



PHASING OUT RUSSIAN GAS IN EUROPE

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Russia's invasion of Ukraine exposed Europe's vulnerabilities in energy and climate security. It exacerbated the energy crisis caused by the gas supply deficit on global markets and highlighted the excessive reliance of many EU member states on Russian fossil fuel imports.

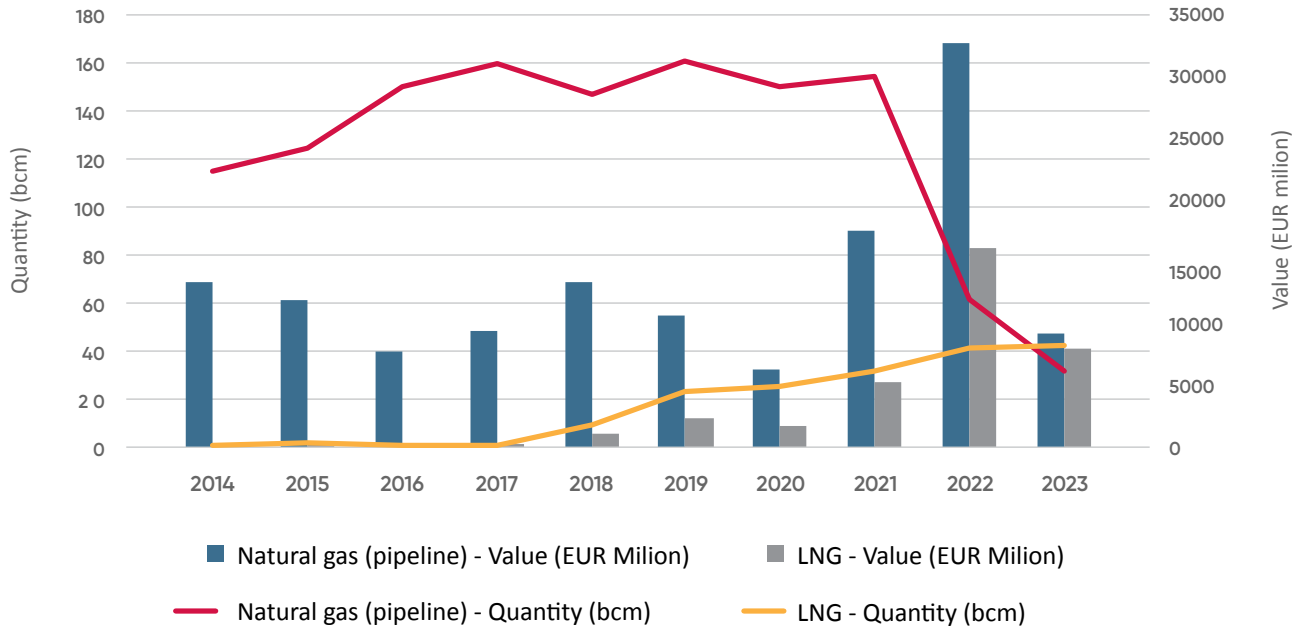
Since then, European countries were forced to rapidly replace the Russian gas in times of limited alternative supply options (mostly from U.S. LNG and an increase in Algerian and Norwegian pipeline imports) sold on an overheated spot market. Although key natural gas consumers such as Germany and Italy have accelerated their efforts to diversify fully away from Russian gas, for many other countries, natural gas import risks have remained high as Russian gas dependence persists.

Natural gas flows through **TurkStream**, which delivers Russian gas to Greece, the Western Balkans, and Hungary, remain unchanged in comparison to pre-war levels, making it **the single largest source of Russian gas exports to Europe**. Since its commissioning on 1 January, 2021, until March, 2024, TurkStream has transported 46 billion cubic meters (bcm) of Russian natural gas to Greece, Serbia, North Macedonia, Bosnia and Herzegovina and Hungary. At the same time, countries such as Slovakia, Austria, and indirectly Czechia have continued buying Russian pipeline gas through Ukraine, adhering to Gazprom's proposed ruble-based payment scheme since April 2022.

