The EU's Continued Dependencies on Russian Energy

A Clean Break?

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Cover: Russia, Republic of Tatarstan (20 March 2024): Pumpjacks extract oil from a well operated by Elkhovneft, a subsidiary of Tatneft, one of the largest national oil and gas producers. Yegor Aleyev/TASS/Sipa USA.

Sammanfattning

Denna rapport använder handelsdata för att analysera EU-länders beroende av energihandel med Ryssland. Rapporten drar slutsatsen att EU framgångsrikt har minskat sitt beroende av import av rysk olja och naturgas sedan Rysslands fullskaliga invasion av Ukraina i februari 2022. Dock är Bulgarien, Tjeckien, Ungern, Slovakien och Österrike fortfarande beroende av import av antingen olja, gas eller kärnkraftsbränsle från Ryssland. Vissa av dessa beroenden är på väg att fasas ut, medan andra ser ut att kvarstå. Det krävs vissa investeringar i anpassning av infrastruktur för att fasa ut de kvarvarande beroendena. Från ett tekniskt och ekonomiskt perspektiv torde det vara överkomligt att nå EU-kommissionens mål om att fasa ut alla medlemsstaters import av rysk energi senast 2027. Den främsta utmaningen med att nå målet kommer framförallt att handla om bristande politisk vilja, snarare än tekniska eller ekonomiska hinder.

Nyckelord: EU, Ryssland, handel, energi

Summary

This report uses trade data to analyse the EU member states' dependency on energy trade with Russia. The report finds that since the full-scale invasion of Ukraine in February 2022, the EU has successfully reduced its overall dependence on Russian oil and natural gas. However, some EU countries, namely Austria, Bulgaria, the Czech Republic, Hungary, and Slovakia, are still dependent on either Russian oil, natural gas, or nuclear fuel. While some of these dependencies are diminishing, others are not. Ending the remaining dependencies requires some investment in adaptation of infrastructure. From a technical and economic standpoint, it should be relatively easy to meet the EU Commission's 2027 deadline to end the EU member states' imports of Russian energy. Any challenges in meeting this deadline will be chiefly related to a lack of political will, rather than technical or economic obstacles.

Keywords: EU, Russia, trade, energy

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Emil Wannheden, Analyst

Stockholm, June 2024

Content

Abbreviations

CEO	Chief Executive Officer
CSD	Center for the Study of Democracy
EU	European Union
EUR	Euro
G7	Group of Seven
GDP	Gross domestic product
IEA	International Energy Agency
FOI	Swedish Defence Research Agency
LNG	Liquified natural gas
OPEC	Organization of the Petroleum Exporting Countries
VVER	*Vodo-Vodianoi Energeticheskiy Reaktor* (“water-water energy reactor”)

1 Introduction

Notwithstanding the fact that in the last two years Russia has launched a large-scale invasion against Ukraine, threatened the use of nuclear weapons, bombed energy infrastructure, and cut off supplies of natural gas, some of the European Union's (EU) member states still import oil, gas, and nuclear fuel from Russia. Why does it seem to be so difficult for the EU to completely stop importing energy from Russia?

The EU's dependency on Russian energy was not created overnight. At the start of the 2000s, growing energy exports helped develop Russia's economy, which allowed it to expand its economic ties with neighbouring countries. In Central and Eastern Europe, Russian state-owned enterprises in the energy and banking sectors spearheaded the expansion of Russian economic and political influence. Russian companies captured large market shares in Eastern European countries, while many countries in Western Europe, like Germany and Italy, became increasingly dependent on Russian natural gas. For Russia, its position as the largest supplier of energy to Europe became a question of national security, not only because energy exports were crucial for its domestic economy, but also because energy exports became a means of political influence.[1]

By the 2010s, it was increasingly evident that Russia was using its economic footprint in European countries in conjunction with propaganda, corruption, security service networks, and the acquisition of strategic assets to expand its influence. While Russia could not hope to draw eastern EU member states into its own regional organisations, such as the Eurasian Economic Union and the Collective Security Treaty Organisation, it aimed to weaken the EU by fostering disunity and corruption, and thereby strengthen its own position.[2]

Russia's 2022 full-scale invasion of Ukraine fundamentally altered the conditions for Russia's influence in EU countries. The EU's sanctions drastically reduced economic ties between the EU and Russia. Before 2022, Russia wanted to increase its energy exports to the EU in order to increase its influence. After 2022, Russia has paradoxically attempted to cut gas exports to apply pressure on the EU, while simultaneously benefitting from its remaining exports of oil and gas to generate income and retain influence in EU countries. In this context, two years after Russia's invasion of Ukraine, it is worthwhile to examine the state of the energy trade between the EU and Russia.

[1] Susanne Oxenstierna and Veli-Pekka Tynkkynen (eds.), *Russian Energy and Security up to 2030* (New York: Routledge, 2014), 1.

[2] Martin Vladimirov, "Reassessing Russian Influence: Economic and Governance Underpinning," in *The Russian Economic Grip on Central and Eastern Europe*, eds. Ognian Shentov, Ruslan Stefanov, and Martin Vladimirov (New York: Routledge, 2016), 9–16.

The report finds that while total EU imports of Russian oil and gas have declined decidedly since February 2022, some countries have not yet managed to reduce their imports of Russian energy. In particular, in 2022 and 2023, Austria, Bulgaria, the Czech Republic, Hungary, and Slovakia imported most of their gas and/or oil from Russia. In addition, with the exception of Austria, they also have Russian-built nuclear reactors that, to different degrees, are dependent on imports of Russian nuclear fuel. Lastly, other EU countries, including France and Spain, still import liquefied natural gas (LNG) from Russia. The current overall trend in 2024 suggests a future decrease in reliance on Russia in all dimensions, with a few exceptions.

The report addresses the following research questions: Which EU countries are still dependent on imports of Russian energy? What are the reasons behind this dependency? Lastly, what is the outlook for ending these dependencies?

1.1 Methods and delimitations

To examine the EU's energy imports from Russia, I use trade data from Eurostat.[3] Energy trade includes trade of coal, peat, oil shale, natural gas, oil, refined oil products, biofuels, waste, electricity and nuclear fuel.[4] Of these, I have analysed the trade in crude oil, natural gas, and nuclear fuel in 2022 and 2023.[5] I have chosen to focus on these three categories of goods, since they account for most of the EU-Russia energy trade that remains after the imposition of the EU's sanctions. The EU has embargoed and no longer trades other categories of energy goods from Russia, with a few exceptions (see further in Chapter 2).

Next, I have chosen to define a country as "dependent" if its share of imports from Russia is greater than 50 percent in a given category. In this way, I single out the countries which are overwhelmingly reliant on Russia as a supplier. According to this definition, Austria, Bulgaria, the Czech Republic, Hungary, and Slovakia are still dependent on imports from Russia in at least one of the three categories of goods mentioned above.[6]

The trade in crude oil, natural gas, and nuclear fuel from Russia is an important study topic because these resources are often difficult to substitute and constitute a significant part of the energy mixes of EU countries. Therefore, I have analysed the reasons behind the continued dependencies in the five countries mentioned above, and the outlook for ending them in the next couple of years. This part of the analysis owes much to the pioneering work on Russian economic influence

[3] Eurostat, *International Trade in Goods: Detailed Data*, accessed 16 April 2024.
[4] As per the definition of the United Nations Department of Economic and Social Affairs, *International Recommendations for Energy Statistics*, Series M No. 93 (New York: United Nations, 2018), 24-26.
[5] In some cases, data for December 2023 is missing.
[6] No other EU countries come close to the cut-off. The closest would be Spain, which gets around 15 percent of its liquid natural gas from Russia.

performed by the Center for the Study of Democracy (CSD), a think tank based in Sofia, Bulgaria, and the 2019 book, *The Russian Economic Grip on Central and Eastern Europe*, edited by Ognian Shentov, Ruslan Stefanov, and Martin Vladimirov, all of whom are affiliated with the CSD. To follow up on the efforts of the examined EU countries to reduce their imports of Russian energy goods, I use reporting in national and international media and analyses by a number of research-oriented think tanks.

1.2 Outline

Chapter 2 discusses the challenges that the EU faces in relation to Russia's energy exports, as well as how it has used sanctions to respond to Russia's energy-related influence. Chapters 3, 4 and 5 analyse the trade with Russia in crude oil, natural gas, and nuclear fuel in EU countries that still depend on this trade. Chapter 6 provides conclusions and answers the research questions.

2 The EU's response to Russia's energy-related influence

Russia's great-power ambitions are closely intertwined with its role as a global energy exporter.[7] It influences the global oil market by cooperating with the Organization of the Petroleum Exporting Countries (OPEC) as a member of the OPEC+ format.[8] Russia's Energy Strategy for the period up to 2035, adopted in 2022, describes the government's domestic and international goals for the sector. The strategy focuses on the development of the fossil fuel and nuclear-energy industries. The switch to renewable energy taking place in Russia's export markets is considered a threat rather than an opportunity.[9]

Russia's position as a dominant energy supplier has much to do with geography. A large share of Russia's exports of oil and natural gas are achieved via fixed pipelines, which connect its trading partners to the oil and gas fields in the country's interior. Russia uses its energy exports for geopolitical purposes, not least in relation to its European neighbours. In other words, Russia uses energy exports as a tool of economic statecraft, or geoeconomics.[10] The EU, with its own economic statecraft, has responded by using sanctions to target Russia's energy sector.

The sanctions imposed by the EU in 2014 in response to Russia's annexation of Crimea initially targeted individuals involved in the annexation. They were subsequently expanded to include bans on the export of technology to Russia's energy industry. EU sanctions have been gradually widened following the full-scale invasion of Ukraine on 24 February 2022, and now include broader transport-related sanctions, a ban on the import of Russian oil (with exceptions explained below), petroleum products, diesel, coal, steel, iron, wood, paper, and other raw materials and goods, and expanded sanctions against Russian financial institutions.[11]

Table 1 provides an overview of EU sanctions against Russian energy as of April 2024. The EU has imposed an embargo on crude oil, with exceptions for crude oil

[7] Niklas H. Rossbach, *The Geopolitics of Russian Energy: Gas, Oil and the Energy Security of Tomorrow*, FOI-R--4623--SE (Stockholm: Swedish Defence Research Agency, 2018), 48; Oxenstierna and Tynkkynen, *Russian Energy*, 1–2.

[8] OPEC, *The Declaration of Cooperation of OPEC and Non-OPEC Oil-producing Countries Reaches Five Years*, press release, 10 December 2021, https://www.opec.org/opec_web/en/press_room/6748.htm

[9] Government of Russia, *Energy Strategy for the Period up to 2035*, accessed 2 August 2023, http://static.government.ru/media/files/w4sigFOiDjGVDYT4IgsApssm6mZRb7wx.pdf .

