 0.5 percent of GDP from ending the transit contract and risks undermining its strategic role as an energy partner for Europe (for example, as a provider of gas storage). Moreover, Ukraine's gas infrastructure, which is so far largely undamaged<sup>2</sup>, could become a military target if Russian gas is no longer in Ukraine's pipelines. While independent stress tests have confirmed the reliability of Ukraine's gas infrastructure in extreme scenarios, including potential attacks<sup>3</sup>, the risk of targeted attacks remains a serious concern, especially ahead of winter.

Furthermore, any stop to gas transit via Ukraine is opposed by Hungary, Slovakia and partially Austria for fear of disproportionate economic losses in such a scenario. To avoid higher prices and gas supply disruptions in 2025, those countries<sup>4</sup> want to maintain some gas flows via Ukraine<sup>5</sup>. They may fear that a stop now will end privileged access to Russian gas forever, potentially putting them at a competitive disadvantage relative to other EU countries.

In this context, we first set out some details of the current transit contract, and then discuss three scenarios:

- Scenario 1: Replacing Russian supplies to central-eastern Europe with LNG;
- Scenario 2: Replacing 'Russian' supplies with 'Azeri' gas via Ukrainian pipelines;
- Scenario 3: New type of gas agreement between the EU, Ukraine and Russia.

## How does Ukraine transit work?

Ukraine's gas pipeline system connects Russia, Poland, Slovakia, Hungary, Romania and Moldova. Gas flows via Ukraine into Poland and Romania have stopped (Table 2). Slovakia is now the main entry point into the EU. Along with Slovakia, Austria, Hungary and Moldova are now the main gas flow recipients via Ukraine.

**Table 2: Breakdown of Russian gas entry into the EU via Ukraine, 2021-2024**

TWh	2021	2022	2023	2024*
Slovakia	297	176	135	106
Poland	44	11	6	6
Hungary	65	3	0	0
Romania	4	4	-	-
<b>Total Ukrainian transit</b>	<b>409</b>	<b>193</b>	<b>140</b>	<b>112</b>



Source: Bruegel EU natural gas import tracker. Note: Poland no longer receives Russian gas; flows in Table 2 might be storage reexports. \* = first eight months of year.

Under the current transit contract, Russia's Gazprom was obliged to pay Ukraine for the transit of 65 billion cubic metres (bcm) (~670 TWh) of gas in 2020, dropping to 40 bcm (~412 TWh) per year until 2024, whether or not Gazprom actually shipped the agreed amount. In fact, flows in 2024 have been around 44 million cubic metres per day, which is equivalent to 16 bcm/year – significantly below the 40 bcm/year contracted amount (Figure 2). Transit fee revenues for Ukraine amounted to \$1.2 billion in 2022 and \$0.8 billion in 2023, or around 0.5 percent of Ukraine's GDP<sup>6</sup>.

**Figure 2: Russian gas volumes transiting Ukraine, 2020-2024**

Source: Bruegel on Green Deal Ukraina, ENTSOG, Columbia CGEP



## Gas transit via Ukraine: three future scenarios

### ***Scenario 1: Replacing Russian supplies with LNG***

The end of the gas transit contract implies that from 1 January 2025, the EU would need an additional import of 140 TWh annually from other sources. Most Russian gas deliveries to Austria, Hungary and Slovakia are under long-term contracts between their major gas companies and Gazprom; these are set to expire years into the future (Table 3). However, the stopping of Ukrainian transit would not pose an immediate supply security risk to Austria, Hungary or Slovakia, for three reasons.

**Table 3:** Gas demand, storage and Gazprom contracts in Slovakia, Austria and Hungary, 2023

	Total gas demand, TWh	Gas in storage TWh (% full)	Gazprom contract end dates (gas company)	Annual gas contract quantity with Gazprom, TWh
Slovakia	46	35 (95%)	2028 (SPP)	67
Austria	72	94 (93%)	2040 (OMV)	62
Hungary	88	64 (90%)	2036 (MVM)	10



Source: Bruegel, Energy Institute (2024) and CGEP. Note: Gas storage as of 29 September 2024. Hungary's total contracted volume is 46 TWh, but only 10 TWh of it is delivered through the Ukrainian transit corridor (via Slovakia and Austria).