In 2022, Russian pipeline exports to Europe fell by 62% compared to 2021, but Russia still received EUR 13.8 billion more in revenues. In addition, **Russia has been steadily increasing its LNG exports to the EU** by investing heavily in LNG export infrastructure. In 2022, Russian LNG sales saw the largest year-on-year increase (30%) in volume terms so far, leading to a 209% increase in revenues (around EUR 16 billion) based on the high prices in Europe.

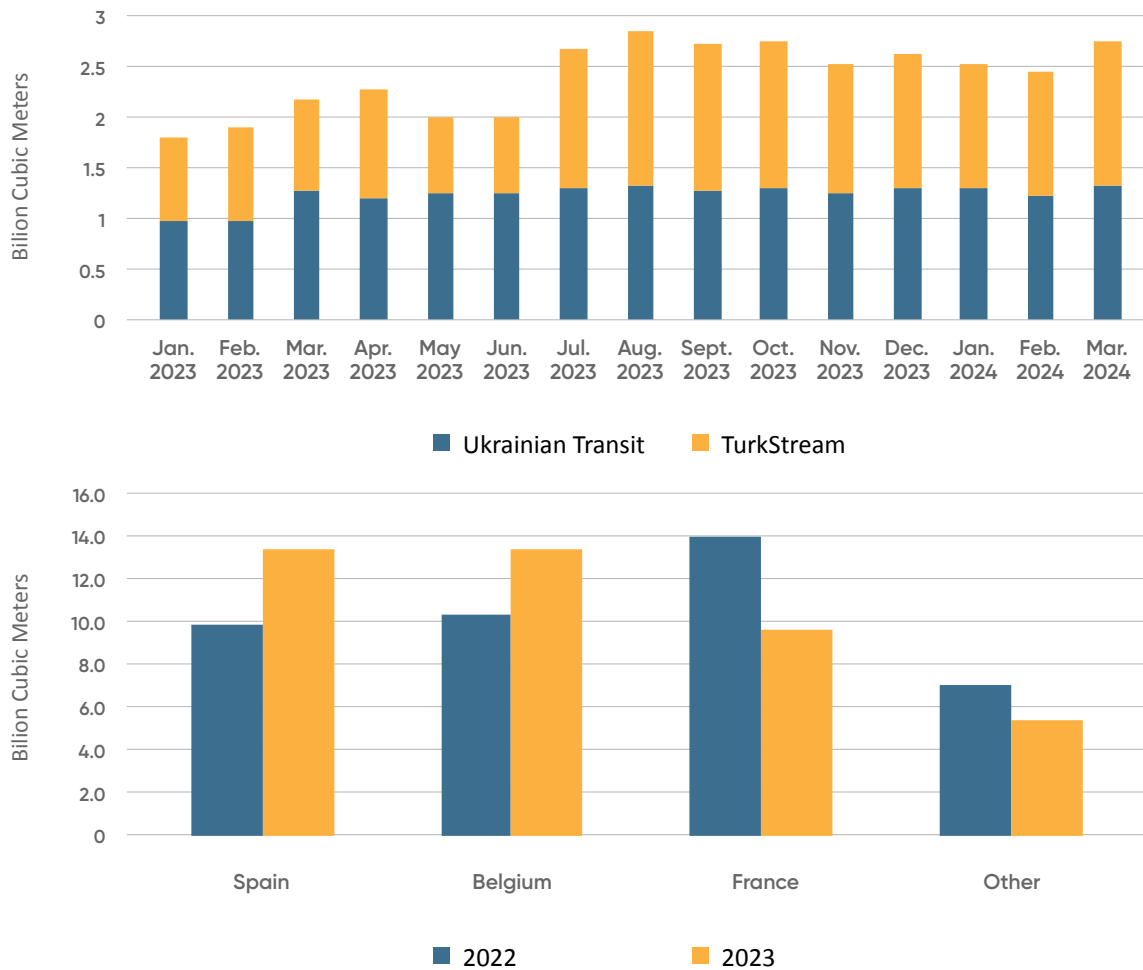
KEY POINTS

- Despite efforts by major natural gas consumers like Germany and Italy to **diversify away** from Russian gas, import risks in Europe remain high due to continued dependence on Russian supplies.
- Russia still accounts for 15% of the **EU's total gas imports**, just behind the U.S. (19%) and ahead of North Africa (14%).
- Natural gas flows through **TurkStream**, which delivers Russian gas to Greece, the Western Balkans, and Hungary, remain unchanged, making it **the single largest source of Russian gas exports to Europe**.
- To fully phase out Russian pipeline gas imports after the transit of Russian natural gas through Ukraine ends **at the end of 2024**, the EU must halt Russian **gas transit** through the European expansion of **TurkStream**.
- The EU should expand **sanctions to include natural gas**. Both buyers of Russian LNG (which accounts for **5% of total EU consumption**) and pipeline gas can replace these imports with **US sources**.
- European countries should expedite the **termination of all long-term gas supply contracts with Gazprom**. The EU should also ensure that Russia does not **circumvent sanctions** by facilitating gas exports via **intermediaries** with close ties to Gazprom
- Full decoupling from Russia requires **dismantling the state capture networks** that continue funding Kremlin's subversion actions across Europe.



Source: CSD based on Eurostat Data.

Figure 2. Russian Pipeline (graph 1) and LNG Exports to Europe (graph 2)



