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# The Last Mile

## Phasing Out Russian Oil and Gas in Central Europe

# The Last Mile: Phasing Out Russian Oil and Gas in Central Europe

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**Cover photo:** Canva

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Founded in late 1989, the Center for the Study of Democracy (CSD) is a public policy institute fostering the reform process through impact on policy and civil society. CSD's mission is "building bridges between scholars and policy-makers". Since 2014, CSD has pioneered the assessment of Russian economic influence through the Kremlin Playbook series of reports, focusing particularly on Russia's weaponisation of energy and state capture to exert outsized influence over decision-making in strategic economic and political areas.

# About CREA

The Centre for Research on Energy and Clean Air (CREA) is an independent research organisation focused on revealing the trends, causes, health impacts, and solutions to air pollution. CREA uses scientific data, research, and evidence to support the efforts of governments, companies, and campaigning organisations worldwide to move towards clean energy and clean air, believing that effective research and communication are the keys to successful policies, investment decisions, and advocacy efforts.

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CREA Centre for Research on Energy and Clean Air

# Key findings

- **Hungary and Slovakia's imports of Russian crude oil** since the start of the full-scale invasion of Ukraine **sent the Kremlin EUR 5.4 bn in tax revenues –** the equivalent of the cost of purchasing 1,800 Iskander-M missiles that have been used to destroy Ukrainian infrastructure and kill Ukrainian citizens.
- The **EU's oil derogation for Hungary and Slovakia has weakened sanctions unity**. Both states have used their exemption to threaten vetoes on EU sanctions, tying their stance to continued Russian energy transit.
- Hungary and Slovakia show **no real signs of decoupling from Russian crude despite the EU legal text stating this was the exemption's purpose**. Hungary increased its Russian crude reliance from 61% pre-invasion to 86% in 2024, and Slovakia remained almost 100% dependent on supply from Moscow.
- **Hungarian oil and gas major MOL captured the full benefit of discounted Russian crude** without passing savings on to consumers. MOL's operating income (profitability) rose by 30% in comparison to pre-invasion levels even though domestic pre-tax fuel prices in Hungary remained 5% above the EU average, in 2024.
- **A loophole in the sanctions** has allowed Slovakia to increase the imports of Russian crude and to export Russian-derived oil products worth EUR 520 million to Czechia in 2024.
- **Phasing out Russian oil is fully feasible** for Hungary and Slovakia, as the Adria pipeline from Croatia supplying non-Russian crude can meet their combined needs. The MOL-controlled refineries in both countries are technically capable of processing non-Russian crude.
- **MOL serves as a vehicle for the Russian influence in the region,** while expanding its market share in Central and Southeastern Europe.
- Despite the EU's push to reduce dependency on Russian gas, Hungary and Slovakia have significantly ramped up their imports via the TurkStream pipeline – transforming **Hungary into a Kremlin-backed gas hub for Central and Southeast Europe** that undermines EU diversification efforts, and reinforces opaque, politically captured networks that entrench Russian influence.
- The **EU must end the exemption for Russian crude pipeline imports under Regulation 833/2014,** which has allowed Hungary and Slovakia to continue and even increase imports more than three years after the invasion.
- **MOL should allow its long-term agreement with Lukoil** for the delivery of crude oil via the Druzhba pipeline **to expire at the end of June 2025**. Any extension of the supply contract should be viewed as a hostile strategy to lock the region into long-term dependence on volatile Russian fossil fuels that undermines the REPowerEU plan.
- In 2024, **Hungary and Slovakia's reliance on Russian pipeline gas supply increased to 70% up from 57% in 2021**. Altogether the two countries' imports of Russian pipeline gas fell by only 5.5%, whilst the rest of the EU reduced imports by 81% compared to pre-invasion levels.
- **Europe can phase out Russian gas without risking supply security**. The EU should set a legal deadline for phasing out all Russian pipeline gas imports by the end of 2025. This should include prohibiting flows through TurkStream and be tied to the review and enforcement of the REPowerEU targets.
- **Several EU countries remain heavily dependent on the Kremlin's nuclear monopoly, Rosatom**, both through fuel imports and large-scale, politically driven projects like Hungary's Paks II nuclear expansion.
- In 2024, Hungary's and Slovakia's combined imports of Russian nuclear fuel were 105% above pre-invasion levels driven mostly by Slovakia's increased purchases. **The EU should sanction Rosatom and all of its subsidiaries** to fast-track the process of reactor fuel diversification.

# Contents

# Introduction

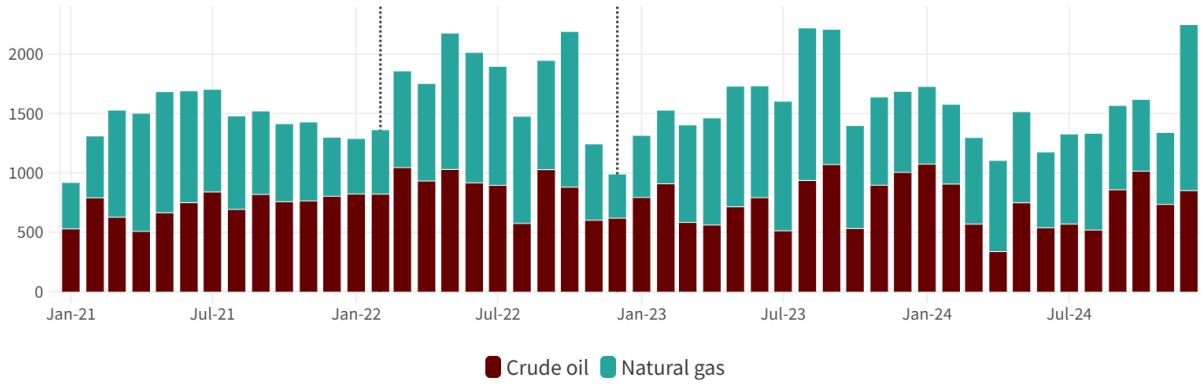
The EU granted the Central European countries of Hungary, Slovakia and Czechia an exemption from the Russian crude oil ban as part of its sixth sanctions package adopted in June 2022. This exemption allowed these landlocked countries to continue receiving Russian crude by pipeline (via the southern Druzhba pipeline) beyond the general EU embargo on Russian seaborne oil, which took effect in December 2022. The purpose of the EU derogation on Russian crude oil imports was to give these three landlocked countries extra time to reduce reliance on Russia.

Hungary and Slovakia have exploited the exemption, offering weak justifications for continuing Russian crude imports, which in 2024 remained above pre-invasion levels – violating the intent of EU legislation. Therefore, the EU needs to immediately end the derogation from the ban on the import of Russian oil that it has provided to the Central European Member States. Hungary and Slovakia have leveraged the exemption to undermine a common EU position on Ukraine and on strengthening sanctions against Russia, which must be agreed upon by all 27 Member States. In January 2025, Hungary threatened to veto the extension of EU sanctions against Russia, a move that could have resulted in the unfreezing of over USD 200 bn in Russian assets within the EU. This threat was explicitly tied to demands for the continuation of Russian crude oil transit through Ukraine and to the buyers in Hungary, Slovakia and Czechia.

Similarly, Slovakian Prime Minister Robert Fico threatened to stop all financial and military aid to Ukraine unless the EU summit's conclusions – held in March 2025 – explicitly "include[d] a requirement to reopen the transit of gas through Ukraine to Slovakia and Western Europe". Unlike their EU counterparts who have – at least publicly – committed to ending reliance on Russian energy sources, Hungary and Slovakia have unambiguously signalled their intention to maintain their strategic dependence on Russian imports.

### Figure 1 – Hungary and Slovakia's monthly import volumes of Russian crude oil and natural gas

Thousand tonnes | 2021 to 2024




Source: CREA and CSD's analysis based on Eurostat data.

*Note: Dotted lines represent the beginning of Russia's full-scale invasion of Ukraine and the start of EU's ban on seaborne Russian crude oil imports respectively.*

Hungary and Slovakia have imported 27 mn tonnes of crude worth EUR 13 bn and 32 billion cubic meters (bcm) of natural gas (EUR 20 bn) since the start of Russia's full-scale invasion until the end of 2024. The intention of the oil derogation[1] was to allow these EU Member States more time to reduce their reliance on Russian imports. In reality, Russian oil purchases have barely changed and in fact import volumes for both Hungary and Slovakia remain 2% higher in 2024 compared to pre-invasion levels (2021). The EU exemption legislation has no clear end date, meaning that MOL – the sole refiner in both Hungary and Slovakia and the last company in Europe still importing Russian crude oil – can legally continue its purchases, with no incentive to end imports that help finance Russia's invasion of Ukraine.

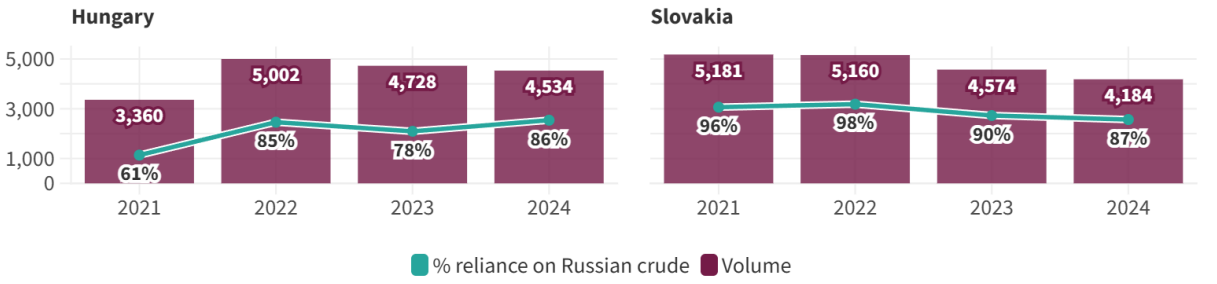
This report highlights that there are **no technical and economic reasons for maintaining the EU's sanctions exemption for Central Europe**. The full decoupling from Russian energy in the region is not only feasible but essential for long-term energy security, European unity and to enhance the impact of the sanctions. Finally, the analysis also offers concrete policy measures to accelerate the Russian energy phaseout in Europe.

Bulgaria has already proven that terminating the exemption from the EU sanctions and ending reliance on Russian oil is possible by completing an overnight transition away from a dependence on Russian energy. The country has since experienced stable or even falling fuel prices.

# No sign of decoupling from Russia

### Figure 2 – Hungary and Slovakia's Russian crude oil imports by year

Thousand tonnes | 2021 to 2024




Source: CREA and CSD's analysis based on Eurostat data.