First, LNG terminals in Poland, Germany, Lithuania, Italy, Croatia and Greece, new floating storage regasification units in Germany and Italy (IEA, 2024a) and the potential expansion of the capacity of the Turkstream pipeline that runs across the Black Sea from Russia to Türkiye could replace the lost volume.

Second, there is enough infrastructure for transmission system operators to transport replacement gas to Austria, Hungary, and Slovakia. For example, Czechia claims it has sufficient gas network capacity to support other countries and mitigate potential disruptions if gas flows via Ukraine cease<sup>7</sup>.

Third, storage capacity is at time of writing 95 percent full ahead of winter. Austria has enough gas stored to cover its entire domestic gas demand (Table 3). Additionally, Germany's decision to not charge a high gas storage fee on transits would help avoid a significant rise in regional gas prices in the event of a complete cutoff of Russian gas (AEA, 2024).

This scenario in which the currently transited volumes are replaced by LNG imports from other countries might be the most 'clean cut' option for the EU. However, pressure from the countries that want to maintain gas transit via Ukraine in some form – potentially backed up with the threat that they could block EU financial support to Ukraine – makes achieving such a solution difficult. The loss to Ukraine of transit revenues could also be an issue.

## Scenario 2: Replacing Russian supplies with Azeri gas

Ukraine could replace transiting 'Russian' gas with 'Azeri' gas<sup>8</sup>. Were that to happen, exchange deals would be the most viable mechanism in the short run because of capacity issues related to pipeline transport of gas from Azerbaijan. Russia would continue to supply gas (labelled 'Azeri gas') to Ukraine, while Azerbaijan would receive gas from Russia (labelled 'Russian gas'). In simple terms, there would be no change in the gas flows: EU traders would buy gas from Azerbaijan, which would buy gas from Russia.

Any such arrangement would have several limitations. Azerbaijan does not produce enough gas to fully replace Russian flows to Europe in the short term. Although Azerbaijan has an agreement to double its gas exports to the EU to at least 200 TWh by 2027<sup>9</sup>, its gas production has not increased significantly in recent years, while domestic consumption is rising (Table 4). Without long-term contracts from European firms<sup>10</sup>, Baku cannot secure the financing to increase production in the Caspian Sea<sup>11</sup>. Countries such as Slovakia and Hungary might consider such contracts once their agreements with Gazprom end (Table 4), but this is not guaranteed.

**Table 4: Azerbaijan's gas production, domestic consumption and exports to the EU, 2021-2023**

TWh	2021	2022	2023
Export to EU	91	126	127
Domestic consumption	132	140	156
Production	328	351	367



Source: Bruegel EU natural gas import tracker and Energy Institute (2024).

The price of exchanged Azeri gas should remain similar to the previous price of Russian gas, provided Azerbaijan does not impose extra levies. The exchanged Russian gas could be sent instead of Azeri gas to Azerbaijan's domestic market or to Türkiye (Corbeau and Mitrova, 2024).

However, purchasing Azeri gas only to exchange it for Russian gas would not result in significant EU progress toward reducing reliance on Russian energy supplies, and

Russia would still be able to cut supplies, as it has done in the past. Moreover, such a deal could be used as a precedent for supplying such 'Azeri' gas via other routes to the EU, further increasing dependence on Russian gas.

The involved parties might be able to live with such a 'sneaky' deal, but it would expose a massive degree of cynicism and by its very nature would encourage opacity and ultimately corruption.

### **Scenario 3: A new agreement between the EU, Ukraine and Russia**

EU traders could buy Russian gas at the Russian-Ukrainian border at Sudzha and book transit capacity through Ukraine's pipeline network infrastructure to deliver 'their' gas to European countries. Before the war, Ukraine pushed for such an EU-regulation-aligned approach. But under the current circumstances, it is unclear if it would still be in Ukraine's favour.