In 2023, the phaseout of Russian gas imports in Europe finally started biting at the Kremlin's revenues, which fell by close to two-thirds. Yet, Russia still sold more than 73 bcm of LNG and pipeline gas, raking EUR 17,3 billion in the process. For all the hype around Europe's successful cut in its gas dependence, **Russia still makes up 15% of the total EU's gas imports**, closely behind the U.S. (19%) and above North Africa (14%).

Among the EU countries that have **increased Russian LNG imports** are Belgium, Spain, the Netherlands, Portugal, Greece and Italy. Some of this gas is not consumed in the country of LNG cargo arrival but is shipped onwards to other markets including to those that suffered a direct Gazprom supply cut in 2022. The goal is to make the ultimate ownership of the natural gas untraceable.

Figure 3. Russian Gas Flows



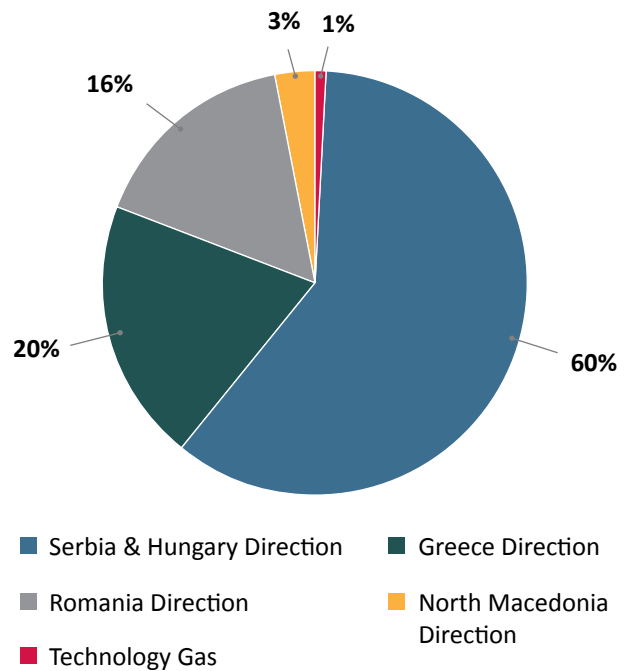
Source: CSD.

Three examples are clearly standing out. Bulgaria and Greece have been buying Russian LNG cargoes since 2022 although the former stopped buying Russian pipeline gas directly in April, 2022, and the latter cut Russian pipeline gas imports by 20%. **Greek traders have raised Russian LNG imports four times in 2023** widening the overall Greek dependence on Russian natural gas to 47%. Bulgaria has indirectly imported this Russian LNG volumes, initially destined for Greek companies with long-term agreements with Gazprom.

Similarly, **Belgium has significantly increased its LNG imports** since February 2022 to meet not only its own demand, but also that of the EU's largest economy, Germany. In 2023, Belgium's purchases of Russian LNG jumped by 30% to around 13,4 bcm, a bulk of which has been reexported to Germany, which receives around a quarter of its pipeline imports from Belgium. Netherlands and France, which jointly imported another 11,6 bcm in Russian LNG are making up another 25% of the German pipeline gas imports.