Hungary and Slovakia have shown no real intention of phasing out Russian crude oil. The Russian crude import levels have remained high despite major disruptions to the Druzhba pipeline that practically halted imports for several weeks at a time in 2024.[2] Hungary increased its imports by 49% from 3.4 mn tonnes in 2021 to 5 mn tonnes in 2022 where it has since remained stable. Slovakia's imports have stayed roughly stable since the start of the full-scale invasion. Yet, in 2024 alone, both countries imported a combined 8.7 mn tonnes of Russian crude, 2% more than they did in 2021. Since the start of the full-scale invasion of Ukraine until the end of 2024, Hungary has imported 13.5 million tonnes of Russian crude oil (EUR 6.3 bn), while Slovakia has imported 13 million tonnes (EUR 6.1 bn).

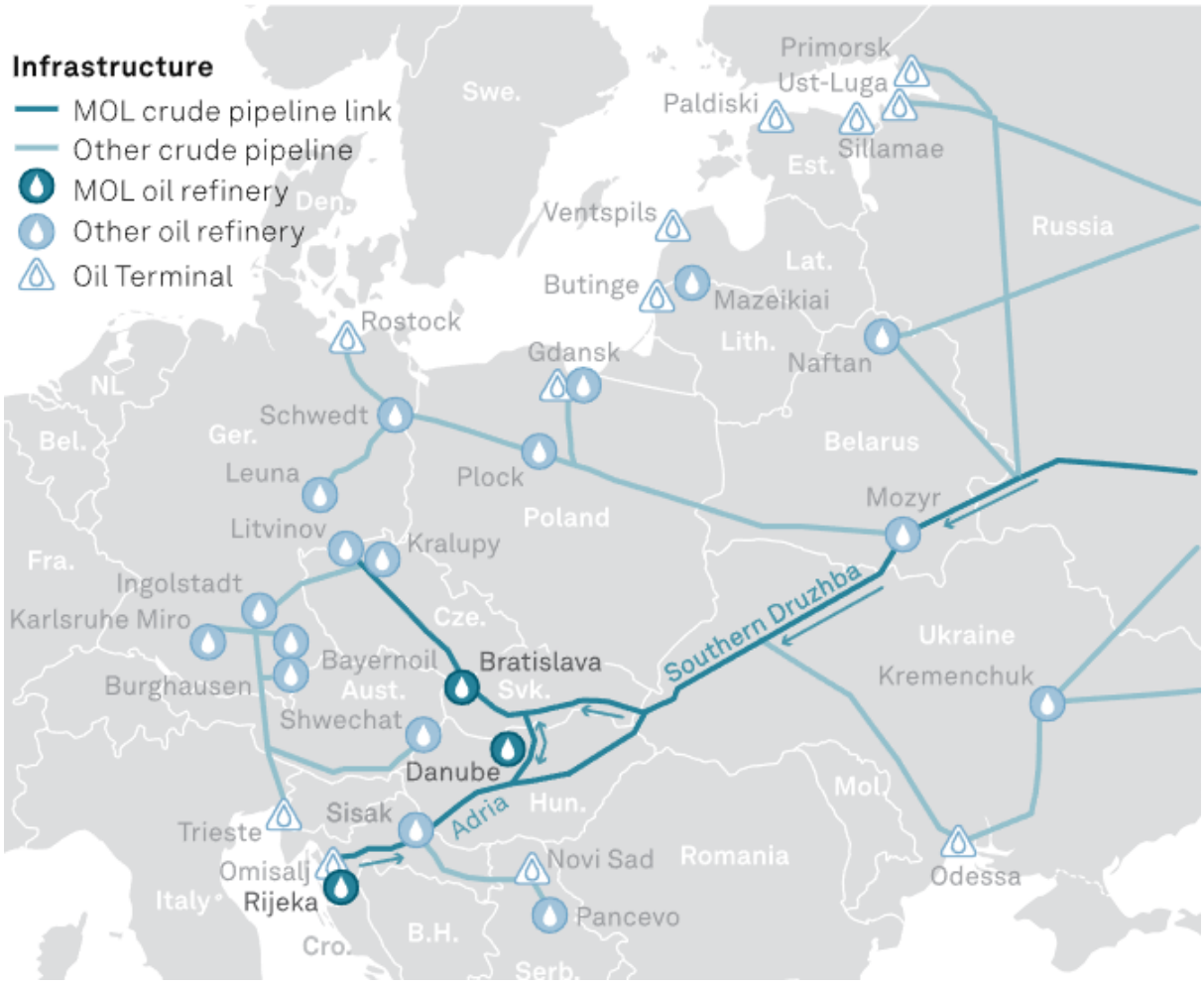
[1] The derogation states that "Member States take all necessary measures to obtain alternative supplies so as to ensure that imports by pipeline of crude oil from Russia are made subject to the prohibitions as soon as possible".

[2] In April and June of 2024, the Druzhba pipeline experienced two unexplained interruptions. Additionally, at the end of June, Ukraine sanctioned Russian oil giant Lukoil, halting all supply to Hungary and Slovakia for multiple weeks.

Hungary and Slovakia's imports of Russian crude oil since the start of the full-scale invasion of Ukraine have sent the Kremlin EUR 5.4 bn in tax revenues. The average cost of one Iskander-M missile, regularly used by Russia to attack Ukrainian cities, is around USD 3 mn, meaning the Kremlin's tax revenues from oil exports to Hungary and Slovakia would be enough to finance the purchase of 1,800 missiles.

Both Hungary and Slovakia depend on two crude pipelines: the Druzhba, which delivers exclusively Russian crude via Ukraine, and the Adria pipeline, operated by the state-owned Croatian company JANAF, which transports non-Russian crude from the Omišalj Oil Terminal in Croatia on the Adriatic coast. Hungary receives its non-Russian crude supply directly through the Adria pipeline, while Slovakia accesses this non-Russian oil through an interconnection where the Adria feeds into the southern part of the Druzhba pipeline.

### Figure 3 – Crude oil pipelines and refineries across Central and Eastern Europe



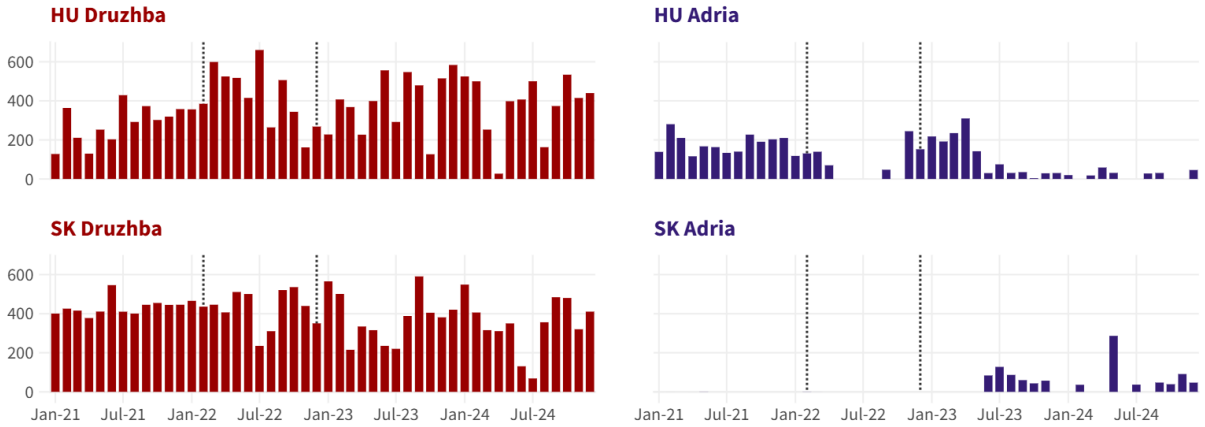

Source: This map was taken from S&P Global Commodity Insights.

The Hungarian oil and gas major MOL owns the only refineries in both countries (the Danube refinery in Hungary and the Bratislava refinery in Slovakia). Therefore, MOL decides on the mix of Russian and non-Russian oil processed in both countries.

While the Hungarian state does not have complete ownership of MOL, it exerts significant influence through its control of three foundations that collectively hold a 30.49% stake in the company, making it the largest shareholder with effective control over MOL's strategic decisions. This creates a situation where the Hungarian government's stance on Russian energy supply is directly reflected in MOL's corporate decisions.

## Figure 4 – Hungary and Slovakia's monthly crude oil imports by pipeline

Thousand tonnes | 2021 to 2024




Source: CREA and CSD's analysis based on Eurostat data.

*Note: Dotted lines represent the beginning of Russia's full-scale invasion of Ukraine and the start of EU's ban on seaborne Russian crude oil imports respectively.*

Historically, Hungary has had a more diversified import mix whereas Slovakia has been almost entirely dependent on Russian crude. In 2021, Hungary was 61% reliant on Russian crude. However, six months after the start of the Russian full-scale invasion of Ukraine, non-Russian crude oil imports via the Adria pipeline decreased to zero and Hungary's overall reliance on Russian crude shot up to 85% for the whole of 2022. MOL did secure a one-year contract in May 2023, for 2.2 mn tonnes of crude via the Adria pipeline to refineries in Hungary and Slovakia; however, only 968 thousand tonnes were actually delivered during this period[3]. In early 2025, MOL signed another one year contract for 2.1 mn tonnes via the Adria pipeline that runs until the end of 2025 even though the flows via the Adria pipeline mostly disappeared in 2024, as Hungary's dependence on Russia reached 86%. Slovakia began to import some non-Russian crude via the Adria pipeline in the latter half of 2024 (261 thousand tonnes), reducing its reliance from 96% in 2021 to 87% in 2024.

### Discounted Russian crude feeds Hungarian state coffers

When fuel prices started rising rapidly in 2021, the Hungarian government imposed a price cap on both gasoline and diesel, which came into effect in November 2021. While the exact limit of the price cap was adjusted multiple times, it was ultimately scrapped in December 2022.

Subsequently, in the first quarter of 2023, the average prices of petrol and diesel pre-tax in Hungary increased to EUR 932 and EUR 1,021 per tonne respectively, which were 14% and 8% higher than the EU average.[4] The discount for Russian crude compared to non-Russian oil imported via the Adria pipeline peaked during this period, averaging a 77% discount, and all this profit appears to have been captured by MOL – not passed onto consumers through lower fuel prices. As the Russian crude oil price discount narrowed to 20% in 2024, both gasoline and diesel prices remained approximately 5% above the EU average in Hungary.