Commercially, the state-owned Gas Transmission System Operator of Ukraine requires a minimum capacity of around 27 mcm<sup>12</sup> per day to operate. The daily technical capacity of Ukrainian transit is much higher (244 mcm per day) than what is being booked (72 mcm) or actually transited (40-50 mcm). As countries such as Italy and Germany have successfully reduced reliance on Russian gas, and Austria continues to diversify away from Russian gas, it is unlikely that future bookings will reach current levels, raising questions about the sustainability of high transit volumes under new agreements.

In terms of price, the Russian marginal supply cost is substantially lower than current LNG prices. Depending on its pricing strategy, Gazprom could offer the most competitive option for European consumers.

However, this scenario would extend Europe's reliance on Russian gas, which would be favourable for Russia and at least initially appealing for Slovakia, Hungary and Austria. This would imply that Russia would continue to have leverage over European consumers and would limit the scope for future sanctions against Russian gas imports.

## Recommendations

To prevent divisions, the EU should seek a common position on the ending of the current contract that governs Russian gas transit through Ukraine. The main elements should include: 1) maintaining some level of European control over member states' remaining energy dependence on Russia; 2) secure and non-discriminatory access to gas for the most affected member states; 3) any new deal should not benefit Russia relatively more than Ukraine.

To ensure the EU can achieve the most favourable terms, it needs to optimise its negotiating position. This requires preparing for a full supply disruption by filling storage in Ukraine (currently only 25 percent full), as EU storage is already full (95 percent), making arrangements to give the most vulnerable countries access to European gas markets and pipeline capacities at fair terms, implementing EU control over pipeline imports from Russia (eg via a sanctions regime) and providing an EU negotiator with a strong mandate.

Based on these criteria and preparations, a scenario is conceivable in which very low-priced gas from Russia continues to flow to central European countries. Ukraine will have to apply European rules to this transit and the EU will jointly determine the volumes now and in future, with the aim of quickly phasing out any risk associated with dependence on Russian supplies.

To reduce dependence on Russian gas and break long-term contracts with Russia, the EU should introduce EU-wide sanctions on Russian gas imports<sup>13</sup>. These sanctions should include an import tax<sup>14</sup> and volume limits to restrict the total amount of Russian gas entering the EU market. To ensure that the countries still dependent on Russian gas agree to sanctions pushed by the EU, these countries would still receive limited volumes of Russian gas under EU control, ensuring compliance with the sanctions. Lastly, a significant share of the economic rent from this transaction, as well as revenues from sanctions on Russian gas, would be given to Ukraine.

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# Annex

## *Less-impacted countries*

**Slovenia's** Russian gas imports dropped to nearly zero after gas company Geoplin's contract with Gazprom ended on 1 January 2023. Since 2022, Slovenia has sourced gas from Algeria and Azerbaijan, and has secured additional capacity to import LNG from Croatia's Krk (starting in 2027). **Croatia's** imports from Russia are now minimal as the country shifted to non-Russian LNG and own production. **Italy's** primary gas sources include Algeria, Azerbaijan and LNG, accounting for 74 percent of the country's supply. Only 9 percent of Italy's gas was supplied by pipeline imports from Russia in the first half of 2024. But to support its neighbours, Italy would need to transport gas to Slovakia and Austria; this quantity could be sourced from Ravenna-LNG, available from 2025, and the existing pipeline from Tunisia<sup>15</sup>.

## *Landlocked countries*

**Austria** does not expect to experience a shortage of gas when Russian gas transit via Ukraine stops (AEA, 2024). Austria could import from Germany (Oberkappel entry point) and is already further expanding its infrastructure to ensure gas supplies<sup>16</sup>. However, this would not close the gap, and send-outs to Hungary would decline, while flows to Italy would stop. When all imports via Ukraine are stopped, Austria will need to import from Italy (Arnoldstein-Tarvisio point)<sup>17</sup>.

While **Hungary** could obtain gas via Turkstream, the Kiskundorozsma-2/Horgos entry point would need to operate continuously at a maximum capacity. If Italy could direct enough flows to Austria, Hungary could get additional gas through reverse flows from Austria (Mosonmagyaróvár point). The Trans-Balkan pipeline is no longer a viable route because significantly increased transmission tariffs in Romania and Moldova make it too expensive to use. Austria would also not be able to transit gas to Hungary until Croatia upgrades its LNG-import capacity during 2025.