[10] Following the definition of geoeconomics in Robert D. Blackwill and Jennifer Harris, *War by Other Means: Geoeconomics and Statecraft* (Cambridge: Harvard University Press, 2016), 20.

[11] Council of the European Union, *Timeline — EU Restrictive Measures against Russia over Ukraine*, accessed 4 May 2024, https://www.consilium.europa.eu/en/policies/sanctions/restrictive-measures-against-russia-over-ukraine/.

delivered via pipeline and for seaborne deliveries to Bulgaria until the end of 2024. However, imports of natural gas and nuclear fuel are still permitted. Table 2 compares the amounts of EU energy-related imports from Russia in 2021 and 2023. The total imports of crude oil and natural gas via pipeline have dropped 90 and 83 percent, respectively. However, imports of LNG have increased by 33 percent and imports of nuclear fuel by 86 percent.

Table 1: Overview of EU measures targeting imports of Russian energy as of March 2024.

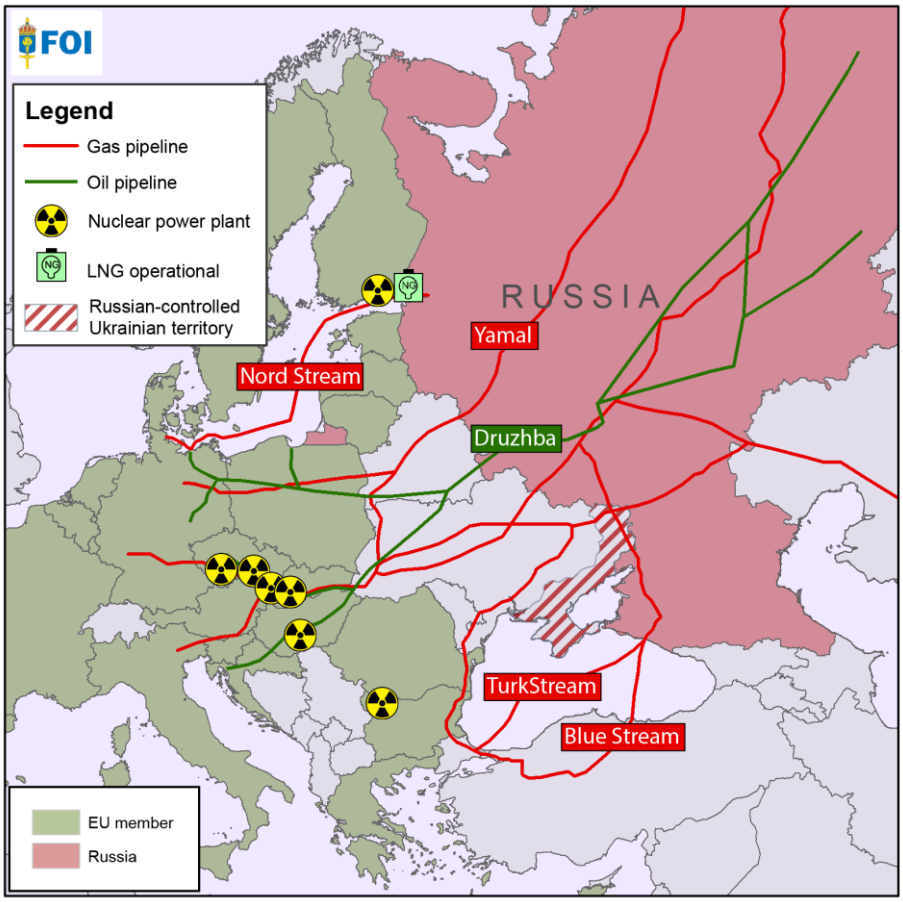
Type	**Status**
Crude oil	Imports forbidden from 5 December 2022, with exceptions granted for Bulgaria and oil transported via pipeline
Coal and solid fossil fuels	Imports forbidden from 10 August 2022
Diesel and refined petroleum products	Imports forbidden from 5 February 2023
Liquefied natural gas (LNG)	Imports permitted
Pipeline natural gas	Imports permitted
Nuclear fuel	Imports permitted

Source: Council of the European Union, *Timeline — EU Restrictive Measures*.

Table 2: Comparison of EU energy-related imports from Russia, 2021 and 2023

Type	**Unit**	**% change from 2021 to 2023**
Crude oil	barrels	–90
Pipeline natural gas	cubic meters	–83
Liquefied natural gas (LNG)	cubic meters	33
Nuclear fuel	euro	86

Source: Ben McWilliams, Giovanni Sgaravatti, Simone Tagliapietra, and Georg Zachmann, *The European Union-Russia Energy Divorce: State of Play,* Bruegel analysis, 22 February 2024.



Map 1: Russian-built nuclear stations and oil and gas pipelines towards the EU.
Source: FOI; Institute for the Study of War, *Russian Offensive Campaign Assessment,* blog post, 29 May 2024.

Map 1 shows how Russia exports its energy to Europe. Crude oil is exported via the Druzhba ("Friendship") pipeline, which passes through Belarus and splits into a northern leg towards Poland and a southern leg that passes through Ukraine before reaching Hungary, Slovakia, and the Czech Republic. Natural gas is exported via two routes: via the TurkStream pipeline, which traverses Turkey before entering Bulgaria, and via the Ukrainian pipelines, which deliver gas to Hungary, Slovakia, and Austria. The Nord Stream gas pipelines, which pass under the Baltic Sea, have not been used since they were sabotaged in September 2022. The Yamal gas pipeline, which crosses Poland, has not been used since April 2022, when

Poland refused Russia's demand to pay for its gas in roubles.[12] The map also shows the locations of the seven EU nuclear-power stations that are or were reliant on Russian nuclear fuel. These are located in Bulgaria, the Czech Republic, Finland, Hungary, and Slovakia. Finally, the map shows the location of the Vysotsk LNG terminal, owned by the Russian gas company, Novatek.

The Russian government directly controls or has a large degree of influence over the largest Russian companies that are still active on the European market, such as Gazprom, Lukoil, Rosneft, and Rosatom and their subsidiaries. These companies experience a high degree of government control, and political considerations can drive their business decisions just as much as economic considerations. The Russian government uses the energy companies to further its long-term foreign policy and security-policy objectives, while European companies operate mostly with a market logic.[13] The Russian government has exploited this mismatch to increase its economic influence in the EU. There are occasionally synergies where dependence in one sector is used to increase dependence in another. An example of this behaviour is Gazprom's price concessions to Hungary in 2013 and 2014. Gazprom agreed to lower its prices for gas deliveries to Hungary at a time that coincided with parliamentary elections and Rosatom's finalisation of the agreement for the construction of a nuclear-power plant (see Chapter 5). The timing of the gas-price concessions suggests they were at least partly politically motivated and aimed at promoting further dependence on Russian energy, including nuclear energy.[14]

In 2022, the EU Commission proposed to end all imports of Russian fossil fuels by 2027.[15] The continued import of Russian energy creates at least three main problems for EU. The first is that it contributes to the Russian government's income. Taxes on energy exports account for around 30–40 percent of income in Russia's federal budget. Continued EU imports of Russian energy therefore undermine the impact of Western sanctions against Russia, which are supposed to reduce Russia's ability to continue funding the war against Ukraine.[16]

The second problem is that dependence on Russian energy exposes the affected countries to the risk that Russia stops supplying them with energy. For example, Russia could reduce its natural gas deliveries to Europe, as it did over the summer

[12] Ignacio Urbasos, *The Future of Russian Gas in the EU*, policy paper, Elcano Royal Institute, March 2024, 11–14.
[13] Heather A. Conley, James Mina, Ruslan Stefanov, and Martin Vladimirov, *The Kremlin Playbook: Understanding Russian Influence in Central and Eastern Europe*, report, October 2016. 24, 32.
[14] András Deák and Csaba Weiner, "Hungary: Leveraging Political Influence," in Ognian Shentov, Ruslan Stefanov and Martin Vladimirov (eds.), *The Russian Economic Grip on Central and Eastern Europe*, (New York: Routledge, 2016), 144–145.
[15] European Commission, *REPowerEU: A Plan to Rapidly Reduce Dependence on Russian Fossil Fuels and Fast Forward the Green Transition*, press release, 18 May 2022, https://ec.europa.eu/commission/presscorner/detail/en/IP_22_3131
[16] Susanne Oxenstierna and Emil Wannheden, *The Russian economy and military expenditure in light of the war in Ukraine and economic sanctions*, FOI Memo 8023, December 2022, 4.

of 2022, in order to cause economic damage through higher energy prices and inflation. The threat of reduced energy supplies does not need to be carried out in order for it to have an effect.

A third problem is that imports of Russian energy can become a channel of indirect Russian influence that seeks to perpetuate dependencies and influence domestic politics. In Bulgaria, for example, Gazprom is believed to have pressured Bulgarian officials to delay the construction of gas interconnectors with Greece, Romania, Serbia, and Turkey, which could have allowed Bulgaria to buy gas from non-Russian sources. Local economic groups and oligarchs with ties to Russia also staged environmental protests in Bulgaria in 2012, with the aim of preventing the country's efforts to diversify its energy imports.[17] Dependence on Russian energy can also undermine EU unity, especially when it comes to policy relating to Russia and Ukraine. For example, prolonged negotiations between EU countries in May 2022 on various exemptions to the energy sanctions for particularly dependent countries meant that it took longer to reach an agreement on sanctions against Russia.

In addition to mitigating these issues, the EU can receive other indirect benefits if it manages to end imports of Russian fossil fuels: speeding up the green transition and demonstrating to third countries that EU applies sanctions in a consistent and credible fashion.

Import dependencies in oil, natural gas, and nuclear fuel matter because their usage contributes to a significant part of the EU's energy mix. This is also true for the five EU countries studied in this report (see Appendix). Oil and oil products account for between 22 and 35 percent of their total energy use; natural gas accounts for between 14 and 32 percent; and nuclear energy represents between 17 and 25 percent (with the exception of Austria, which does not use nuclear power).[18]

[17] Martin Vladimirov and Ruslan Stefanov, "Bulgaria: State Capture Unplugged," in *The Russian Economic Grip on Central and Eastern Europe*, eds. Ognian Shentov, Ruslan Stefanov and Martin Vladimirov (New York: Routledge, 2016), 121.

[18] International Energy Agency (IEA), *Energy Statistics Data Browser*, accessed 23 May 2024, https://www.iea.org/data-and-statistics/data-tools/energy-statistics-data-browser .