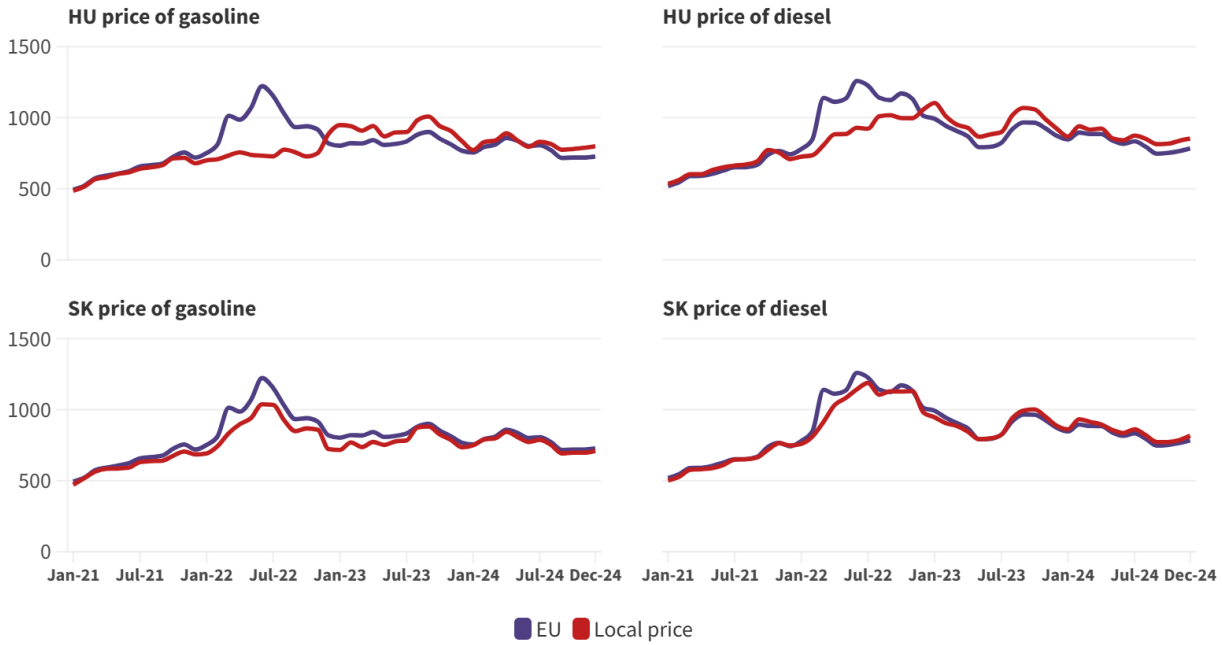
In Slovakia, gasoline prices have consistently remained just below the EU average (2.3% lower in 2024), while diesel prices have generally aligned with EU averages but have risen to 2.9% above the EU average in 2024.

[3] According to Kpler data the biggest exporters of crude oil to the Croatian port of Omišalj that then sends the crude through the Adria pipeline were: Iraq, Azerbaijan, Kazakhstan, Norway, Nigeria, Libya and the UAE between June 2023 and the end of May 2024.

[4] Fuel prices were taken from the EU's weekly oil bulletin.

## Figure 5 – Pre-tax prices of gasoline and diesel in Hungary and Slovakia compared to the EU average

EUR per tonne | 2022 to 2024




Source: CREA and CSD's analysis based on the EU's Oil Bulletin.

Likely as a result of importing discounted Russian crude and selling refined fuels at prices similar to or even above those in other Member States, MOL's operating income rose by 34% year-on-year to USD 26.4 bn in 2022 and has remained around USD 25.3 bn in both 2023 and 2024.

MOL's profits did not increase further partially due to the decision of the Hungarian government to impose a steep windfall tax on excess profits generated by petroleum companies (almost exclusively MOL) from June 2022. The windfall tax was originally set at 25% of the difference between the price of Russian crude and the international market price (Brent) per month. The windfall tax rate was later increased to 95% which came into effect in December 2022. A large part of MOL's profit has therefore been controlled by the Hungarian state and used to stabilise the country's increasingly strained budget. According to their financial reports, MOL paid USD 521 mn in windfall taxes in 2022, which decreased to USD 2 mn and USD 15 mn in 2023 and 2024, respectively.

An investigation by Hungarian nonprofit G7 estimated that between the start of 2022 and May 2024, the Hungarian Government and MOL together achieved a total of EUR 1.7 bn in "extra profit" from purchasing discounted Russian crude oil while maintaining high consumer fuel prices.

Orbán's government has become increasingly reliant on domestic corporate allies and taxes earned from MOL as an essential financial buffer. This dependency has grown as the European Commission has withheld national recovery and resilience funds to pressure Hungary to address its rule of law and corruption issues.

## The Russian connection

MOL has, over the last two decades, emerged not simply as one of the biggest oil companies in the region, but as a powerful enabler of Russian economic and political influence in Europe. The company has also served as an instrument for transferring public resources into the hands of oligarchic networks close to the government, as demonstrated by the deepening of these ties in 2021 through the establishment of a joint public trust between MOL and the Hungarian Government. MOL's market success has also been closely linked with the regional expansion of Russia's largest private oil company, Lukoil, which has been the largest supplier of Russian crude to Hungary and Slovakia.

Initially a state-owned enterprise in the early 2000s, MOL underwent a privatisation process, closely directed by the Hungarian government. By the time Viktor Orbán returned to power in 2010, MOL had become a key element of the country's economy as it was the biggest employer in the country and the most important instrument of economic policy. Hungary then politically supported MOL's expansion across the Balkans and beyond.[5]

Between 2009 and 2013, MOL became the largest shareholder in INA, Croatia's national oil company, through a controversial deal that later resulted in the sentencing for corruption of the former Croatian Prime Minister Ivo Sanader. The company also acquired downstream assets in Slovakia, Slovenia, Czech Republic and Romania, often in circumstances that bore striking resemblance to how Lukoil expanded during the 1990s and early 2000s – acquiring undervalued assets, leveraging political relationships, and utilising regional economic asymmetries.

MOL's expansion also came on the back of closer ties with Russia. While many European companies have sought to diversify away from Russian oil and gas since the annexation of Crimea in 2014, MOL has instead doubled down on oil deals with Lukoil. The Hungarian government pressured the EU to secure an exemption from the EU ban on Russian oil imports, directly benefiting MOL. Simultaneously, Bulgaria threatened to veto the EU oil sanctions package if Lukoil did not receive a similar derogation for seaborne imports to Bulgaria.

MOL and Lukoil have been actively cooperating since 2003 in both the supply of crude and the operation of downstream assets such as retail gas stations. MOL concluded a 5-year contract with the Russian company at the end of 2019 for the delivery of crude oil until the end of June 2025. At the same time, MOL became a front runner to purchase the Neftohim refinery in Burgas on the Bulgarian Black Sea coast, which is owned by Litasco, Lukoil's international trading arm. To back the deal, the Hungarian Prime Minister Orbán visited Bulgaria at the end of 2024 signalling that the proposed deal for the refinery is part of a larger strategic alignment that includes the continuation and expansion of Russian gas flows through TurkStream too.

[5] Shentov, O., Stefanov, R., and Vladimirov, M., *The Russian Economic Grip on Central and Eastern Europe*, Routledge, 2019.

## The Kremlin playbook in the Hungarian oil sector

The continued import of Russian oil into Hungary is not simply the result of technical or infrastructural constraints. It is the product of a deeply entrenched network of intermediaries and offshore trading structures that have enabled Russian companies to maintain their grip on Hungary's energy sector – and profit handsomely in the process. At the heart of this system is **Normeston Trading SA**, a company with complex ownership links, offshore registrations, and a history of shadowy dealings with Russian state oil firms and Hungary's MOL Group. For example, Normeston accounted for a quarter of Hungarian and Slovak imports in 2015 – generating substantial profits by acting as a middleman for Russian oil exports.

Originally registered in **Belize**, later in **Cyprus** and **Switzerland**, Normeston has served as a **primary conduit for Russian crude into Hungary and Slovakia**. According to both Hungarian and Russian sources, Normeston was the dominant intermediary in the continued flow of Russian oil to MOL following the 2022 full-scale invasion of Ukraine – a role that allowed it to operate below the radar of EU sanctions scrutiny.

Normeston's ownership and leadership trace back to **Imre Fazekas**, a veteran Soviet-era oil trader and former representative of Yukos. Fazekas is widely regarded as the architect of Russian-Hungarian oil ties in the post-Communist period, maintaining close relationships with executives at **Lukoil, Bashneft,** and later **Rosneft**. He is also known to be a trusted ally of MOL CEO Zsolt Hernádi, and acted as a company advisor during the controversial acquisition of Croatia's INA – a case that led to Hernádi's conviction in absentia for bribery by a Croatian court.

From 2016 onward, **László Csőke**, a Hungarian businessman with ties to both Moscow and Dubai, took over as Normeston's official representative. A graduate of MGIMO – Russia's elite diplomatic academy – Csőke had previously served as a board member at CEGE and OT Industries, both companies later absorbed by MOL. His move to **Dubai in 2023** coincided with Normeston's shift towards more discreet operations, likely to insulate key actors from scrutiny.

Normeston's corporate history is inseparable from the privatisation and resale of Russian oil assets in Central Europe. The company was involved in the acquisition and later resale of **Lukoil's retail networks in Hungary (2014) and Slovakia (2021)** – both of which were eventually bought by MOL. Normeston also sold pipeline crude to MOL's Slovak subsidiary **Slovnaft**, further blurring the lines between independent intermediary and de facto trading arm of the MOL-Russia nexus.

Crucially, **Bashneft**, a Russian state-owned oil company at the time, sold Normeston up to **USD 4.1 bn worth of crude oil in 2014 alone**, more than the entire annual volume imported by Hungary from Russia that year. Trade data shows that between 2012 and 2021, Russian oil became on average **5% more expensive when reaching Hungary** than at the point of export – suggesting that **intermediaries like Normeston siphoned off hundreds of millions of euros** through hidden markups.

This ecosystem – sustained by offshore networks, compromised legal oversight, and the politicisation of corporate governance – reveals how state capture and foreign influence are mutually reinforcing. Ending Hungary's dependence on Russian oil will therefore require more than infrastructure upgrades: it demands dismantling the Kremlin playbook embedded within its national oil sector.

At the end of 2014, MOL's subsidiaries acquired 138 retail gas stations from Lukoil in Hungary and Slovakia, thus solidifying the Hungarian company's dominant position in Central Europe. The strategic partnership between MOL and Lukoil is lucrative for both firms: the Russian firm maintains indirect market presence through its crude deliveries while avoiding Western sanctions, and MOL expands its market presence under the state's diplomatic umbrella. MOL controls critical energy assets, including refineries and storage facilities, and its control over fuel distribution is so significant that any disruption in its operations effectively paralyses the country's economy.