Finally, **Spain and Portugal became the biggest resellers of Russian LNG in Europe** in 2023 buying a total of over 14 bcm, and, likely sending more than 50% of that volumes east to France, Italy, Switzerland and others. Spain has become a hub for transshipments of Russian LNG enabled by a number of trading companies that have had close ties to Russia, including MET and Gunvor among others.

Exporting gas via intermediaries has become a strategic Russian objective as the Kremlin aims to not only obfuscate the ownership of the natural gas entering the European market but to also preempt a potential full EU ban of Russian natural gas imports. The European Commission has advised member-states to stop buying Russian gas by 2027 in line with the end of the long-term supply contracts of most Gazprom clients in Europe. Yet, this diversification effort could remain only on paper if Russian gas exporters are able to reroute their sales and expand their network of third-party companies ready to benefit from the premium profits they are getting for trading relatively cheaper Russian gas.



Source: CSD based on ENTSO-G Data.

Still in the Russian Gas Grip

In the absence of sanctions on gas, Russian supply continues to flow through the European pipeline system, albeit at much lower rates. The main recipients of the Russian pipeline gas have been Greece, Serbia, Bosnia and Herzegovina, Austria, Slovakia, Croatia, Italy and Hungary. Slovakia in particular has become a distribution hub for Russian gas in Central Europe, acting as a transit country for onward flows to Austria, Czechia, Hungary, Germany and Italy from the Ukrainian gas system.

In fact, **Austria** increased its dependence on Russian gas to 98% (up from 80% before the war), reversing the initial decision to reduce Russia gas imports in the Fall of 2022. The Austrian oil major, OMV, has a long-term supply contract with Gazprom ending in 2040. The company has been discussing various alternative supply options including buying gas from Norway and from Azerbaijan (via Turkey) but a structural change in the Austrian gas policy is constantly delayed.

Hungary has followed suit by expanding the natural gas volumes it is receiving from Gazprom under a 15-year supply contract, signed in 2021, for the supply of 4.5 bcm/yr. In 2023, Hungary expanded the imports from Russia by at least another 1.5 bcm with ¾ of the volumes being sent out on the TurkStream.

In **Southeast Europe**, two years after the Russian invasion of Ukraine, Gazprom is still king albeit with diminished power. The Russian company has effectively

utilized TurkStream and the legacy contractual arrangements for the booking of capacity on the TransBalkan pipeline until 2030 to reduce the entry of alternative gas.

Serbia and Bosnia and Herzegovina (buying a total of around 3.1 bcm/yr) receive 100% of their natural gas needs from Russia via TurkStream. In fact, 61% of the transit volumes through the European extension of the pipeline are destined for the Western Balkans and Hungary. Another 20% or around 2.7 bcm in 2023 are shipped to Greece, 16% to Romania, likely covering most of the natural gas consumption of Moldova and around 10% of the gas supply in Romania. Less than 3% of the gas is delivered to North Macedonia.

New Outlets for Russian Gas Exports to Europe

In anticipation of the halt in the transit of Russian gas through Ukraine from 1 January, 2025, Russia can try to partially ship some of these roughly 14.5 bcm/yr volumes via TurkStream. Under the transit agreement between Gazprom and the Bulgarian gas transmission system operator (TSO), Bulgartransgaz, the Russian company can book up to 90% of the entry point on the Bulgarian gas network at Strandzha-2. Currently, Gazprom has been utilising roughly 75% of the available capacity, which means that it can increase send outs to TurkStream by 2.5 bcm/yr.

The other rerouting option for Gazprom is to take advantage of the agreement signed between Bulgartransgaz and the Turkish state-owned gas monopoly, Botas, in January, 2023, allowing the latter to use the entry capacity at Strandzha-1 (the old TransBalkan pipeline crossborder point between Bulgaria and Turkey) in reverse mode. The deal allows the Turkish transmission system to transfer up to 1.9 bcm/yr of gas to Bulgaria and opened up access for Bulgargaz, the largest state-owned gas supplier in Bulgaria, to Turkish LNG terminals and storage facilities. If Bulgargaz does not use the booked capacity on the Bulgarian entry point for the import of gas from Turkey, the tripartite contract in effect allows Botas to sell around 3,65 bcm/yr of gas to the Bulgarian/broader SEE market.