3 Crude oil

Before February 2022, Russia was one of the EU's largest trading partners for crude oil. In June 2022, however, the EU adopted an embargo on maritime imports of Russian crude oil, which entered into force on December 5, 2022. The decision on the embargo was delayed because of opposition from Bulgaria, the Czech Republic, Hungary, and Slovakia (EU decisions on sanctions are taken by consensus). The Czech Republic, Hungary, and Slovakia are landlocked and import oil via pipelines, and therefore have difficulty switching to other suppliers for their refineries. Bulgaria insisted on being exempted from the embargo by arguing that its main oil refinery, Neftochim, was important for the country's economy and that it could only process Russian oil.[19] In the end, EU's member states reached an agreement to exclude pipeline imports from the embargo, and by allowing Bulgaria to continue importing Russian crude oil by sea.

Figure 1 shows the evolution in the share of EU imports of Russian crude oil relative to total oil imports from January 2022 to November 2023. At the beginning of 2022, the EU received approximately 25 percent of its crude oil imports from Russia. That share had fallen to less than 5 percent at the end of 2023. Figure 2 shows the evolution of EU imports of barrels of Russian crude oil since January 2022. In January 2022, the EU imported almost 16 million barrels of crude oil from Russia. By March 2023, that figure had fallen to around 2 million barrels, a level at which it stabilised for the rest of the year.

[19] Euronews, *Hungary, Slovakia, Czech Republic and Bulgaria still resisting EU ban on Russian oil*, 14 May 2022, https://www.euronews.com/my-europe/2022/05/09/hungary-slovakia-czech-republic-and-bulgaria-still-resisting-eu-ban-on-russian-oil .

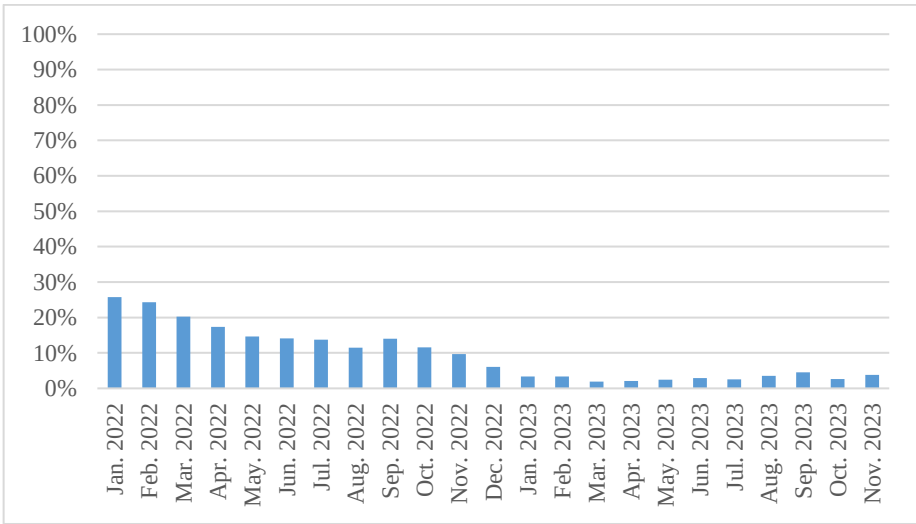


Figure 1: Share of Russian crude oil of total EU imports of crude oil from January 2022 to November 2023; percent.
Source: Eurostat.

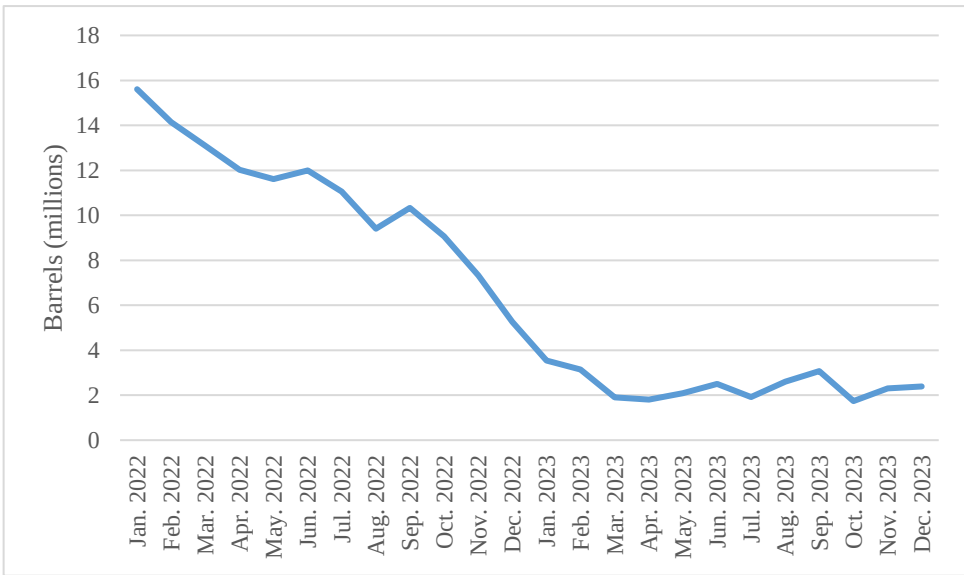


Figure 2: EU imports of Russian crude oil from January 2022 to December 2023; millions of barrels.
Source: Eurostat.
Note: Assumes one barrel of crude oil weighs 136.4 kilos.

It is clear that the EU has successfully reduced its imports of Russian crude oil and forced it to export its oil to other countries instead. In 2023, Russia's energy revenues decreased due to the combined effects of the Group of Seven's (G7) price cap and the EU embargo.[20] However, the embargo went into effect relatively late, more than eight months after the full-scale invasion in February 2022. During this time, Russia continued to export large quantities of high-priced oil to EU countries, which was important for its fiscal sustainability and contributed to weakening the effects of other EU sanctions.[21]

The trade data shows that EU imports of Russian crude oil have continued during 2023, albeit at a lower level. In the second half of 2023, they even increased slightly. This illustrates the difficulty of going the "last mile" to eliminate EU imports of Russian crude oil. Figure 3 shows which EU countries continued to import Russian crude in 2023. Bulgaria, Hungary, Slovakia, and the Czech Republic all imported between EUR 2–2.5 billion worth of Russian crude oil in 2023. Poland imported approximately EUR 360 million worth during the first two months of 2023 before halting imports. Interestingly, Eurostat data also shows that the Netherlands imported Russian crude oil for EUR 421 million in 2023. The Dutch Ministry of Economic Affairs and Energy has stated that the Netherlands no longer imports crude oil from Russia, so the Eurostat data may reflect transhipments of Russian crude taking place in or around the port of Rotterdam.[22]

[20] Isaac Levi, *Monthly Analysis of Russian Fossil Fuel Exports and Sanctions*, Centre for Research on Energy and Clean Air (CREA), 23 January 2024.

[21] Emil Wannheden and Tobias Junerfält, "Russia's Economy: Bracing for the Long Haul," in Maria Engqvist and Emil Wannheden (eds.), *Russia's War against Ukraine: The First Year* (Stockholm: Swedish Defence Research Agency, 2023), 78.

[22] See Ministry of Economic Affairs and Energy, *Netherlands No Longer Dependent on Russian Energy*, 10 February 2023, https://www.government.nl/latest/news/2023/02/10/netherlands-no-longer-dependent-on-russian-energy. The Eurostat data shows that the Netherlands imported Russian crude oil during all months of 2023, with the exception of July and August.

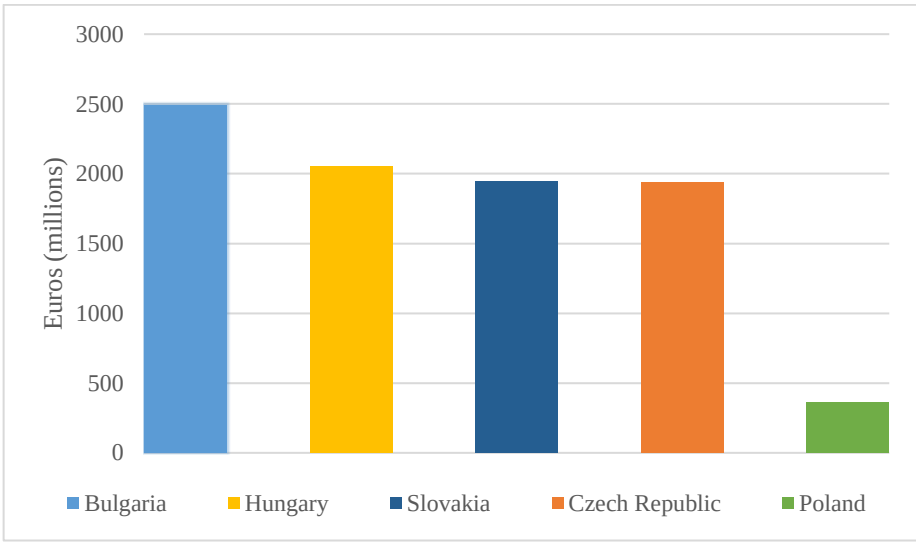


Figure 3: Imports of Russian crude oil by value in 2023; millions of EUR.
Source: Eurostat.

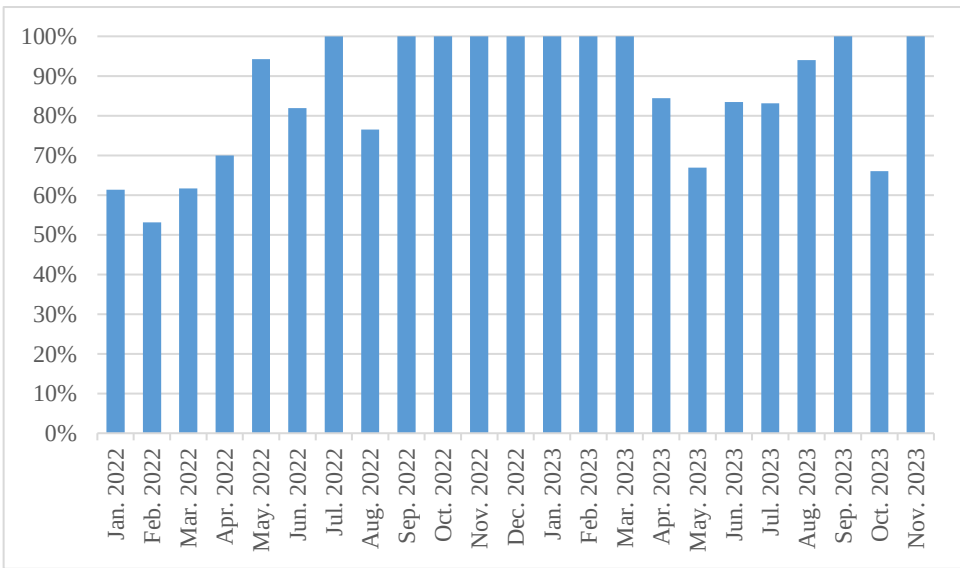


Figure 4: Share of Bulgaria's crude-oil imports originating from Russia; percent.
Source: Eurostat.