In Hungary, MOL's market dominance has translated into influence over politics and civil society. It has become a key element of the ecosystem that contributes to the Hungarian state's impact over public discourse in the country. The MOL Foundation funds numerous civic, cultural, and educational projects that like many other public institutions, blur the line between corporate philanthropy and political indoctrination. Its CEO enjoys privileged access to decision-makers, and its interests are often treated as indistinguishable from those of the state. Additionally, Hungary's Mathias Corvinius Collegium (MCC) is a think tank largely funded through dividends from oil giant MOL *"using Russian oil profits to promote Orbán's agenda"*. In effect, MOL has captured key government institutions operating as an instrument of political power, at home and abroad – a model borrowed from the Kremlin Playbook.

The Hungarian oil group MOL is looking to expand its control of European oil markets further by participating in a tender to buy the Lukoil owned refinery in Burgas, Bulgaria according to Prime Minister Orbán. The Neftohim Burgas oil processing facility is the largest one in Southeast Europe, and has benefited from being a price setter on the regional market, controlling more than 90% of the Bulgarian wholesale market and exporting large volumes of petroleum products all across the region and in key European markets such as Italy, the Netherlands and Greece.

## Phasing out Russian oil: Mission possible

The European Commission announced a revised Roadmap in early May 2025 to fully wean itself off Russian energy by the end of 2027. The Roadmap clearly says that Central Europe already has the necessary alternative pipeline infrastructure to diversify away from Russian oil. It calls on Hungary and Slovakia to develop concrete national plans to phase out Russian oil imports through urgent infrastructure upgrades, accelerated refinery adaptation, and regional coordination to eliminate remaining chokepoints in Central Europe. Yet, despite these recommendations, Hungary and Slovakia are entrenching rather than dismantling their dependence on Russian oil.

Hungary has consistently opposed an EU-wide ban on Russian crude imports as long as "it makes the country's energy supply impossible." The Hungarian government has claimed without providing evidence that it would need EUR 200 mn in EU funding to expand the capacity of alternative pipelines and an additional EUR 500 mn – a figure revised down from EUR 700 mn – to reconfigure refineries in both Hungary and Slovakia to process non-Russian crude.

In February 2023, MOL representatives participated in technical tests conducted with JANAF, which confirmed that the Adria pipeline's capacity stands at 1.2 million tonnes per month, translating to an annual throughput of 14.4 million tonnes, or more than the total combined oil consumption needs of Hungary and Slovakia. The Bratislava refinery processes between 5.1 and 5.8 million tonnes of crude oil annually, while the Danube refinery handles 6 to 6.4 million tonnes, therefore both countries' maximum import volume would total between 11.1 and 12.2 million tonnes per year. The application of drag-reducing agents (DRA) could raise the Adria pipeline's operational capacity to 16.4 million tonnes per year, contingent on the number of active pumps along the route.

Nonetheless, the Hungarian Foreign Minister Péter Szijjártó continues to assert that JANAF – the Croatian company that operates the Adria pipeline – has failed to undertake the necessary investments to enhance

capacity and that the figures provided by the company have never been independently verified. Croatia publicly rebuffed the Hungarian claim in the summer of 2024 when Ukraine stopped the transit of Lukoil-owned crude through Druzhba, saying that the Adria pipeline can fully replace the Russian oil supply.

Hungary has cited another principal objection to sourcing its oil from the Croatian port of Omišalj: the Adria pipeline operator JANAF's alleged excessively high transit fees, and Croatia's supposed lack of reliability as an energy trading partner. Hungary's reluctance to rely on Croatia's oil exports may be stemming less from structural or economic issues and more from the protracted legal dispute that MOL has with the Croatian oil and gas company INA, which has created a backdrop of tension and mistrust between the two countries.

While the precise size of the transit fees remains undisclosed, JANAF has clarified that pricing is determined through negotiations using a methodology that considers pipeline length and utilisation rates that is equal for all users. The transit fee charged for oil transported through the Druzhba pipeline is also partially determined by the volume and distance it travels through the pipeline. By this logic, importing oil from Croatia should be economically advantageous for Hungary, given that the **Adria pipeline to the Hungarian border spans only 289 kilometres** – far shorter than the nearly 700 kilometre stretch of the Druzhba pipeline running through Ukraine. Moreover, JANAF has emphasised that beyond economic factors, reliance on oil transit through a conflict zone entails inherent security risks, a consideration absent from Hungary's pricing complaints.

MOL has also confirmed that its refineries can process non-Russian crude. In an interview, Zsolt Huff – the Managing Director of Downstream Production at MOL – admitted that their refineries can operate without Russian crude but has claimed that this would reduce their yield efficiency, meaning they extract less refined product per unit of crude, which effectively increases their unit costs.

MOL's own operational history during Druzhba disruptions confirms this adaptability to pivot away from reliance on Russian crude. MOL began testing alternatives to Russian crude as early as 2015, and during multiple disruptions to the Druzhba pipeline, has operated without Russian supply. In April 2019, the Druzhba pipeline was contaminated with high levels of organic chlorides, forcing a suspension of deliveries that lasted until June. During this period, Hungary increased its imports of non-Russian crude via the Adria pipeline, reducing its reliance on Russian crude to just 48%.

Most refineries in Central Europe are configured to refine more sour Russian crude – which has a high sulfur content – and can take some competitive advantage from doing so. However, there is nothing to prevent them from reconfiguring these refineries to process crude from different sources. This is clearly demonstrated by the NIS refinery in Serbia, owned by Gazprom Neft. When Croatia's temporary exemption to the EU's Russian crude oil ban ended at the end of 2023, the NIS refinery swiftly transitioned from Russian crude to Iraqi oil without significant operational disruption. Likewise, chemical analysis of the Lukoil refinery in Burgas reveals its capability to process 24 different crude blends, from Norwegian Brent to varieties from Saudi Arabia and Guyana.

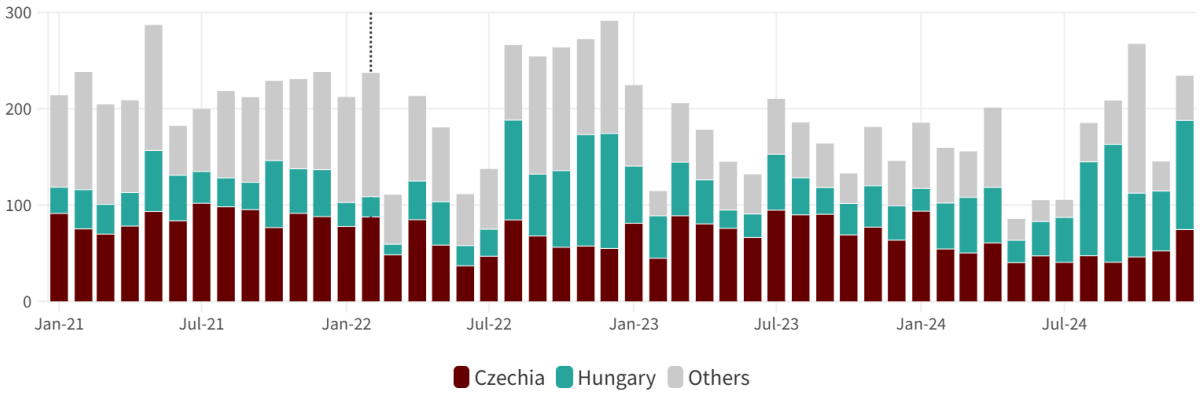
Additionally, the Bratislava refinery and Danube refinery have a Nelson complexity index (NCI) of 11.5 and 10.6 respectively, further indicating their ability to process a wide variety of crude. Refineries that have a higher NCI can handle lower quality crude oil or produce more value-added products. An NCI of 10 and above is generally considered a high degree of flexibility in refining a broad range of crude oils.

MOL has stated that it is "responsible for the region's energy supply". Reliance on Russian oil via the Druzhba pipeline entails huge security of supply risks as it flows through a war-zone. This leaves buyers exposed to potential energy blackmail by the Kremlin. Energy suppliers must learn from the 2022 energy crisis in Europe, triggered by Russia's full-scale invasion of Ukraine, which forced the EU to spend over EUR 800 bn on consumer subsidies to ease the supply crunch. This highlights the myopic belief that relying on slightly cheaper Russian fossil fuels in the short term is a strategically and economically sensible decision.

# A second Russian oil revenue stream

### Figure 6 – Slovakia's monthly oil product exports by destination country

Thousand tonnes | 2021 to 2024 | Top two countries




Source: CREA and CSD's analysis based on Eurostat data.

*Note: Dotted lines represent the beginning of Russia's full-scale invasion of Ukraine.*

Hungary and Slovakia are not benefitting only from buying discounted Russian crude oil but also from another EU exemption allowing the two countries to re-export oil products to Czechia that have been made from Russian crude. Originally set to expire in December 2023, the derogation was first extended to December 2024 after both countries successfully lobbied the EU using the same unsubstantiated claims about infrastructure limitations, capacity constraints, and security of supply concerns. In the EU's 15th sanctions package against Russia (announced in December 2024), the EU again extended the exemption for Slovakia to export oil products to neighbouring countries by six months until June 2025 – despite the Czech Ministry explicitly stating that "Czechia does not see a reason why the exemption should be extended."

MOL's Slovak subsidiary, Slovnaft, is the primary beneficiary of the ongoing trade of petroleum products made from mostly Russian crude. In 2024, exports to Czechia represented 46% of Slovakia's total oil product exports, sending 710 thousand tonnes of oil products valued at EUR 520 mn. Hungary, through MOL, exported an additional 39 thousand tonnes to Czechia worth EUR 40 mn.

If the legal loophole had been terminated by the EU, Slovakia would have been forced to limit the fuel sales only to the domestic market or to non-EU countries – logistically an impossible task. A restriction on Hungary and Slovakia selling oil products made from Russian crude would have also incentivised MOL to begin importing non-Russian crude to maintain exports to other EU Member States.

The exemption also benefits the multinational oil company Orlen, which controls the largest network of gas stations in Czechia. In 2024, the average price of gasoline and diesel in Czechia was EUR 1,490 and EUR 1,450 per tonne respectively. Meanwhile, traders of Slovakian gasoline and diesel exported at an average export price of EUR 750 per tonne, securing an almost 100% markup on sales.