Since by the Turkish gas law all natural gas volumes entering Turkey are automatically owned by Botas, the Turkish company could **resell surplus Russian gas volumes as nominally Turkish gas** to the SEE market. This is consistent with announcements in late 2023 by senior officials in the Russian and Turkish government that Gazprom and Botas are working out a concept for a natural gas hub in Turkey that will serve to replace Gazprom’s lost sales to Europe.

Considering that Gazprom uses only 2/3 of the available capacity on the two pipelines linking Russia and Turkey directly via the Black Sea, namely Blue Stream and TurkStream, the Russian firm could potentially expand sales to Turkey by between 8-10 bcm/yr. To resell these volumes on to the European market, Botas has been

considering the use of the cross-border points with Bulgaria where it can export roughly 6 bcm/yr and the Transanatolian Pipeline (TANAP) reaching the border with Greece, connecting to the TransAdriatic Pipeline (TAP) at the Kipoi border point with another 2.5 bcm/yr of available capacity. In a sign that the rerouting strategy is underway, Botas signed an agreement with the Hungarian company, MVM, to sell about 300 million cubic meters per year (mcm/yr).

Mission Possible: Stopping Russian Gas Pipeline Imports from 2025

When the transit of Russian natural gas through Ukraine stops at the end of 2024, Europe has the unique opportunity to fully phase out Russian pipeline gas imports into Europe, which would require that Bulgaria, the entry point of the European extension of TurkStream, stops the Russian gas transit after the end of the winter heating season on 1 May, 2025.

As a result, the SEE region will lose access to roughly half of its existing natural gas supply (Figure 5). Yet, there are **no major security of supply risks from cutting Russian pipeline imports** with the possible exception of Bosnia and Herzegovina, which receives 100% of its gas from Russia via the Serbian section of TurkStream, and which does not currently have easy access to alternative gas supply.

Figure 5. Russian Gas Dependence in Southeast Europe and Available Alternative Supply in Case of a TurkStream Shutdown (million cubic meters per year)

Country	2023 Demand (mcm)	Russian Gas Supply (mcm)	% Russian Gas Dependence	Alternative Supply Routes (mcm)	% Coverage of Russian Supply by Alternatives	Alternative Supply Routes
Bulgaria*	2544	1492	59%	7800	523%	From Greece: booked capacity at FSRU Alexandroupolis (1.000 mcm/yr) and ICGB expansion to 5.000 mcm/yr; From Turkey: booked LNG capacity 1800 mcm/yr
Greece	5211	2449	47%	13300	543%	From domestic LNG: 4500 mcm/yr of capacity at FSRU Alexandroupolis and 6800 mcm/yr at Revithoussa; From Turkey: 2.000 mcm/yr available capacity at TAP
Croatia	2536	1395	55%	5782	415%	From domestic LNG: Krk LNG re-gasification plant (2899 mcm/yr); From Hungary: Dravaszerdahely (2883 mcm/yr)

Hungary	8499	5000	59%	7900	158%	From Croatia: Krk LNG regasification plant (1800 mcm/yr); From Romania: 1700 mcm/yr; From Austria: 4400 mcm/yr
Romania	9545	1479	15%	7885	533%	From Bulgaria: Ruse (985 mcm/yr) and Kardam (6898 mcm/yr)
Moldova (w/o Transnistria)	657	0	0%	2085	317%	From Romania: Ungheni (2080 mcm/yr)
North Macedonia	350	350	100%	1241	355%	From Bulgaria: Kyustendil (1241 mcm/yr)
Serbia	3057	2500	82%	6800%	272%	From Bulgaria: Kulata (2007 mcm/yr); From Hungary: Szeged (4800 mcm/yr)
BiH	254	254	100%	1496	589%	From Croatia: 1496 mcm/yr (planned)
Total	32653	14919	46%	54289	364%	

Source: CSD. *Bulgaria imports only around 300 million cubic meters of Russian gas directly via TurkStream. However, there is evidence that Bulgargaz, the biggest wholesale supplier, are buying around 1.1 bcm/yr of gas from the Greek traders DEPA and Mytilineos, which both have long-term supply contracts with Gazprom, at the TurkStream gas entry point Strandzha-2. This import volumes correspond roughly to 80% of the total Greek gas exports.