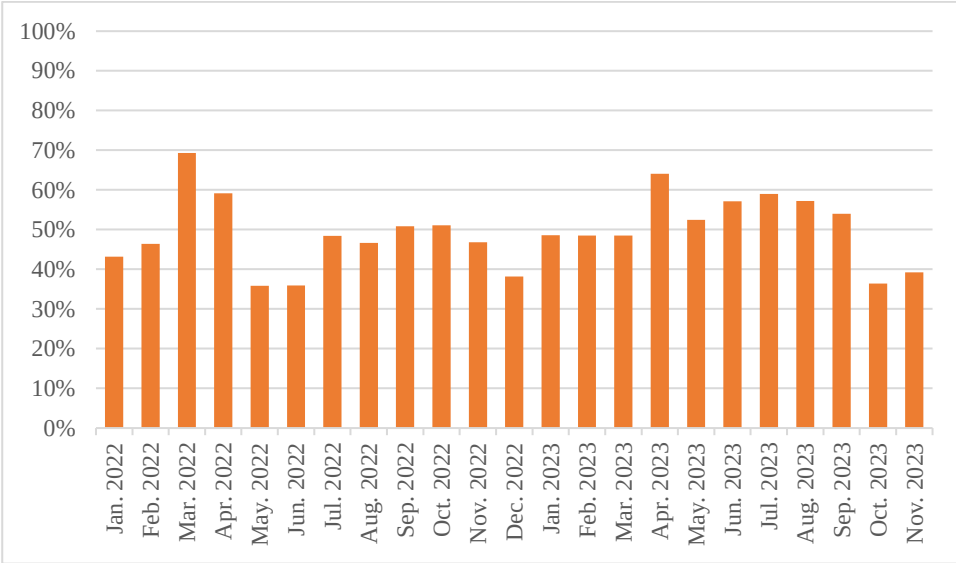


Figure 5: Share of the Czech Republic's crude-oil imports originating from Russia; percent.
Source: Eurostat.

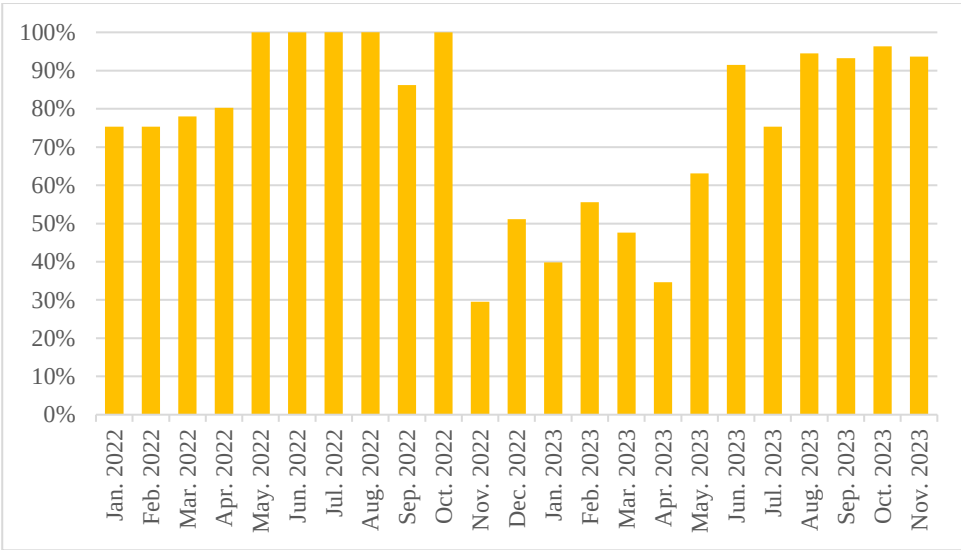


Figure 6: Share of Hungary's crude-oil imports originating from Russia; percent.
Source: Eurostat.

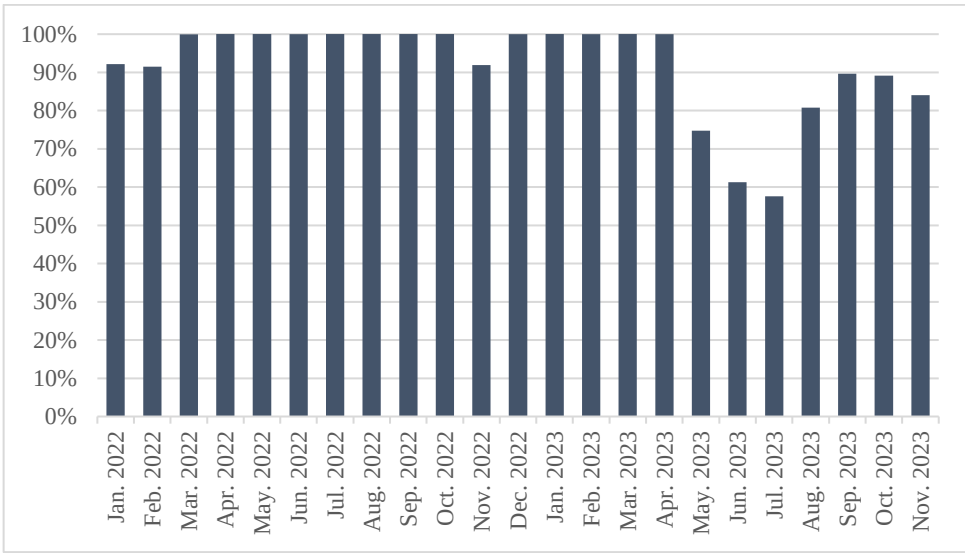


Figure 7: Share of Slovakia's crude-oil imports originating from Russia; percent.
Source: Eurostat.

Figures 4, 5, 6, and 7 show the share of Russian crude oil imports in the total crude oil imports of Bulgaria, the Czech Republic, Hungary, and Slovakia from January 2022 to November 2023. The figures show that by the end of 2023, these countries had still not managed to substantially reduce their dependence on Russian oil. Bulgaria, Hungary, and Slovakia remain almost completely dependent on Russian oil, while it constitutes approximately 50 percent of the Czech Republic's oil imports.

Why do these four countries continue to depend on Russian oil, and have they taken any concrete steps to phase out their dependency? Bulgaria's dependence on Russian oil is linked to the Neftochim refinery, which is located near Burgas, on the Black Sea coast and operated by the Russian company, Lukoil. Lukoil Bulgaria is not only the country's largest company but also one of the largest employers and contributors to its gross domestic product (GDP). In 2014, Lukoil indirectly contributed about a quarter of all of Bulgaria's state budget revenues and controlled approximately two-thirds of the wholesale fuel market.[23] Through Lukoil's ownership of the refinery, Russia has influenced public institutions in Bulgaria. Lukoil has also shifted its profits away from Bulgaria and evaded taxes.[24] However, the influence of Lukoil is likely to diminish in the future. In December 2023, the Bulgarian parliament adopted a law that ended imports of Russian crude oil from March 1, 2024. Lukoil has consequently stated that it is considering the sale of the

[23] Vladimirov and Stefanov, "Bulgaria," 125.

[24] Vladimirov and Stefanov, "Bulgaria," 126.

Neftochim refinery. As of March 2024, the refinery is running on oil imported from Kazakhstan, Iraq, and Tunisia.[25] Contrary to the Bulgarian government's claims in May 2022, during discussions about the EU oil embargo, it was and remains technically possible for the refinery to source its oil from non-Russian suppliers. The drawback is that the absence of Russian oil lowers Lukoil's profits.[26] The Bulgarian decision to switch from Russian oil marks a significant setback for the latter's economic influence in the country and elsewhere in Southeast Europe. As long as Lukoil owns the refinery, though, Russia can try to continue to exert influence through the company.

The dependence of Hungary and Slovakia is linked to the Hungarian energy company MOL Group, one of the largest companies in Central and Eastern Europe. MOL Group owns three refineries in the region, including Slovnaft, Slovakia's only refinery. Until now, the refineries have almost exclusively processed Russian oil; processing oil from other countries requires adapting the infrastructure. Since the Russian invasion, Hungary and Slovakia have increased their exports of fuel to Ukraine, leading to the paradoxical situation that the Ukrainian Armed Forces are using fuel refined from Russian oil.[27]

In May 2022, MOL Group confirmed that it had begun the process of adapting its refineries to process other types of oil. According to the Hungarian Minister for Foreign Affairs, this adjustment could cost up to EUR 18 billion and take several years.[28] That figure is likely an exaggeration. In April 2023, MOL Group's CEO stated that the adaptation would cost between USD 500 and 750 million, and be ready by the end of 2025.[29] Therefore, it is unlikely that Hungary and Slovakia will agree to stop imports of Russian oil before the end of 2025 at the earliest. Since MOL Group is Hungarian and owns most of Slovakia's energy infrastructure, the issue will be decided in Budapest. So far, the signals from Hungary's government do not indicate that shifting from Russian oil is prioritised. For example, in May 2023, Hungary and Serbia agreed to spend EUR 100 million to build a connector pipeline in order to allow Serbia to import Russian oil through

[25] Moscow Times, *Bulgaria Ends Russian Oil Imports*, 1 March 2024, https://www.themoscowtimes.com/2024/03/01/bulgaria-ends-russian-oil-imports-a84308 .
[26] Boyko Nitzov, *Decoupling from Russian Oil* (Sofia: Center for the Study of Democracy, 2023).
[27] Handelsblatt, *Warum ukrainische Panzer mit russischem Öl fahren* [Why Ukrainian tanks run on Russian oil], 25 July 2023, https://www.handelsblatt.com/politik/international/ukraine-krieg-warum-ukrainische-panzer-mit-russischem-oel-fahren-/29265056.html. Bulgaria has also exported fuel refined from Russian oil to Ukraine, see Radio Free Europe, *Russia Gets Its Oil into the EU Through Bulgaria: Perhaps Not for Long*, 2 August 2022, *https*://www.rferl.org/a/russia-bulgaria-oil-lukoil-eu-sanctions-pressure-ukraine/32231148.html.
[28] Financial Times, *Hungary's MOL prepares to move away from Russian oil,* 19 May 2022, https://www.ft.com/content/87308996-a5a0-4e6f-acbd-7c69cc019e8c .
[29] Reuters, *Oil group MOL disputes hikes to pipeline fees through Ukraine, Croatia*, 28 April 2023, https://www.reuters.com/business/energy/oil-group-mol-disputes-hikes-pipeline-fees-through-ukraine-croatia-2023-04-28/

Hungary.[30] However, MOL Group may have a commercial interest in reducing its dependency on Russian oil, since it flows through the Ukrainian section of the Druzhba pipeline. Therefore, it has to pay steep transit fees to the Ukrainian pipeline operator, Ukrtransnafta.[31] There is also a risk that the war will directly affect the transport of oil through Ukraine.