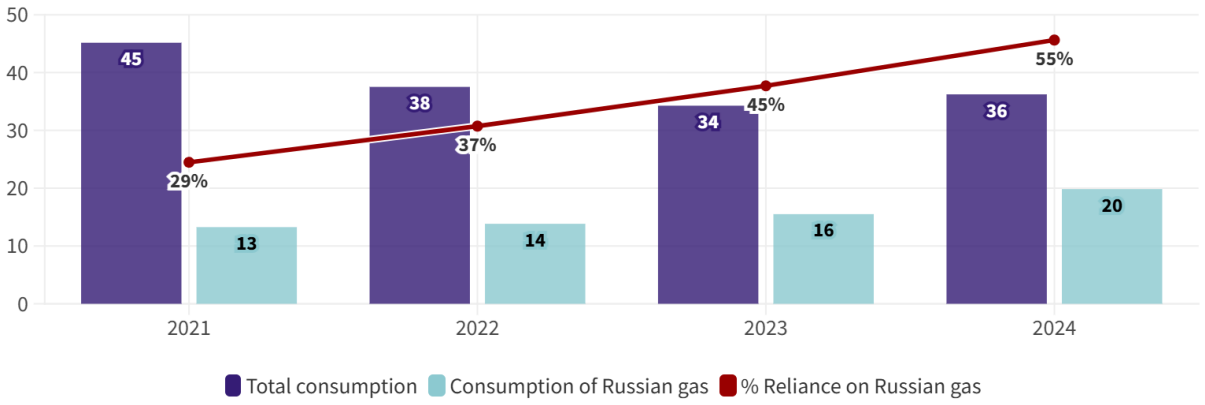
When compared to Germany (Czechia's biggest supplier, providing 67% of total oil product imports), Slovakia offers only modest price discounts: diesel carries a mere 7% discount (EUR 53 per tonne) while gasoline provides just a 6% discount (EUR 47 per tonne). For traders, switching exclusively to German fuel imports would result in only an 11-12% reduction in their markup.

# The Russian gas fortress

More than three years after the Kremlin's full-scale invasion of Ukraine, the EU has reduced its pipeline natural gas imports from Russia from over 40% in 2021 to just 11% in 2024. This drop happened partly because Gazprom stopped supplying certain European companies that wouldn't pay in rubles. In addition, exports were halted through the Yamal pipeline; the Nord Stream gas link was blown up; and the transit agreement between Ukraine and Russia expired at the end of 2024, cutting most pipeline flows.

### Figure 7 – Comnined reliance of South-Eastern and Central European countries[6] on Russian natural gas

Billion cubic metres (bcm) | 2021 to 2024




Source: CREA and CSD's analysis based on ENTSOG and Eurostat data.

*Note: South-Eastern and Central European countries include: Hungary, Slovakia, Bulgaria, Greece, Kosovo, North Macedonia, Serbia, Albania, Croatia, Bosna and Herzegovina.*

One big exception to the EU's reduced imports of Russian pipeline gas has been gas transported via the TurkStream pipeline, which was commissioned in 2021, and since then has seen transit volumes of Russian gas to the EU skyrocket. The pipeline is operated by Gazprom and Turkey's state-owned BOTAŞ and is the single largest source of Russian gas exports to Europe in 2025, delivering gas to Greece, Western Balkans, Romania, Moldova, Hungary and Slovakia. Since its launch, **TurkStream has transported over 62 billion cubic metres (bcm)** of Russian natural gas to Europe, translating into around **EUR 22 bn** in revenues for the Kremlin.

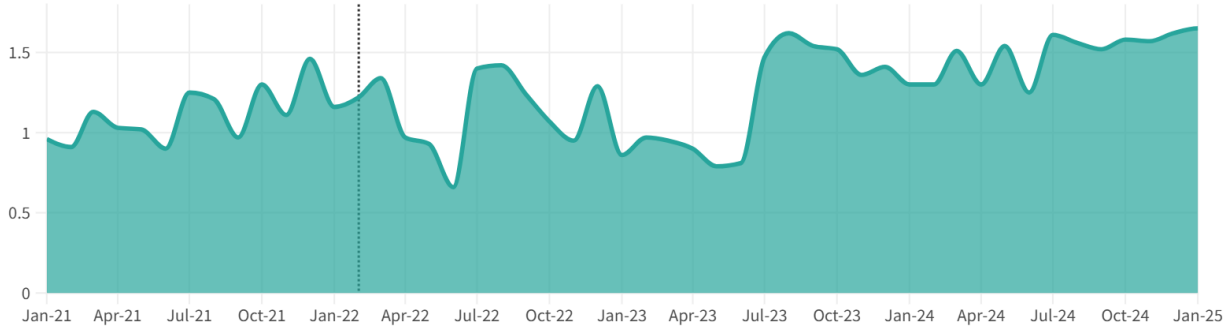
TurkStream not only facilitates continued Russian gas exports, but it also undermines European diversification by flooding the market with discounted gas (in 2024, Russian pipeline gas was estimated as being sold at a 13–15% lower price to EU buyers than other options according to CSD's analysis of Eurostat data[7]). Because Russian suppliers can offer discounted gas and there are no legal measures to discourage its purchase, buyers have no financial reason to stop relying on Russian gas, leaving regions vulnerable to energy blackmail. Discounted Russian gas disincentivises the domestic production of Member States in the

[6] South-eastern and Central European countries include: Hungary, Slovakia, Bulgaria, Greece, Kosovo, North Macedonia, Serbia, Albania, Croatia, Bosnia and Herzegovina.

[7] The assessment is based on Eurostat and Comext data on gas import volumes, values and origins, harmonised according to Eurostat measurement standards. Additional costs for transmission and regasification were estimated using EU-wide average costs. The discount is dynamic, reflecting the specific structure and weighting of key pricing components in various supply contracts, including indexation to the TTF gas hub and oil derivatives.

Black Sea, instead leading to increased reliance on the volatile Russian gas supply that threatens energy security. Because Member States are continuing to depend on discounted Russian pipeline gas, they are less motivated to switch to importing liquefied natural gas (LNG) through terminals that they have invested heavily in. As a result, the terminals built in Greece, Croatia, and Poland could end up underused or wasted – becoming stranded assets, meaning costly infrastructure that no longer serves its purpose.

### Figure 8 – Total imports of Russian natural gas to Europe via TurkStream




Source: CREA and CSD's analysis based on Eurostat and ENTSOG data.

*Note: Dotted lines represent the beginning of the full-scale invasion.*

Gazprom exports Russian gas to Central and Southeast Europe via a transit agreement with the Bulgarian gas transmission operator, Bulgartransgaz, signed in 2019. Under this deal, the Russian company can reserve up to 90% of the Turkish-Bulgarian gas network entry point at Strandzha-2 with a total technical capacity of around 22 bcm per year. In addition, Gazprom has booked 80% of the Bulgarian-Serbian exit point for deliveries to the Western Balkans, Hungary and Slovakia. In addition to the long-term reserved capacities on the European section of TurkStream, Gazprom and a number of gas traders with access to Russian gas supply contracts have booked the free available capacity on the pipeline to maximise its utilisation. This has led to a 26.77% increase in Russian gas transported via TurkStream to Europe in January and February 2025, compared to the same period in 2024.

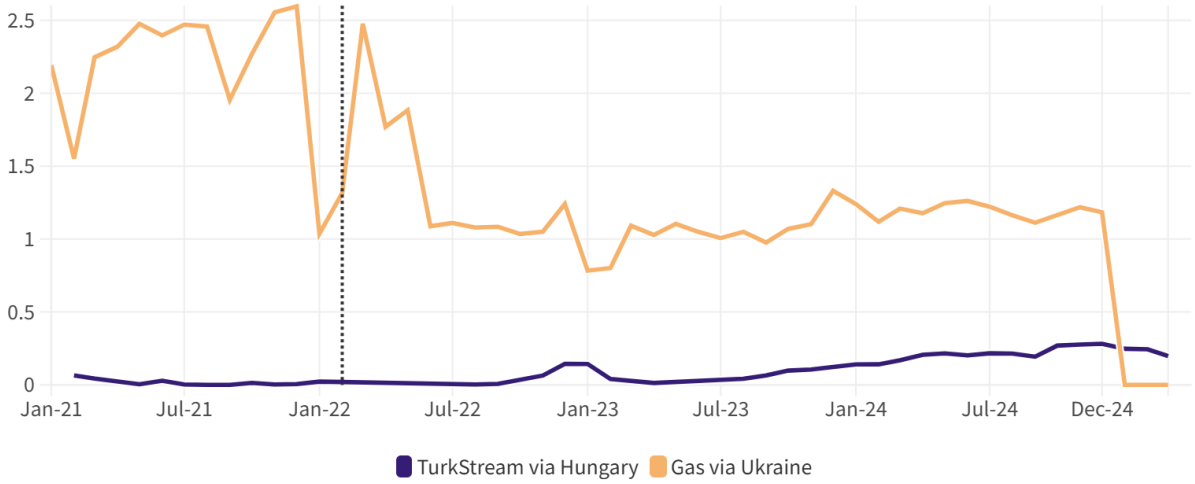
The increase in the TurkStream transit volumes has happened despite the US Treasury Department's sanctions on Gazprombank, which is the financial intermediary for gas supply and gas transit contracts involving Gazprom, in November 2024. To secure the uninterrupted gas flows via TurkStream, Turkey, along with Bulgaria, Serbia, Hungary and Slovakia, received a waiver from the US in December, 2024, and then again in March, 2025, allowing them to continue paying for Russian gas via TurkStream.

The main reason for the expansion of Russian gas flows through TurkStream is Hungary and Slovakia, which have become the biggest buyers of Russian gas in Europe. Hungary signed a 15-year contract with Gazprom in 2021, which aimed to deliver 4.5 bcm per year. However, in 2023, Hungary raised its imports by 1.5 bcm, with the majority transported via TurkStream. Then in October 2024 the Hungarian foreign minister announced Russian gas imports will rise a further 2 bcm per year, enabling full coverage of the country's annual gas demand.

Hungary, which used to be a major transit country for Russian gas until the supply through Ukraine ended, is trying to position itself as a new hub for Gazprom deliveries via TurkStream. Hence, Hungary has increased its re-exports of Russian gas to Slovakia as the latter aims to maintain its long-term gas contract with Gazprom ending in 2034. At the end of March, 2024, the Slovak national gas supplier, SPP, announced it will expand purchases of Russian gas via TurkStream on the back of a Hungarian government decision in January, pledging to raise the gas export capacity to Slovakia from 2.6 to 3.5 bcm/yr.

## Figure 9 – Slovakia's imports of Russian gas by pipeline

Billion cubic metres (bcm) per month | January 2021 to January 2025




Source: CREA and CSD's analysis based on Eurostat and ENTSOG data.