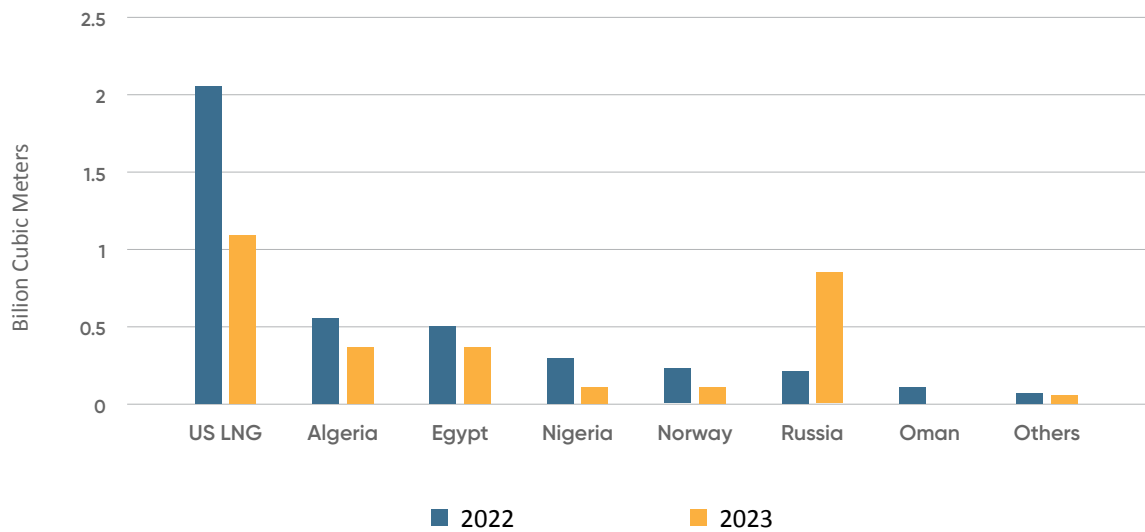
The rest of the region will be able to leverage the significant improvement of regional gas connectivity over the past 7 years to fully replace the lost Russian gas volumes. **Alternative gas delivery routes** have the capacity to bring three and a half times more gas than the current Russian deliveries. This is possible because Greece, Bulgaria, Romania, Serbia and Hungary completed a number of strategic interconnector projects that have allowed reverse flow gas deliveries on most border points. Even more importantly, Greece, Bulgaria and Romania have accelerated the work on the reversing of the now-empty TransBalkan Pipeline, which used to bring Russian gas via Ukraine to the SEE region until TurkStream was launched in 2021. The TransBalkan network could be used to ship LNG delivered on the Greek and (in theory) the Turkish regasification terminals to Central Europe, Moldova and Ukraine.

The **launch of the Alexandroupolis Floating Storage and Regasification Unit (FSRU)**, to be commissioned around mid2024, will bring 5.5 bcm/yr of additional LNG import capacity to the region. This means that **Greece**, which has another regasification plant in Revithoussa near Athens, would be able to import a total of 12.3 bcm/yr of gas from the global market or around 79% of the current Russian gas imports to the whole SEE region. Greece can, hence, fully replace its own Russian gas supplies, currently at close to 2.5

bcm/yr. Greece also has a long-term supply contract with SOCAR for 1 bcm/yr delivered from Turkey via TANAP-TAP connection at the Kipoi entry point on the border with Turkey. There, Greece could potentially import another 2 bcm/yr of Azeri gas or LNG delivered at Turkish terminals.

The Greek LNG regasification facilities can also fully replace Russian gas imports in **Bulgaria**. Bulgargaz already has 1 bcm/yr of booked capacity at Alexandroupolis, which can be shipped via the Interconnector Greece-Bulgaria (ICGB), which is also delivering the 1 bcm/yr of contracted Azeri pipeline gas to the Bulgarian market. The interconnector's total capacity is currently 3 bcm/yr but will likely increase to 5 bcm/yr in 2025 allowing for the evacuation of the Alexandroupolis LNG deliveries to Bulgaria, Romania, Moldova and, potentially to Hungary and Ukraine.