The Czech Republic relies on the Druzhba pipeline to supply its refineries with Russian oil. The government expects to end imports of Russian oil by the end of 2024, since it will then be able to import oil from other suppliers by connecting to the Transalpine Pipeline. This would allow the Czech Republic to import crude oil delivered by sea to the port of Trieste, Italy.[32]

[30] Vladimir Afanasiev, "Russian Oil Lure: Hungary and Czech Republic Take Opposite Directions," *Upstream*, 11 May 2023, https://www.upstreamonline.com/production/russian-oil-lure-hungary-and-czech-republic-take-opposite-directions/2-1-1449968 .
[31] Reuters, *Oil group MOL*.
[32] Afanasiev, "Russian Oil Lure."

4 Natural gas

As mentioned above, the EU has not embargoed Russian natural gas. Russia has historically been EU's largest supplier of natural gas. Prior to 2022, Russian gas delivered via pipeline made up about 40 percent of EU's gas supply.[33] Three pipeline systems delivered the gas to the EU: Nord Stream, passing under the Baltic Sea; Yamal, which carries gas from the Yamal gas fields in northern Siberia, crossing Belarus into Poland; the pipelines crossing Ukraine (Soyuz and Bratstvo); and the TurkStream pipeline, across Turkey into Romania (see Map 1). In addition to pipeline gas, the EU also imports LNG from Russia.[34] In July 2022, Russia exploited the EU's dependency, inflicting economic damage on it by unilaterally reducing gas deliveries via Nord Stream. A sabotage attack by an unknown actor in September 2022 made deliveries through Nord Stream impossible. The interruptions caused gas prices to spike in Europe, contributing to higher inflation and a decline in industrial production.[35] While Russian gas imports via pipeline have declined sharply since March 2022, imports of Russian LNG have been relatively stable (see Figure 8).[36]

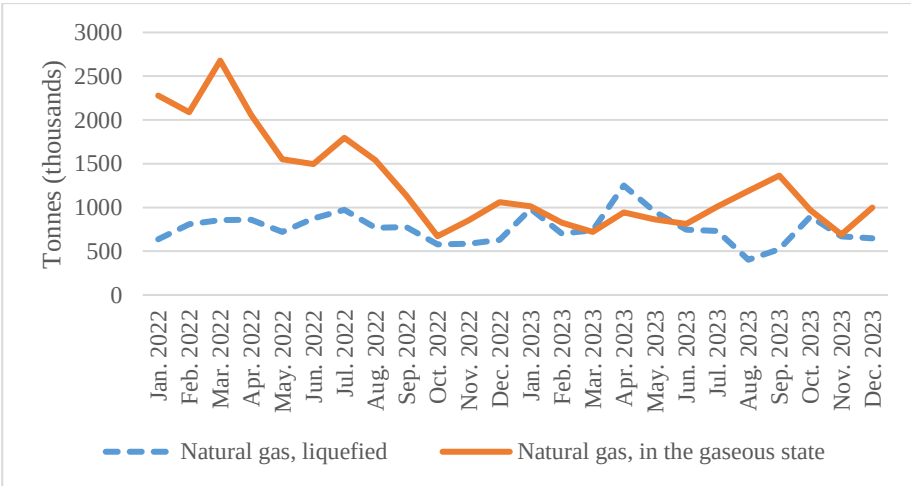


Figure 8: EU imports of Russian natural gas via pipeline and Russian LNG, by month, from January 2022 to December 2023; thousands of tonnes.
Source: Eurostat.

[33] Ben McWilliams, Giovanni Sgaravatti, Simone Tagliapietra and Georg Zachmann, *The EU Can Manage Without Russian Liquified Natural Gas*, Bruegel policy brief, 28 June 2023.
[34] LNG is natural gas that has been cooled in order to liquify it and allow for maritime transport.
[35] Piergiorgio Alessandri and Alessandro Gazzani, *The Impact of Gas Supply Shocks in Europe*, CEPR Voxeu Column, 25 July 2023, https://cepr.org/voxeu/columns/impact-gas-supply-shocks-europe .
[36] The data for natural-gas trade for some countries, notably Germany and Austria, are missing from the Eurostat data set.

EU compensated for the interruption of Russian pipeline gas deliveries by reducing demand and increasing the import of LNG from other partners. In the first quarter of 2023, Russian LNG accounted for 7 percent of the EU's total natural gas imports. The most exposed countries are Spain and France, where Russian LNG comprised 18 and 15 percent, respectively, of the total gas supply for the winter of 2022–2023. Just as it did with gas delivered via pipelines, Russia could unilaterally interrupt the supplies of LNG at any time to apply pressure on the European gas market and contribute to raising inflation in EU countries. A study by the economic think tank, Bruegel, found that given the EU's rather limited dependency on Russian LNG, it should be able to afford to pre-emptively introduce an embargo on Russian LNG and substitute the gas from other sources at marginally higher prices.[37] Figure 9 shows the value of EU countries' imports of LNG from Russia in 2023.

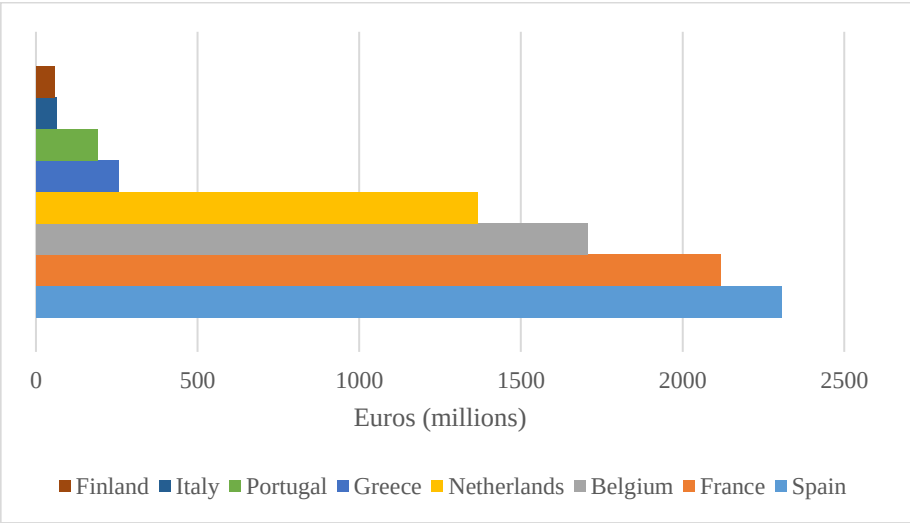


Figure 9: EU imports of Russian LNG, by country, in 2023; millions of EUR.
Source: Eurostat.

While Belgium, France, the Netherlands, and Spain are the biggest importers of Russian LNG, the main importers of Russian gas via pipeline are located in Central and Southern Europe. In 2023, Austria, Greece, Hungary, Italy, and Slovakia continued to import Russian gas via pipeline.[38] Since pipelines are fixed infrastructure, they take time to build, along with their connectors, which allow for imports from other suppliers, if they are not already in place. In the case of gas imports from Russia, the situation is complicated by the fact that the Yamal pipeline, one

[37] McWilliams et al., *The EU Can Manage.*
[38] Eurostat data. Smaller volumes were also recorded for Bulgaria, the Czech Republic, Latvia, and Slovenia.

of the only two operational gas pipelines connecting Russia and Europe, passes through Ukraine and its gas transmission system. In 2020, Ukraine signed a five-year deal with Gazprom to deliver gas to its customers via the Ukrainian gas transmission network. The agreement ends on 31 December 2024, and Ukrainian officials have stated that they have no intention of renewing it. However, Slovakia's prime minister, Roberto Fico, has called on Ukraine to renew the arrangement. Slovakia would benefit from its extension, since it has its own transit deal with Gazprom, in addition to relying on the gas for its domestic market. Slovakia's pressure puts Ukraine in a difficult position, as Ukraine needs Slovakia's support on other issues at the EU level, such as decisions on sanctions against Russia, which are taken by consensus.[39]

The situation is further complicated by the fact that, in April 2024, Russia began bombing Ukraine's gas infrastructure and storage facilities. European gas traders use some of this storage. Prior to April 2024, these facilities had been spared from the war.[40] Russia's deliberate bombing of energy infrastructure used by EU companies illustrates the paradoxes of the EU-Russia energy trade.

Even if gas transit through Ukraine were halted, EU countries could still import Russian gas via the TurkStream pipeline. Since it is relatively easy to hide the origin of gas when it is re-exported, there are fears that Russian gas could enter the EU unnoticed, via the Turkish "back door". This could, in the worst case, create an inadvertent EU dependency on Russian gas that is re-labelled as Turkish. Russia's president, Vladimir Putin, went as far as hinting that this was one of the objectives of a recent Russo-Turkish gas deal. Turkey's reliance on Russian gas exacerbates the issue, potentially limiting the EU's ability to influence Turkish energy policy.[41]

Bulgaria profits from the transit of Russian natural gas, but it does not use any for itself.[42] Austria, Hungary, and Slovakia, however, still depend on Russia for gas deliveries. While Austria initially managed to reduce its dependence during the first months after the 2022 invasion, it shot back up again later in 2022 and 2023. In December 2023, 98 percent of its gas imports came from Russia (see Figure 10). Its dependency is linked to a 2018 contract that the Austrian energy company OMV signed with Gazprom for the delivery of almost all of Austria's natural gas demand until 2040. Under the terms of the contract, OMV needs to pay for the gas,

[39] Sergiy Makogon and Aura Sabadus, *Ukraine and EU at Crossroads Over Expiring Russian Gas Deal*, Centre for European Policy Analysis, 8 February 2024, https://cepa.org/article/ukraine-and-eu-at-crossroads-over-expiring-russian-gas-deal/.

[40] Benjamin Schmitt and Aura Sabadus, *Goodbye Putin: Disarming the Gas Transit Weapon*, Centre for European Policy Analysis, 24 April 2024, https://cepa.org/article/goodbye-putin-disarming-the-gas-transit-weapon/.

[41] Aura Sabadus and Benjamin Schmitt, *Russian Gas by Any Other Name*, Centre for European Policy Analysis, 26 June 2023, https://cepa.org/article/russian-gas-by-any-other-name/.