*Note: Dotted lines represent the beginning of Russia's full-scale invasion of Ukraine.*

Russia aims to reroute all of the gas transit through Ukraine to Turkey and Bulgaria. One option is to increase the technical capacity of the second string of the TurkStream pipeline going to Europe. This will be expensive and will take some time. Another option, however, which is already available, is to take advantage of the agreement signed between Bulgartransgaz and Turkey's state gas monopoly, BOTAŞ, in January 2023.

The deal gives BOTAŞ preferential access to booking 1.9 bcm/yr of entry capacity at the Strandzha-1 interconnection point between Turkey and Bulgaria. In addition, it allows Bulgaria's state-owned gas supplier, Bulgargaz, to use the Turkish gas transmission network for the transportation of around 1.5 bcm/yr of gas delivered in the form of LNG at one of Turkey's import terminals and storage facilities. BOTAŞ exported 1.93 bcm in 2014 using the agreement with Bulgaria**,** and in 2025 there has already been a 20% increase in shipped volumes year-on-year in January and February.

Since Bulgaria needs to pay around USD 9 per Megawatt-hour (MWh) of booked capacity whether Bulgargaz uses it or not, the company has hardly imported any LNG cargoes using the arrangement with BOTAŞ. The Bulgarian government has stopped paying the booking fees and has tried to renegotiate the excessive payment terms, which could lead to the resale or transfer of the booked capacity to third parties. The risk at this point would be that these third party gas suppliers would use the preferential access to the Turkish and Bulgarian gas grids to increase the sales of Russian gas to the EU market.

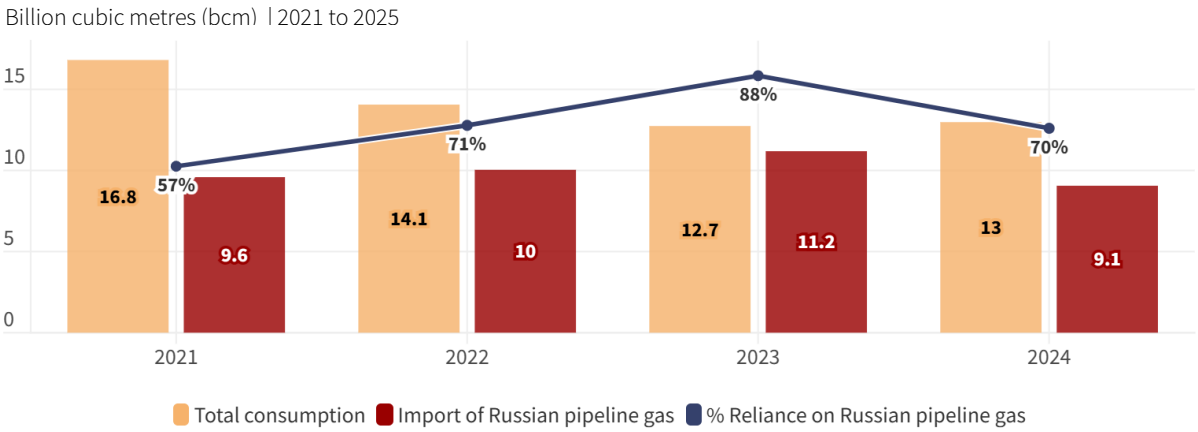
Under Turkish law, all natural gas entering Turkey is automatically owned by BOTAŞ, meaning the Turkish company could resell surplus Russian gas to the Southeastern European market as nominally Turkish gas. This approach aligns with statements made throughout 2023 and 2024 by senior Russian and Turkish energy officials, who have indicated that Gazprom and BOTAŞ are working on a natural gas hub in Turkey to replace Gazprom's lost sales to Europe.

Gazprom is currently using only two-thirds of the available capacity of the two pipelines connecting Russia and Turkey across the Black Sea – Blue Stream and TurkStream. This suggests that there is potential for Gazprom to increase its sales to Turkey by between 8 and 10 bcm per year. To resell these volumes to Europe, BOTAŞ is considering using the cross-border points with Bulgaria, where it can export about 6 bcm per year, and the Trans-Anatolian Pipeline (TANAP), which reaches the border with Greece and connects to the Trans-Adriatic Pipeline (TAP) at the Kipoi border crossing. This provides an additional 2.5 bcm per year of available capacity for exports.

In a demonstration that the rerouting strategy of Russian gas to Europe is already in motion, BOTAŞ has signed an agreement with Hungarian company MVM to sell approximately 300 million cubic metres per year (mcm/year), marking an initial step in the implementation of this new supply route via Bulgaria.

Whilst many EU Member States have reduced their reliance on Russian gas, Hungary and Slovakia have increased their dependence on Russian supply – creating huge security of supply risks and leaving the countries vulnerable to energy blackmail from Putin. Hungary and Slovakia's combined Russian pipeline gas imports fell a mere 5.5% in 2024 compared to pre-invasion levels of 2021, whilst the rest of the EU reduced total imports of Russian pipeline gas by 81% in the same period[8]. During this time period, Hungary and Slovakia's total gas consumption dropped 23% therefore highlighting how both Member States' reliance on Russia actually rose from 57% in 2021 to 70% in 2024%. Since the start of Russia's full-scale invasion of Ukraine until the end of 2024, Hungary and Slovakia have imported an estimated EUR 19.7 bn of Russian pipeline gas.

## Figure 10 – Hungary and Slovakia's combined reliance on Russian pipeline natural gas




Source: CREA and CSD's analysis based on ENTSOG data.

CREA

[8] The analysis relies upon CREA's data that models the physical flows of Russian gas imports from ENTSOG data rather than the commercial flows. Methodology on CREA's gas model can be seen here.

## The perfect gas enabler

Similar to the oil sector, the Kremlin Playbook for the capture of Hungary's natural gas industry begins with the renationalisation campaign in the early 2010s. In 2013, the state-owned Hungarian Electricity Works (MVM) took over the Hungarian subsidiary of Germany's E.ON, which was importing Russian gas under a long-term contract. Around the same time, Gazprom significantly lowered the gas price in the bilateral agreement, allowing the Orbán government to slash utility tariffs and convert a political crisis into electoral gain – boosting its base from 1.3 million voters in 2012 to over 2 million by the 2014 elections.

Since then, Hungary's gas sector has evolved into a **closed-loop system of political control, strategic dependence, and opaque profiteering**, centred around the Swiss-registered **MET Group**. Although officially "employee-owned," MET has long been suspected of operating as a front for politically connected Hungarian and Russian actors. Founded by MOL in 2007, MET was quickly restructured to include **Normeston Trading Ltd**, an offshore vehicle tied to Russian stakeholders – the same entity implicated in Hungary's oil import structure.

MET has gained privileged access to gas delivered via the **TurkStream pipeline**, despite the company lacking any formal long-term supply agreement with Gazprom. Instead, MET acted as **Gazprom's preferred reseller**, booking transmission capacity through Bulgaria under the guise of market competition, while effectively preserving Russian control of flows.

This setup was enabled by the Hungarian government through a series of legislative decrees between 2011 and 2015 that excluded competition and handed near-monopoly rights over cross-border capacity to MVM and its trading arm, MVMP. MET was then granted the right to purchase this gas.

MET's shareholders evolved to include Orbán confidants **István Garancsi and György Nagy**, along with offshore entities and individuals such as **Ilya Trubinkov**, suspected of acting as a straw man for Russian interests. By 2016, **MOL remained the single largest shareholder**, maintaining both corporate and political alignment.

The owners of MET seem to be also connected to Sandor Csanyi, who is a member of the MOL's Board and also the CEO of OTP, the largest Hungarian bank. MOL is one of the largest shareholders in the bank, together with the sons of Megdet Rahimkulov, a Russian dual citizen and a former manager of Gazprom Hungary.

The reach of this network extends beyond energy. **László Szűcs**, a former MET executive, became co-owner of **Mercarius**, a vehicle leasing company later contracted by **Rosatom** for the Paks II nuclear project. Mercarius secured Russian funding via **Sberbank**, giving the Kremlin indirect leverage over sensitive Hungarian nuclear infrastructure.

In essence, Hungary's gas sector has become **a pipeline not just for Russian gas, but for Russian influence**, disguised through private intermediaries, offshore fronts, and captured institutions. As TurkStream's capacity grows – with Gazprom now attempting to relabel gas as "Turkish Blend" – MET's role as the perfect enabler continues. The intermediary structure of supply ensures Russian energy dominance, Hungarian political gain, and an opaque flow of profits through a Kremlin-aligned economic ecosystem.

# Europe can make do without Russian gas

When Russian natural gas transit through Ukraine ceased at the end of 2024, Europe was presented with a unique opportunity to completely **halt gas imports from Russian pipelines.** In order to halt gas imports from Russian pipelines, Bulgaria, the entry point for the European extension of TurkStream, would need to stop the transit of Russian gas in 2025. As a result, the Central and Eastern Europe (CEE) region would lose access to approximately half of its current natural gas supplies. Even so, there are no major security of supply risks linked to the Russian gas phaseout, particularly in terms of finding alternative pipelines and supply routes. The only possible exception is Bosnia and Herzegovina, which depends entirely on Russian gas supplied via the Serbian section of TurkStream and currently lacks easy access to alternative sources. The development of Bosnia and Herzegovina's gas infrastructure, including the completion of the North-South gas interconnection with Croatia, would give the region access to the Krk LNG terminal and help replace reliance on Russian gas.

The rest of the region, however, stands to benefit, thanks to the considerable improvements in regional gas connectivity over the past decade, which should enable it to fully replace the lost Russian gas volumes. Alternative gas delivery routes now have the capacity to bring in three and a half times more gas than current Russian supplies. This is possible because Greece, Bulgaria, Romania, Serbia, and Hungary have completed a number of strategic interconnector and LNG regasification projects that allow for reverse flow gas deliveries at most border points and the delivery of non-Russian gas from the global market.

Even more crucially, Greece, Bulgaria, Romania and Ukraine have accelerated efforts to reverse the now-empty Trans Balkan Pipeline, which previously transported Russian gas via Ukraine to Southeast Europe before the commissioning of TurkStream in 2021. The Trans Balkan network could now be used to transport LNG to Greek and potentially Turkish regasification terminals, providing alternative gas supplies to Central Europe, Moldova, and Ukraine.

The operational start of the Alexandroupolis Floating Storage and Regasification Unit (FSRU) in the beginning of 2025 expanded the region's LNG import capacity by 5.5 bcm per year. Combined with the existing regasification facility at Revithoussa, this will enable Greece to import up to 12.3 bcm per year from the global market – approximately 70% of the current Russian gas pipeline exports to Europe.