**Slovakia** would have fewer alternatives as it would find itself further down the gas flow chain. Gas could be delivered from Czechia (Lanzhot entry point) or Poland (Vyrava interconnection point, which currently lies idle). However, since additional regasification in Poland is only coming in 2025, Slovakia could even need to arrange a reverse flow from Austria or Italy, or receive gas through the relatively small LNG

terminals in Germany. Supplies would depend on whether Austria, Czechia and Hungary have enough gas to satisfy their own demands.

## Endnotes

- 1 Russia's Gazprom also has an incentive to maintain gas flows to the EU to support the company's financial recovery after a record net loss of \$7 billion in 2023. See Vladimir Soldatkin and Oksana Kobzeva, 'Gazprom plunges to first annual loss in 20 years as trade with Europe hit', Reuters, 2 May 2024, <https://www.reuters.com/business/energy/russias-gazprom-swings-into-69-....>
- 2 Despite attacks on storage facilities, there has not been significant disruption to gas flows.
- 3 See Energy Community press release of 31 August 2023, 'Winter is coming: Reviewing Ukrainian gas storage and transmission systems under stress scenarios', <https://www.energy-community.org/news/Energy-Community-News/2023/08/31....>
- 4 The Economist, 'The West still needs Russian gas that comes through Ukraine', 4 September 2024, <https://www.economist.com/europe/2024/09/05/the-west-still-needs-russia....>
- 5 Reopening the Yamal pipeline through Poland or opening the intact line of Nord Stream 2 are politically inconceivable as it would imply stepping back from limiting Russian gas imports. The capacity of the TurkStream pipeline is largely maxed out.
- 6 Sergiy Makogon, 'The Russian gas transit to Europe via Ukraine must end in 2025', Euractiv, 8 April 2024, <https://www.euractiv.com/section/energy-environment/opinion/the-russian....>
- 7 Though starting from 1 October 2024, pipeline capacity between Germany and Czechia has been reduced; see John Ainger, 'Germany Accused of Hoarding Gas Meant for Czech Republic', Bloomberg, 18 July 2024, <https://www.bloomberg.com/news/articles/2024-07-18/germany-accused-of-h....>
- 8 There have been rumours to this effect though there have been denied. Reuters, 'News outlet backs away from report on Azerbaijan-Ukraine gas transit deal', 20 September 2024, <https://www.reuters.com/business/energy/ukraine-agrees-transit-azerbaij....>
- 9 See European Commission press release of 18 July 2022, 'EU and Azerbaijan enhance bilateral relations, including energy

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12 Aura Sabadus, 'ICIS EXPLAINS: What will happen after Ukraine's gas transit contract expires?' ICIS, 18 March 2024, <https://www.icis.com/explore/resources/news/2024/03/18/10981563/icis-ex...>

13 Currently, sanctions target only EU transshipment of Russian LNG.

14 For example, the tax on Russian gas could be set at 20 percent of the benchmark for natural gas prices in Europe, which is similar to current price cap on Russian oil.

15 Christoph Halser and Laura R. Skaug, 'Supply shift: End of Ukraine gas transit sets the stage for LNG and pipeline diversions', Rystad, 16 July 2024, <https://www.rystadenergy.com/news/end-of-ukraine-gas-transit-lng-and-pi...>

16 Nikolaus J. Kurmayer, 'Vienna agrees to fund 40km pipeline to boost gas independence from Russia', Euractiv, 1 March 2024, <https://www.euractiv.com/section/energy-environment/news/vienna-agrees-....>

17 Christoph Halser and Laura R. Skaug, 'Supply shift: End of Ukraine gas transit sets the stage for LNG and pipeline diversions', Rystad, 16 July 2024, <https://www.rystadenergy.com/news/end-of-ukraine-gas-transit-lng-and-pi...>

**Bruegel**

Rue de la Charité

33,

B-1210 Brussels

(+32) 2 227 4210

info@bruegel.org

**Bruegel.org**