[42] Ilona Gizińska and Łukasz Kobeszko, *Bulgaria introduces additional fees for Russian gas transit*, OSW (Centre for Eastern Studies) analyses, 26 October 2023.

whether it takes it or not. Austria could easily source the gas elsewhere since its gas infrastructure is well connected with other European countries, but breaking the contract could trigger legal action by Gazprom.[43]

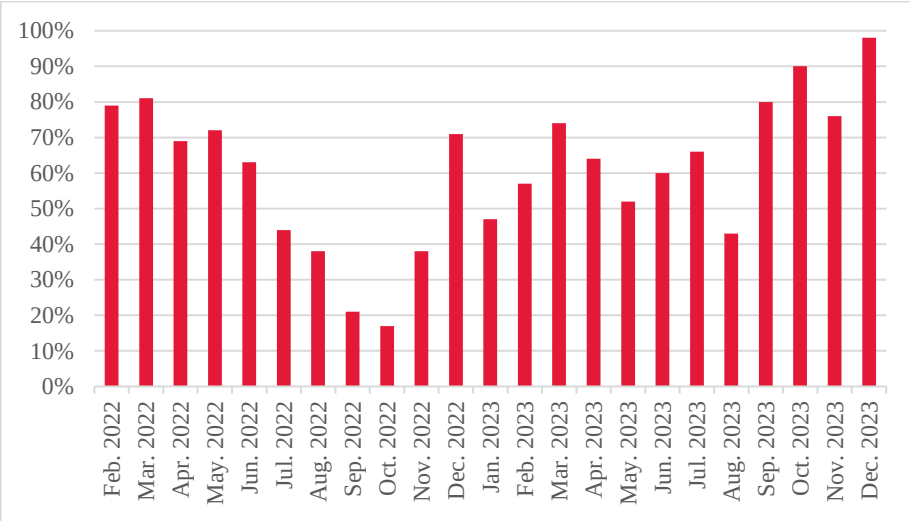


Figure 10: Austria's share of natural gas imports from Russia; percent.
Source: Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation, and Technology, *Imports of Russian Gas,* accessed 25 March 2024, https://energie.gv.at/hintergrund/import-von-russischem-gas.

[43] Euractiv, *'We Don't Need Russian Gas': Will Austria Finally Ditch Gazprom?*, 29 February 2024, https://www.euractiv.com/section/energy-environment/news/we-dont-need-russian-gas-will-austria-finally-ditch-gazprom/.

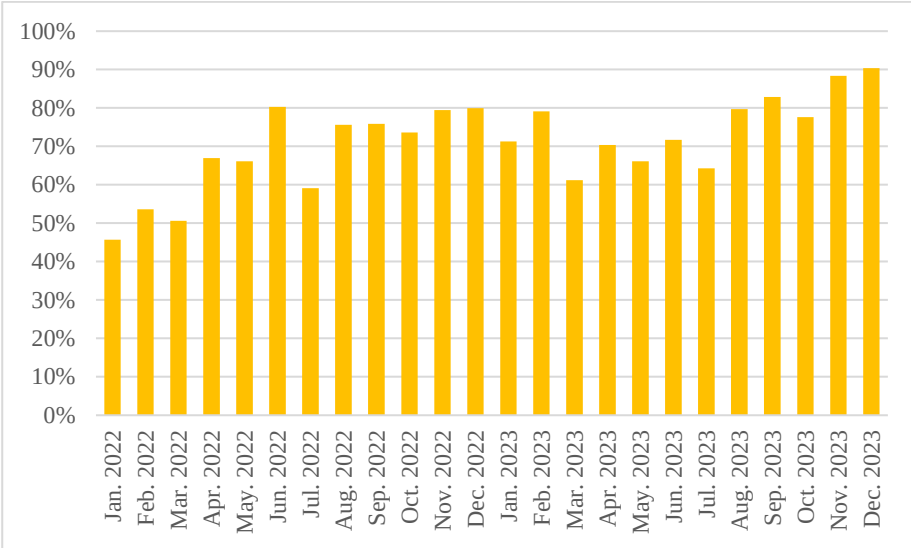


Figure 11: Hungary's share of natural gas imports from Russia; percent.
Source: Eurostat.

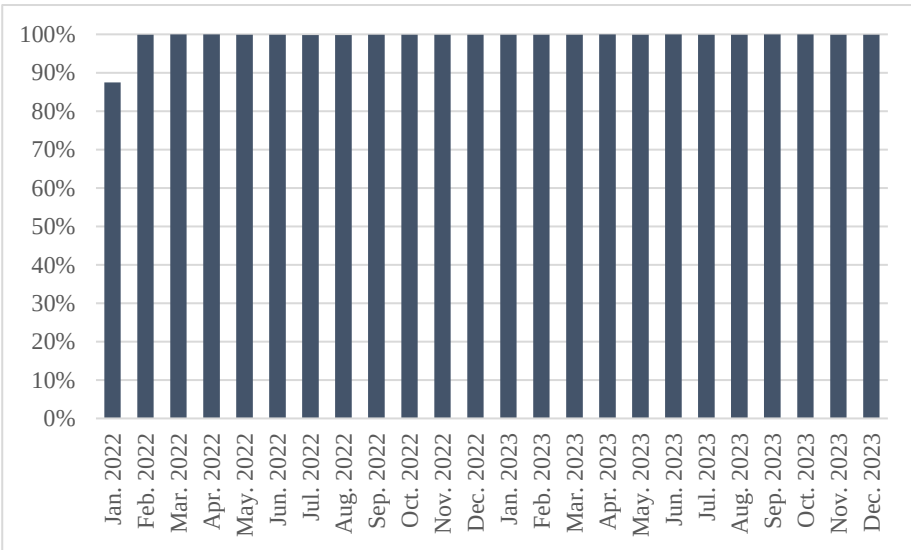


Figure 12: Slovakia's share of natural gas imports from Russia; percent.
Source: Eurostat.

Hungary's dependence on Russian gas has, if anything, increased during the last two years (see Figure 11). In September 2021, Hungary agreed to a 15-year deal with the Russian company Gazprom for gas delivery. During a visit to Moscow in

April 2024, Hungary's foreign minister, Péter Szijjártó, stated his government's intention to extend the deal and also increase the imports of Russian gas via Turkey.[44] Cheap gas and reduced utility bills for Hungarian households have been one of the main electoral slogans of the governing Fidesz party. The Hungarian government also sees the gas deals as a way of strengthening bilateral ties with Russia, which might bring other benefits, for example, regarding cooperation on nuclear energy (see further details below).[45] Slovakia continues to import virtually all of its natural gas from Russia (Figure 12). The transition to a more Russia-friendly government in Bratislava in October 2023 means efforts by the government to reduce dependency on Russian gas are likely to diminish.[46]

[44] Ilona Gizińska, Filip Rudnik, and Andrzej Sadecki, *Szijjártó in Moscow: Hungary Maintains Its Energy Cooperation with Russia,* OSW (Centre for Eastern Studies) analyses, April 2024.
[45] Deak and Weiner, "Hungary," 144.
[46] Daniel Hornak and Kevin Whitelaw, *Under Fico, Slovakia Tilts Toward Russia,* Bloomberg news article, 16 March 2024, https://www.bloomberg.com/news/newsletters/2024-03-16/under-robert-fico-slovakia-tilts-toward-russia.

5 Nuclear fuel

Russia's nuclear energy exports have not received as much attention as its fossil fuel exports, but they are an important tool of Moscow's economic statecraft. Russia's nuclear energy sector is controlled by the state-owned company Rosatom, which is the heir of the Soviet Ministry of Atomic Energy. The sector remains one of the few where Russia is technologically advanced and globally competitive.[47] So far, the EU has not placed any restrictions on the import of Russian nuclear fuel or technology. A number of EU countries are dependent on them, following a successful Russian strategy of "nuclear energy diplomacy." In January 2023, Hungary stated that it would veto any sanction against the Russian nuclear sector.[48] Given the increasing constraints that Russia has faced in the European oil and gas sectors, the nuclear sector is a potentially attractive alternative for maintaining influence.[49] Since nuclear power plants take many years to build and can operate for decades under contracts that give exclusive rights to the original manufacturer to service them and provide them with fuel, they can create dependencies that last for decades and that are difficult to terminate.

Table 4 shows a list of Russian- or Soviet-designed nuclear reactors of VVER-type (*Vodo-Vodianoi Energeticheskiy Reaktor*, "water-water energy reactor") currently operating in the EU. If companies operating VVER reactors cannot use Rosatom's services or their original replacement components, they face challenges in replacing and maintaining the nuclear-system's equipment.[50] In addition, VVER reactors are dependent on the delivery of fuel from the Rosatom subsidiary, TVEL. Diversification from Russian nuclear fuel supplies for VVER reactors is possible, but it is costly and can take years to implement.[51] Table 4 lists EU nuclear reactors that are or used to be dependent on nuclear fuel provided by TVEL. Map 1 marks their respective locations. Figure 12 shows the amount of imports of nuclear fuel from Russia in the Czech Republic, Finland, Hungary, and Slovakia in 2022 and 2023 (data for Bulgaria is missing). All of these countries were completely dependent on TVEL for nuclear fuel for their VVER reactors in 2022 and 2023, but many of them have started processes to find other suppliers. The Czech Republic, Hungary, and Slovakia increased their imports from Russia in order to create a buffer of additional stock of fuel, in case of a future interruption of supplies.[52]

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[47] Susanne Oxenstierna, "Nuclear Power in Russia's Energy Policies," in *Russian Energy and Security up to 2030*, eds. Susanne Oxenstierna and Veli-Pekka Tynkkynen (New York: Routledge, 2014), 150.
[48] Politico, *Orbán to Veto EU Sanctions against Russian Nuclear sector*, 27 January 2023, https://www.politico.eu/article/orban-to-veto-eu-sanctions-against-russian-nuclear-sector/ .
[49] Pami Aalto, Heino Nyyssönen, Matti Koj and Pallavi Pal, "Russian Nuclear Energy Diplomacy in Finland and Hungary," *Eurasian Geography and Economics*, 58:4, 386–417.
[50] Matt Bowen and Paul Dabbar, *Reducing Russian Involvement in Western Nuclear Power Markets*, Columbia University Center on Global Energy Policy, May 2022.
[51] Darya Dolzikova, *Atoms for Sale: Developments in Russian Nuclear Energy Exports*, 14 February 2023, RUSI, https://rusi.org/explore-our-research/publications/special-resources/atoms-sale-developments-russian-nuclear-energy-exports, 8.
[52] Bellona, *Europe Doubled its Import of Russian Nuclear Fuel for 2023, Data Say*, 15 March 2024.