**Greece** will therefore be able to fully replace its own Russian gas supply, currently around 2.5 bcm per year, while also leveraging its long-term supply contract with SOCAR for 1 bcm per year via the TANAP-TAP pipeline link at the Kipoi entry point. Additionally, Greece could potentially import an additional 2 bcm per year of Azeri gas or LNG through Turkish terminals.

Greek LNG regasification capacity is also sufficient to replace Russian gas imports in **Bulgaria**. Bulgargaz has already booked 1 bcm per year at Alexandroupolis, which can be transported via the Greece-Bulgaria Interconnector (ICGB). The gas link with a current capacity of 3 bcm/yr delivers 1 bcm/yr of contracted Azeri gas to Bulgaria but can be easily expanded to 5 bcm/yr if there is enough demand for LNG imports from Greece into Bulgaria, Romania, Moldova, and potentially Hungary and Ukraine too. To expand LNG sales to these markets, the governments in the region need to complete the expansion of the reverse-flow capacity on the Trans-Balkan pipeline and double the Romania-Hungary interconnector, anticipated to be completed by the end of 2025.

**Romania**, the region's largest natural gas consumer, meets more than 75% of its demand through domestic production but still imports approximately 1.5 bcm/yr of Russian gas under a contract with BOTAŞ, facilitated by Bulgargaz and Bulgartransgaz. The suspension of Russian gas transit through Ukraine on 1 January 2025 has exacerbated economic challenges in **Moldova**, while the breakaway region of Transnistria has faced severe energy shortages due to the loss of approximately 2 bcm/yr of Russian gas. In response,

the European Parliament has approved a EUR 1.9 bn support package to help Moldova secure alternative supplies.

In the medium term, Romania and Moldova could achieve complete independence from Russian gas when production begins at the offshore Neptun Deep field in 2027. With estimated reserves of up to 100 bcm, Neptun is expected to produce approximately 10 bcm/yr, positioning Romania as the EU's largest gas producer and a potential exporter to Hungary and Austria via the planned Bulgaria-Romania-Hungary-Austria (BRUA) pipeline. The success of this project depends on securing financing for the critical Podișor-Recaș transmission link, which will transport Black Sea gas to the Hungarian border.

The countries most vulnerable to the suspension of TurkStream transit through Bulgaria are in the Western Balkans. Serbia, which meets 25% of its gas demand through domestic production, has access to supply from Hungary and, by extension, Western European gas through Austria's Baumgarten hub. However, North Macedonia and Bosnia and Herzegovina currently lack alternative supply routes. Their combined annual consumption of approximately 600 million cubic metres (mcm) is small, and both countries are actively developing interconnections with Greece and Croatia.

**North Macedonia** could also receive gas through Bulgaria via the Kyustendil border connection, given Bulgaria's role as a regional hub for alternative gas imports. Bulgargaz already possesses surplus volumes of around 400 mcm/yr, sufficient to meet North Macedonia's demand.

In **Bosnia and Herzegovina**, most gas consumption is concentrated in Republika Srpska, where governance challenges and internal disputes have delayed completion of a north-south interconnector with Croatia, which has a planned capacity of 1.5 bcm per year and would provide access to the Krk LNG regasification terminal on the Adriatic coast.

The Krk facility will be critical in addressing the most complex regional energy security challenges: replacing Russian gas in Hungary. Gazprom supplies Hungary with between 7 and 8 bcm/yr, now 100% arriving via TurkStream. Phasing out this dependency will require increased LNG imports through Krk, whose regasification capacity was recently increased to 6.1 bcm/yr. A portion of this capacity will likely be allocated to replacing **Croatia's** Russian imports of 1.4 bcm per year, while the remainder could supply Bosnia and Herzegovina, and Hungary.

However, Krk alone will not suffice to cover Hungary's shortfall, which is why more cooperation with Austria would be necessary to secure alternative supplies from Western European LNG import terminals and from Norway. Hungary possesses the infrastructure to import approximately 4.4 bcm per year from the Austrian Baumgarten storage facilities, as well as an additional 1.7 bcm per year from Romania. Given that domestic gas production meets around 20% of Hungary's demand, the country would still face a supply gap of 0.6–0.8 bcm per year in the event of a complete halt to Russian gas imports. Careful coordination of LNG shipments to Krk, along with optimised west-east gas flows from Germany, Switzerland, and Italy, will be essential to avert supply disruptions.

The diversification of gas supply in Central Europe is not only feasible but essential for phasing out dependence on Russian imports. **Slovakia's** newly constructed interconnector with Poland, with a capacity of 4.7 bcm, already exceeded the country's total gas demand of 4.4 bcm in 2024, proving that alternative sources can fully meet national needs. Similarly, Austria's extensive pipeline connections with Germany and Italy, totalling 23 bcm, provide direct access to global LNG markets, benefiting not just Austria but also Hungary and Slovakia.

The historical underutilisation of these interconnectors is the product of economic factors, rather than technical limitations. Full capacity utilisation is a viable option. The maximisation of the existing capacities should be prioritised to strengthen energy security and reduce price differentials between Western and Eastern European gas markets.

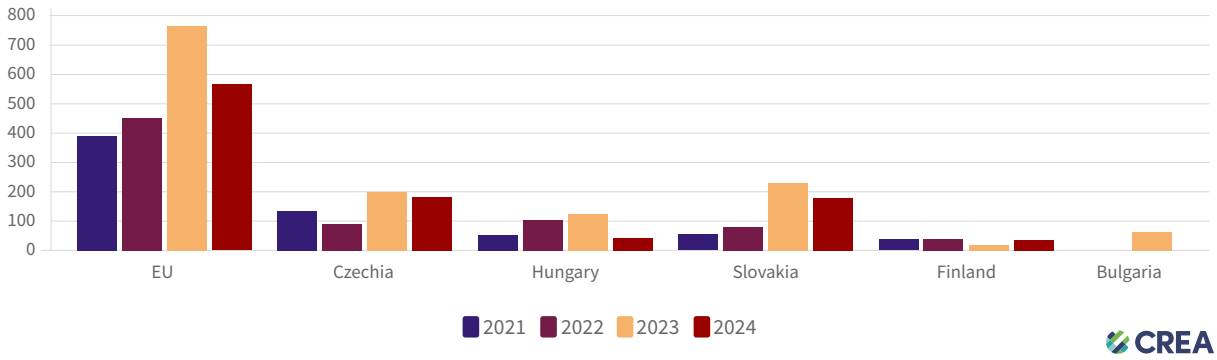
# The silent Russian nuclear dependence

There are currently no sanctions against the Russian nuclear sector. However, the European Commission has been discussing the different ways in which it can sever ties with Russia's nuclear supply chain. Czechia, Hungary, Slovakia, Bulgaria and Finland, which rely significantly on nuclear energy for covering their electricity needs, are also completely dependent on Moscow for the supply of their reactor fuel. Nuclear energy provides 44% of Hungary's and 52% of Slovakia's power generation, respectively.

Most operators of nuclear power plants with installed Russian VVER reactors in the EU have stepped up efforts to find alternative suppliers. As a result, EU imports of Russian nuclear fuel could decrease by at least 60% compared to 2022 levels by the end of the decade – down to about 70-100 tonnes annually. This translates into 7-9 gigawatts (GW) worth of nuclear power capacity that the Russian state-owned nuclear monopoly, Rosatom, will lose in nuclear fuel exports.

### Figure 11 – The EU's annual imports of Russian nuclear fuel by country

Tonnes | 2021 to 2024




Source: CREA and CSD's analysis based on Eurostat data.

After the Kremlin's full-scale invasion of Ukraine, European consumers began stockpiling in anticipation of potential disruptions and sanctions against the Russian nuclear industry. Hungary dramatically increased its imports of nuclear fuel by 96% to 104 tonnes in 2022, the largest increase among EU countries. Russian reactor fuel exports to Hungary grew by another 19% to 124 tonnes in 2023, far exceeding Hungary's typical annual purchases of 50-80 tonnes.

Slovakia followed a similar pattern, boosting year-on-year imports by 48% to 80 tonnes in 2022 and then almost tripling them in 2023 to 230 tonnes. This stockpiling is enough to cover the needs of Slovakia's six nuclear reactor units for the next 2-3 years.

In 2024, Hungary and Slovakia's combined imports of Russian nuclear fuel were 105% above pre-invasion levels in 2021. Although Hungary's imports in 2024 fell by 22% on 2021 levels despite their rapid rise in import volumes observed in 2022 and 2023, Slovakia saw a 229% increase in imports from Russia.

Despite the jump in imports from Russia, both Hungary and Slovakia have taken steps to diversify their nuclear fuel supply. Hungary's MVM Paks NPP entered into a fuel supply contract with France's Framatome to ensure continued operation of the Paks plant, which provides approximately half of the country's electricity. In 2023, Slovakia's main electricity provider, Slovenské elektrárne, signed a long-term agreement

with the US registered company Westinghouse Electric Company to supply VVER-440 fuel[9] for its Bohunice and Mochovce nuclear plants, aiming to strengthen energy security.

Despite Framatome's key role in reducing direct Russian fuel dependency, the French nuclear conglomerate has maintained strong ties with Rosatom. Framatome has signed agreements with Rosatom for the joint production of nuclear fuel for VVER reactors, including for those in Hungary and Slovakia. Paris has also approved Framatome's participation in the construction of two new reactors at the Paks power plant, arguing that its partnership with Russia does not violate international sanctions.

If Hungary and Slovakia genuinely aim to strengthen their energy sovereignty, there are viable alternatives to diversify using Western technology that is already compatible with the VVER reactors in the Central and Eastern Europe (CEE) region. In response to growing geopolitical tensions and the resulting shift away from Russian energy dependence, countries including Bulgaria, Finland, Slovakia, the Czech Republic, and Ukraine are turning to Westinghouse to secure a stable and diversified nuclear fuel supply. Bulgaria recently received its first VVER-1000 fuel reload from Westinghouse for the Kozloduy Nuclear Power Plant, while Finland's Loviisa plant began operating with Westinghouse fuel in 2024. Ukraine, a long-standing partner, continues to source VVER fuel from Westinghouse, while Slovakia and the Czech Republic have also signed supply agreements. Supporting this regional shift, Westinghouse leads the EU-funded APIS project – a multinational initiative focused on developing a fully European nuclear fuel supply chain for VVER reactors.

## The Paks-2 project: A Russian nuclear lock-in for decades

The potential exchange of political favors between Hungary and Russia in commercial oil and gas contracts, is dwarfed by the other major energy deal in recent years – the Paks II project. The Rosatom-led project for expanding the Paks nuclear power plant aims to add two new VVER-1200 reactors on the existing power plant site, which will effectively double the country's nuclear generation capacity. With an estimated cost of EUR 12.5 bn – equivalent to approximately 12% of Hungary's GDP – Paks-2 is primarily financed by a Russian state loan covering 80% of the costs. Even so, as of publication, the authors of this report have not found any published economic analyses of potential alternative options and the government failed to deliver evidence that the project would be profitable. The cost of the project has since increased by 20% to EUR 15 bn on the back of the worsening HUF/EUR exchange rate and the change in the repayment terms for the Russian loan.

The Paks II project has been managed by the Prime Minister's Office, taking it entirely out of the control of the state-owned MVM electricity company. The project was awarded to Rosatom in 2014 in a non-competitive and non-transparent procedure, and the key elements of the contract have been classified for up to 30 years. Regulatory issues have been ignored, especially regarding conformity to EU standards. The European Commission had launched several investigations regarding public procurement (the lack of tendering), potential state aid aspects, and transparency considerations (the past and future decisions related to the project were classified).

Hungary faces both a technological lock-in and a Russian debt trap extending well into the 2040s, which has been leveraged by Moscow to achieve an outsized political influence over Hungary's strategic and foreign policy.

Russia's economic footprint in the nuclear sector has also reinforced state capture risks in Hungary. Hungarian companies financed by Russia have secured public procurement contracts for key infrastructure projects in the nuclear sector. Investigations have uncovered a pattern where companies offering competitive bids are often disqualified for minor administrative reasons, facilitating the success of firms with either Russian connections or ties to the Hungarian government.

[9] VVER-440 fuel refers to the nuclear fuel used in the VVER-440 reactor, a type of pressurized water reactor (PWR) developed in the former Soviet Union. "VVER" stands for "Vodo-Vodyanoi Energetichesky Reaktor" (Water-Water Power Reactor), and the number 440 refers to its electric output in megawatts (MW).

# What's next and policy recommendations

To end Central Europe's role as a backdoor for Russian fossil fuel revenues, the EU must close the sanctions loopholes and accelerate the complete phaseout of Russian oil and gas imports in Hungary and Slovakia. This requires urgent regulatory, financial, and diplomatic measures at both the national and EU level. Neither technical limitations nor energy security concerns justify continued imports of Russian fossil fuels. The following steps are necessary:

1. **End the derogation from the EU ban on Russian oil imports for land-locked Central European countries**
   - The EU should **end the exemption for pipeline imports of Russian crude oil** under Regulation 833/2014. The exemption has allowed Hungary and Slovakia to sustain a strategic dependence on Russian oil, undermining EU unity on sanctions on Russia. The legal basis for the derogation requires Member States to *take all necessary measures* to replace Russian supply, which Hungary and Slovakia have failed to do.
   - **Set a clear, enforceable deadline** – no later than 30 June 2025 – for ending Russian pipeline oil imports via the Druzhba system. This would align with the successful early phaseout timeline achieved in Bulgaria and Czechia, which did not result in spikes in domestic oil product prices.
   - **Ban the exemption on the export of petroleum products** to Czechia that are made from processing Russian crude oil in Hungary and Slovakia. The derogation leads to the increase in the purchase of Russian crude and hence to higher tax revenues for the Kremlin that are used to finance their war in Ukraine. The profit from selling cheaper petroleum products goes to the dominant wholesale market suppliers in Czechia, and not to final consumers in the form of lower prices. The EU should clearly link the fuels export eligibility to the crude origin, requiring full traceability of feedstock and product flows through refinery disclosure rules.
   - MOL should allow its long-term agreement with Lukoil for the delivery of crude oil via the Druzhba pipeline **to expire at the end of June 2025.** Any extension of the supply contract should be viewed as a Hungarian strategy to create long-term dependence on Russia in the region and undermine the EU's announced plan to end its reliance on Russian fossil fuels by 2027.

2. **Leverage existing infrastructure to enable oil supply diversification**
   - **Maximise the utilisation of the Adria pipeline** from the Adriatic coast of Croatia. Technical tests already show that its capacity (14.4–16.4 million tonnes per year (Mt/year)) exceeds Hungary and Slovakia's combined crude needs (around 10 Mt/year) and will be able to fully replace Russian oil supplies.
   - Enable the use of the **emergency crude oil stocks** and the **Adria-Druzhba interconnection point**, to prevent any fuel shortfall in the period when MOL adjusts its supply strategy.
   - Launch an **independent audit of JANAF transit fees** to dispel claims of non-competitiveness, and introduce an EU-backed arbitration framework for resolving payment disputes with JANAF. This would encourage flows through the non-Russian crude oil supplying pipeline and resolve claims from the Hungarian buyers that the Croatian company JANAF is an unreliable and unverified supplier.

3. **Dismantle the state capture networks that have facilitated the Kremlin Playbook in Hungary and Slovakia**
   - The EU bodies including OLAF and DG FISMA as well as the Hungarian and Slovakian investigative authorities should **examine and expose the role of MOL and its subsidiaries in prolonging Russian energy dependence**, including:
     - Market dominance over both upstream and downstream segments.
     - Cooperation with Russian suppliers (e.g. Lukoil) under sanctions.
     - Use of windfall profits to entrench domestic oligarchic networks.

- The Hungarian government should **decouple national energy security policies from corporate interests**, including revising corporate governance frameworks to limit undue political control over state-owned energy companies.

4. **Phase out Russian gas imports via TurkStream**
   - The deadlines for phasing out all Russian gas imports in the new European Commission Roadmap for phasing out Russian energy imports should be **pushed forward to the end of 2025**, and the EU should make the target binding. This could trigger force majeure clauses in long-term Gazprom contracts, though legal experts warn courts may not accept the argument. Still, a better strategy would be to claim that the seismic geopolitical changes since 2022 are forcing companies to **renegotiate or cancel their contracts**.
   - To encourage the process of supply diversification, the **EU could ban spot gas purchases immediately** as they do not require long-term gas contract modifications.
   - Adopt a regional roadmap for **ending Russian pipeline gas deliveries through TurkStream**, with a focus on coordinated LNG imports and the use of reverse-flow interconnection capacities across Central and Southeast Europe.
   - Introduce an **EU-wide certification and traceability system for gas country of origin**, requiring all suppliers to disclose the composition and source of gas entering the EU via Turkey and other entry points. The REMIT regulation (EU) No 1227/2011) should be updated to require transparent reporting of the exact origin of natural gas and LNG, including details on transshipment, blending, or processing in third-party countries. Additionally, the EU Customs Union Code (Regulation (EU) No 952/2013) should mandate importers to provide detailed origin information at entry points, ensuring customs authorities have full visibility of the gas' source.
   - The EU should presume that **all gas entering the EU from Turkey and Ukraine is of Russian origin**, unless independently verified, and impose a **windfall tax** on the price differential between discounted pipeline imports and EU hub prices. Tax revenues should be earmarked for Ukraine's reconstruction fund.

5. **Prioritise regional interconnection and reverse-flow expansion**
   - Ensure completion of reverse-flow upgrades and interconnector expansions to **enhance energy security and price stability**, including:
     - Romania-Hungary interconnector (double capacity to >3.4 bcm/year).
     - Full operationalisation of the Trans-Balkan pipeline for LNG flows.
     - Coordinated efficient utilisation of the Krk LNG terminal to diversify the gas supply to Hungary.
     - Maximisation of the capacity bookings on West-East gas interconnections to allow the flow of supplies from Norway and other sources of non-Russian LNG.
   - Utilise existing **capacity booking contracts on LNG terminals** in Greece, Croatia, and Poland to replace Russian volumes.

6. **Eliminate nuclear dependencies on Russia**
   - The EU should **sanction Rosatom and all of its subsidiaries** as a policy instrument to fast-track the process o**f reactor fuel diversification.**
   - National governments should accelerate the implementation of supply contracts with non-Russian fuel suppliers, with **clear deadlines for replacing the Rosatom fuel stocks** used in VVER reactors.
   - Expand public disclosure of nuclear fuel inventories and sourcing to **reduce opacity and enable independent monitoring** of nations' decoupling progress.
   - **Discontinue all joint nuclear power plant projects with Rosatom** including Paks-2 as they have locked-in governments to long-term technological and financial dependence on the Kremlin.

# Methodology

### Data sources and terminology

The analysis in this report is based on an array of different sources including: Eurostat, Global Energy Monitor, Gas Infrastructure Europe, customs data and the ENTSOG Transparency platform. Units were converted between tonnes and barrels using UnitConverters.net data. More on CREA's data methodology can be found here.

**Pricing of oil from different sources**

To estimate pricing, we used data from Comext, published by Eurostat. To estimate the average price per barrel we divided the value by the volume – and eliminated anomalous data. The prices of oil products such as petrol and diesel were taken directly from the EU weekly oil bulletin.

### Oil product flows to Czechia from Slovakia

We note that there is currently a large discrepancy in the data between the reported volumes of oil products imported by Czechia from Slovakia and the reported volumes exported by Slovakia to Czechia in the final quarter of 2024. The December 2024 data shows an especially large discrepancy – approximately 11,000 tonnes difference between what Czechia reports as imports versus what Slovakia reports as exports. This trade asymmetry is present in both Eurostat and Comtrade though the exact difference is slightly different. Eurostat has indicated that this data is provisional and will not be finalised until October 2025.

Therefore, this report uses Czechia's stated volume of imports from Slovakia for the basis of our analysis to maintain consistency with our previous report on Czechia's strategic delays in phasing out their reliance on Russian fossil fuels.

### Data on pipeline flows of gas

Data was collected from ENTSOG (European Network of Transmission System Operators for Gas) and Eurostat for European pipeline transmission. To attribute the pipeline data to each country within the pipeline network, we analysed data from ENTSOG on flows between countries at transmission interconnections daily. We then assumed that on any given day, a country is a perfect 'gas mixer' – that is, all gas gets mixed before being consumed and/or re-exported. This allows us to attribute Russian gas consumption to countries that do not have a direct connection with Russia. Read more about it in our post about our change in pipeline gas attribution methodology.

### Estimating Russian tax revenues from oil exports

When estimating the revenue from oil exports to the Russian federal budget for 2022 and 2023, we focus exclusively on the mineral extraction tax (MET) and the export duty. For 2024, due to the announced abolition of export duty, our calculations are based solely on MET. This methodology directly reflects the payments made by Russian companies for extracting and exporting fossil fuels, offering a clear view of the fiscal impact on the Russian federal budget. Data was gathered from publicly available sources, including the Russian Ministry of Finance.