Table 3. List of Russian-designed nuclear reactors currently operating in the EU and their fuel supplier.

Country	Name	Megawatts	Origin of fuel supplies
Bulgaria	Kozloduy-5	1003	TVEL (Russia) Westinghouse (US) from 2024
Bulgaria	Kozloduy-6	1003	TVEL (Russia) Framatome (France) from 2025
Czech Republic	Temelin-1	1027	TVEL (Russia) Westinghouse (US) and Framatome (FR) from 2024
Czech Republic	Temelin-2	1029	TVEL (Russia) Westinghouse (US) and Framatome (FR) from 2024
Czech Republic	Dukovany-1	468	TVEL (Russia) Westinghouse (US) from 2024
Czech Republic	Dukovany-2	471	TVEL (Russia) Westinghouse (US) from 2024
Czech Republic	Dukovany-3	468	TVEL (Russia) Westinghouse (US) from 2024
Czech Republic	Dukovany-4	471	TVEL (Russia) Westinghouse (US) from 2024
Finland	Loviisa-1	507	TVEL (Russia) Westinghouse (US) from 2024
Finland	Loviisa-2	507	TVEL (Russia) Westinghouse (US) from 2024
Hungary	Paks-1	479	TVEL (Russia)
Hungary	Paks-2	477	TVEL (Russia)
Hungary	Paks-3	473	TVEL (Russia)
Hungary	Paks-4	473	TVEL (Russia)
Slovakia	Bohunice-3	466	TVEL (Russia)
Slovakia	Bohunice-4	466	TVEL (Russia)
Slovakia	Mochovce-1	439	TVEL (Russia)
Slovakia	Mochovce-2	469	TVEL (Russia)
Slovakia	Mochovce-3	440	TVEL (Russia)

Source: Matt Bowen and Paul Dabbar, *Reducing Russian Involvement in Western Nuclear Power Markets,* Columbia University Center on Global Energy Policy, policy paper, May 2022; AP News, *US, French Companies to Supply Fuel to Czech Nuclear Plant*, news article, 28 June 2022; Radio Free Europe, *Bulgaria Moves to Replace Russian Nuclear Fuel Supplies,* news article, 30 December 2022; American Nuclear Society, *Westinghouse to Supply Fuel for Dukovany,* news article, 3 April 2023.

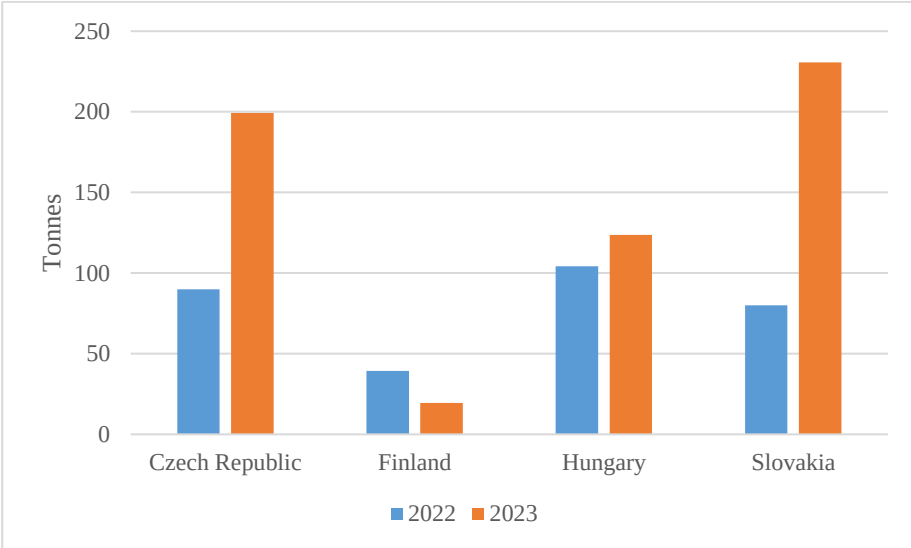

Figure 12: EU imports of nuclear fuel from Russia by EU country in 2022 and 2023; tonnes.
Source: Eurostat.
Note: Data for Bulgaria is missing from the dataset.

Bulgaria has diminished its reliance on Russia by cancelling plans for a new Russian-built nuclear power plant and is well on its way to substituting Russian nuclear fuel imports with those from the US company, Westinghouse, and the French company, Framatome.[53] The Czech Republic signed a deal with Westinghouse for the delivery of nuclear fuel from 2024 onwards. [54] In 2022, Finland cancelled a contract with Rosatom to build a new nuclear power plant.[55] In January 2024, Finland's environment and climate minister stated that the Loviisa power plant was no longer dependent on new shipments of Russian-supplied nuclear fuel.[56]

In Hungary, the Paks nuclear power plant uses VVER reactors that provide approximately half of the country's electricity generation.[57] Hungary has not announced any initiative to find a new supplier of nuclear fuel, and it is the only EU country that is moving forward with a new nuclear power plant, Paks 2, to be built partly

[53] World Nuclear News, *First Westinghouse Fuel at Bulgaria's Kozloduy Nuclear Power Plant*, 22 April 2023, https://world-nuclear-news.org/Articles/First-Westinghouse-fuel%C2%A0at-Bulgaria-s-Kozloduy-nuc.
[54] Dolzikova, *Atoms for Sale*, 10.
[55] Marina Lorenzini, *Cutting Power: How Creative Measures Can End the EU's Dependence on Russian Nuclear Fuel*, Bulletin of the Atomic Scientists, 3 May 2023, https://thebulletin.org/2023/05/cutting-power-how-creative-measures-can-end-the-eus-dependence-on-russian-nuclear-fuel/.
[56] Yle News, *Minister: Loviisa Plant Cuts Dependence on Russian Nuclear Fuel*, news article, 13 January 2024, https://yle.fi/a/74-20069301.
[57] Paks Nuclear Power Plant, *Nuclear FAQ*, accessed 31 July 2023, https://atomeromu.mvm.hu/en/Tudastar/AtomGYIK.

by Rosatom. The Paks 2 project was announced in 2014. It is 80 percent funded by a Russian state-backed loan of EUR 10 billion. The total cost of the project at the time of its announcement corresponded to more than 12 percent of Hungary's GDP. The project has been identified as a major source of risk for corruption and Russian influence.[58] Since the announcement in 2014, it has suffered delays. In May 2023, Hungarian Prime Minister Viktor Orbán met with Rosatom's CEO; the Hungarian government confirmed that they had received the EU Commission's approval to start construction.[59] The Hungarian government's commitment to the project was reconfirmed during the visit of its foreign minister, Péter Szijjártó, to Moscow in April 2024.[60]

Slovakia is completely reliant on Russian nuclear fuel imports and has not signed any contract with alternative suppliers, though it has started cooperating with Westinghouse and Framatome to find alternatives.[61]

A final point to consider in this context, is that nuclear fuel produced by Westinghouse and Framatome is to some degree dependent on Russian enrichment and conversion services, which are processes necessary for converting uranium into nuclear fuel. In 2020, Russia accounted for 40 percent of global uranium conversion capacity.[62] The increased production of nuclear fuel in the EU and the United States could lead to a higher demand for imports of enriched uranium from Russia. It is possible to expand uranium conversion and enrichment capacity in Western countries, but it would require time and investments.[63]

[58] Deák and Weiner, "Hungary," 145–148.
[59] Hirado, *Szijjártó Péter: Hamarosan megkezdődnek a paksi bővítés újabb fontos előkészítő munkálatai* [Péter Szijjártó: New important preparatory works for the Paks expansion will begin soon], 6 May 2023, https://hirado.hu/belfold/cikk/2023/06/05/szijjarto-peter-hamarosan-megkezdodnek-a-paksi-bovites-ujabb-fontos-elokeszito-munkalatai.
[60] Gizińska et al., "Szijjártó in Moscow."
[61] Euractiv, *Slovakia to Continue De-Russification of Nuclear Fuel*, 9 November 2023, https://www.euractiv.com/section/politics/news/slovakia-to-continue-de-russification-of-nuclear-fuel/.
[62] Bowen and Dabbar, *Reducing Russian Involvement*.
[63] Bowen and Dabbar, *Reducing Russian Involvement*.

6 Conclusions

Which EU countries are still dependent on imports of Russian energy?

The EU's dependence on Russian energy is much smaller than it was prior to 2022. The EU no longer imports coal or petroleum products from Russia, while its total imports of crude oil and natural gas diminished by 90 and 83 percent, respectively, from 2019 to 2023. However, a handful of EU countries in Central and Eastern Europe still depend on Russia for energy imports. Austria is still dependent on Russia for natural gas, Bulgaria for nuclear fuel, and the Czech Republic for its crude oil, while Hungary and Slovakia depend on Russia for oil, natural gas, and nuclear fuel. Other EU countries, especially Spain, France, Belgium, and the Netherlands, continue to import LNG from Russia, but they are not dependent since they could buy LNG from other countries at marginally higher prices.

What are the reasons behind this dependency?

In the scope of this report, geography and the location of infrastructure explain many of the reasons behind the dependence of Eastern and Central European countries on Russian energy. Since they are landlocked (with the exception of Bulgaria), they import oil and gas via land-based pipelines that are connected to Russia. In addition, starting in the early 2000s, Russia has been successful in wielding its energy influence to cement its dominant position as an energy provider in Eastern and Central Europe. Diversifying these countries' energy suppliers requires investments in energy infrastructure to better integrate them with that of other EU countries. Investments are also needed to adapt the Russian-built nuclear power plants in Bulgaria, the Czech Republic, Hungary, and Slovakia to process non-Russian fuel.

What is the outlook for ending these dependencies?

The oil trading relationship between Russia and Bulgaria, the Czech Republic, Hungary, and Slovakia is at a turning point. Of these four countries, Bulgaria has come the furthest by ceasing imports of oil from Russia. This is remarkable, since Bulgaria is sometimes considered the EU country most affected by Russian influence, especially in the energy sector.[64] The Czech Republic is also well on its way to ending imports of Russian oil. The governments of Hungary and Slovakia, however, have not provided any clear signal that they want to stop importing Russian oil. The dominant energy company in Hungary and Slovakia, the Hungarian-owned MOL Group, has indicated it is switching to other suppliers by adapting its infrastructure in 2024 and 2025. If Hungary and Slovakia decide to continue importing

[64] Vladimirov and Stefanov, "Bulgaria", 124.

Russian oil beyond 2025, it will likely be for political rather than economic reasons. The same is true for Hungarian and Slovak imports of natural gas from Russia.

Regarding Russian nuclear fuel, Finland has already ended its imports, while Bulgaria and the Czech Republic plan to do so in the near future (2024 or 2025). Slovakia is moving in the same direction, but the time frame is less clear. Hungary stands out as the only EU country still actively pursuing nuclear trade with Russia, on the back of its large financial commitment to Rosatom to build a new nuclear power plant. As long as Hungary's position does not change, the EU will be unable to impose sanctions on Russia's nuclear sector.

Compared to the situation prior to the invasion of Ukraine in February 2022, Russia's influence in the EU energy sector is smaller and concentrated in fewer countries. However, dependencies in even just one or two EU countries can have an outsized effect, since many EU decisions are taken by consensus.

The EU's sanctions and Russia's increased isolation have made it more difficult for Russia to use the threat of cuts in energy exports as a weapon, since it is reliant on the incomes they generate for its federal budget. This dynamic played out in the summer of 2022, when Russia decided to activate its "energy weapon" by cutting gas deliveries to the EU. However, the EU subsequently reduced its dependence on Russian gas, thereby also reducing Russian gas-export revenues. Since Russia delivers most of its natural gas via pipelines, it cannot easily find other buyers without building new pipelines, for example to China. The proposed "Power of Siberia 2" project would connect the Yamal gas fields with China, and allow Russia to re-orient its pipeline gas exports towards China. However, since China is the only potential major buyer of Russian pipelines gas from Yamal, it is difficult for Russia to negotiate a good price.[65] This experience illustrates the difficulty of "weaponising" a mutually beneficial trade relationship: it can be unclear, a priori, who will be hurt the most.

Some of the trading relationships analysed in this report could be described as "false dependencies": they are the product of decisions to prioritise cheap imports from Russia rather than energy security. Such trading relationships could be ended relatively quickly if prioritised by national governments. For example, for a relatively modest investment, Hungary and Slovakia could import crude oil from other countries.

Overall, from a technical and economic standpoint, it should be relatively easy to meet the EU Commission's 2027 deadline to end the EU member states' imports of Russian energy. Any challenges in meeting this deadline will be chiefly related to a lack of political will, rather than technical or economic obstacles.

[65] Financial Times, *Russia-China gas pipeline deal stalls over Beijing's price demands*, 2 June 2024, https://www.ft.com/content/f7a34e3e-bce9-4db9-ac49-a092f382c526.

Appendix

The following pie charts illustrate the shares of fuel types of the total energy supplies of Austria, Bulgaria, the Czech Republic, Hungary and Slovakia. Total energy supply is defined as all the energy produced in or imported to a country, minus that which is exported or stored. Some of these energy sources are used directly while most are transformed into fuels or electricity for final consumption.[66]

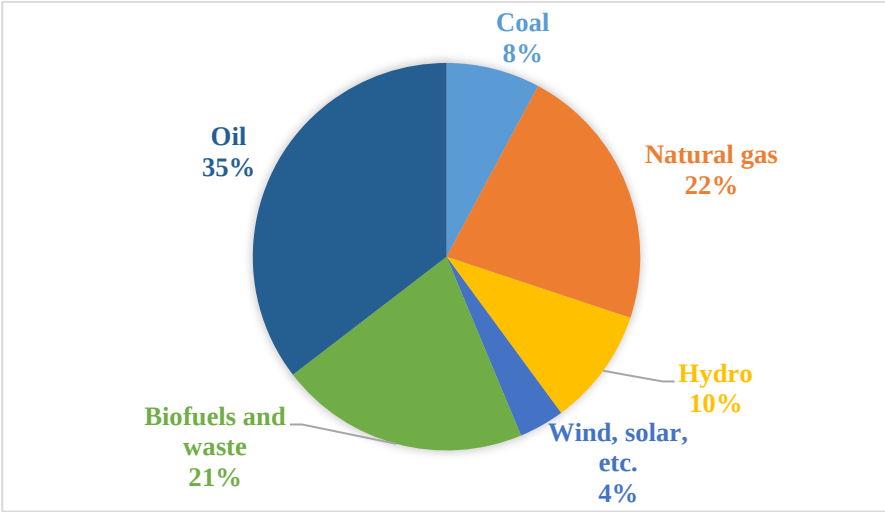

Figure 13: Austria's total energy supply by fuel type in 2022; terajoules.
Source: IEA.

[66] International Energy Agency, *Energy statistics.*

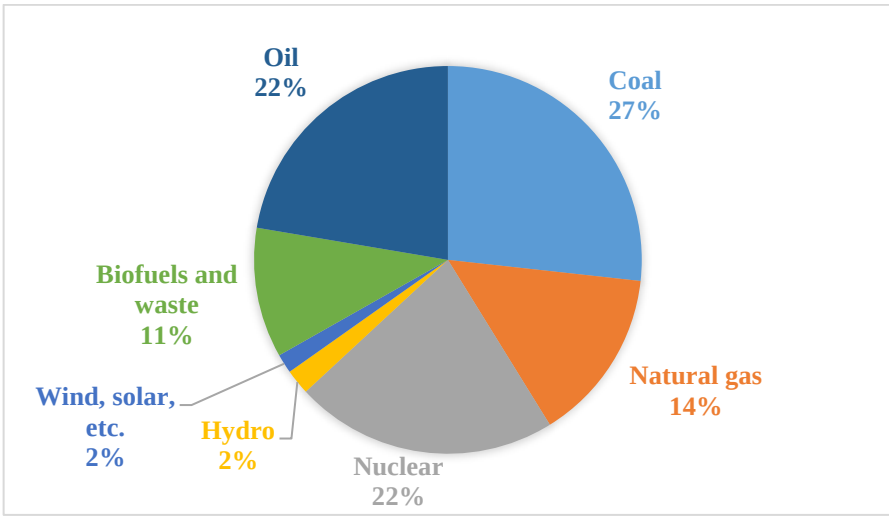

Figure 14: Bulgaria's total energy supply by fuel type in 2021; terajoules.
Source: IEA.

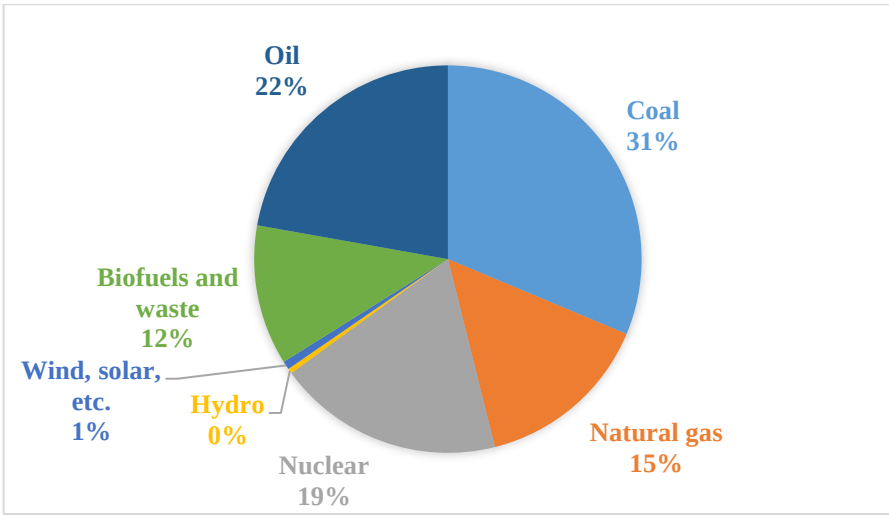

Figure 15: The Czech Republic's total energy supply by fuel type in 2022; terajoules.
Source: IEA.

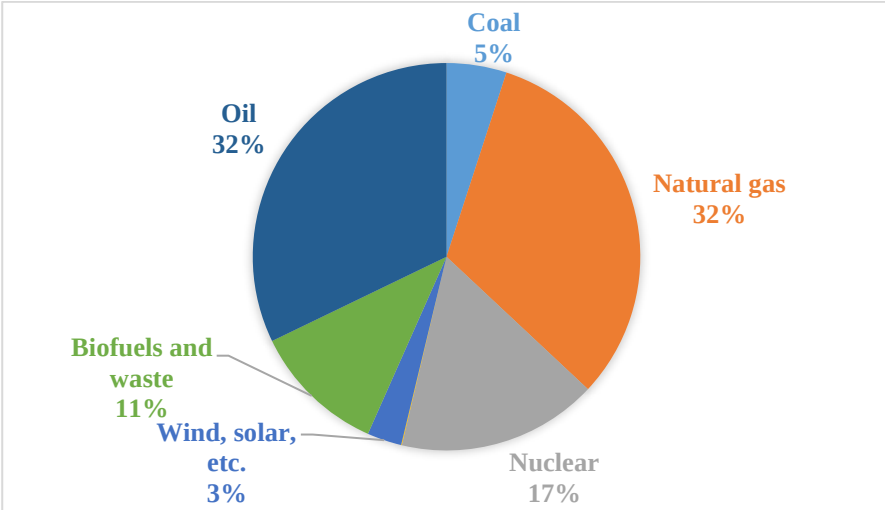

Figure 16: Hungary's total energy supply by fuel type in 2022; terajoules.
Source: IEA.

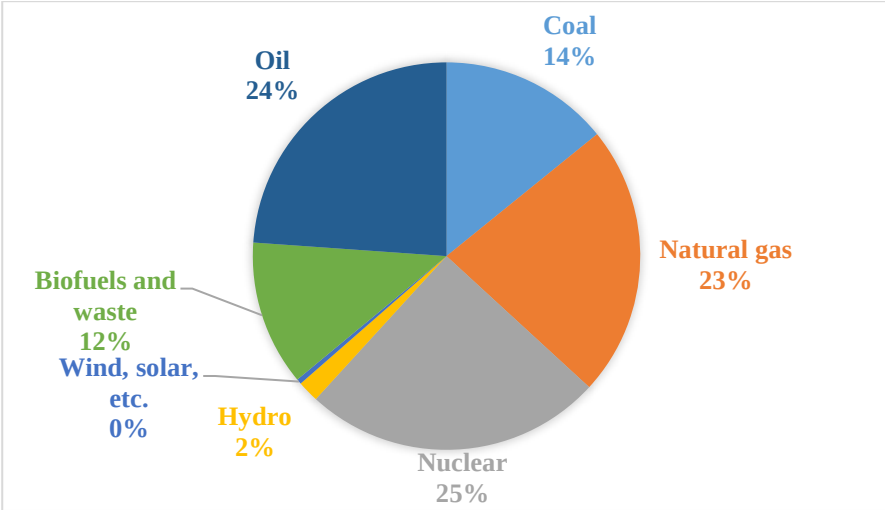

Figure 17: Slovakia's total energy supply by fuel type in 2022; terajoules.
Source: IEA.

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