The latter will depend on the speed of the completion of the expansion of the reverse flow capacities on the TransBalkan pipeline bringing gas to Moldova and Ukraine, and of the interconnection point between Romania and Hungary (expected to be doubled by the end of 2025). Bulgaria can also use the standing agreement with Botas until 2035 for importing up to 1.9 bcm/yr of LNG via Turkish terminals.



Source: CSD based on DESFA Data.

Romania, which is the biggest natural gas consumer in the region, satisfies more than 75% of its own demand with domestic production. However, it still bought around 1.5 bcm of Russian gas in 2023 via TurkStream. Although the **Moldovan government** said that it has stopped direct imports of Russian gas, the TurkStream transit volumes to Romania indicate that this may not be the case, and that Moldova keeps buying Russian gas via intermediaries, similar to the case of Bulgaria. The halt of the Ukrainian transit could also make the supply of around 2 bcm/yr of gas to the breakaway province of Transnistria complicated. To prevent a security of supply crisis that could turn into a humanitarian disaster, the Chisinau government would have to purchase enough alternative gas on behalf of Transnistria. This would also mean importing more LNG in Greece and Turkey, and shipping it via the TransBalkan pipeline.

In the medium-term, **Romania and Moldova** could potentially fully phase out the Russian dependence when the offshore Neptun gas field with reserves of up to 100 bcm will start commercial gas extraction in 2027. Neptun will produce around 10 bcm/yr making Romania the largest EU gas producer and potentially a major exporter to Hungary and Austria via the planned Bulgaria-Romania-Hungary-Austria (BRUA) pipeline. The success of the project will depend on finding the funding for the key Podisor-Recas transmission link, which will bring the gas from the Black Sea to the Hungarian border. Until then, Romania and Moldova could replace the Russian gas with more LNG imports from Greek and Turkish LNG terminals.

The most vulnerable countries to the halt of the TurkStream transit through Bulgaria are in the **Western Balkans**. While Serbia can cover 25% of its gas needs

from domestic production, and also has access to supply from Hungary, and by extension from Western Europe via the Austrian Baumgarten gas hub, North Macedonia and Bosnia do not have an alternative supply route yet.

Yet, both are marginal gas consumers (around 600 mcm/yr combined) and have also worked on building interconnectors to Greece and Croatia, respectively. **North Macedonia** could also import gas from Bulgaria via the existing border link at Kyustendil. As Bulgaria is poised to become a hub for gas imports from at least three different sources and Bulgargaz already has around 400 mcm of surplus volumes, securing the gas supply of North Macedonia should not be an issue.

In the case of **Bosnia and Herzegovina**, most of the consumption is inside the Republika Srpska entity, and internal divisions, as well as widespread governance deficits in the management of the gas transmission network of the country, has prevented the completion of the 1.5 bcm/yr North-South interconnection with Croatia, which could provide access to the Krk LNG regasification terminal.

Namely the **Krk facility** will play a key role in solving the last and possibly most complicated piece of the new gas security of supply puzzle – replacing Russian gas supply in Hungary. Gazprom sold around 5 bcm to Hungary in 2023, more than 75% via TurkStream. Phasing out that supply will require LNG imports at Krk, which, however, has only 2.9 bcm/yr of regasification capacity, and would likely be used to cover the 1.4 bcm of Russian gas that Croatia still buys. The rest could potentially go to Bosnia and Hungary but this would not be enough to cover the shortfall.

Hungary would need to cooperate with **Austria**, which itself buys almost 100% of its gas from Gazprom via Ukraine, to negotiate alternative supply from Western European LNG import facilities. Hungary has the capacity to import around 4.4 bcm/yr from Austria and the Baumgarten gas storage facilities. Another 1.7 bcm/yr can be already imported from Romania. Hungary can also cover around 20% of its gas needs via domestic production, which leaves the country with around 0,6-0,8 bcm/yr supply deficit in case of a full Russian gas supply halt. Careful management of LNG deliveries to Krk and West-East gas flows from Germany, Switzerland and Italy would be necessary to avert any gas supply crisis.

the security risks of natural gas imports. An accelerated gas phaseout strategy could reduce gas demand by one-third across the region by 2030. The potential for demand reduction varies significantly among the different countries due to the differing roles of natural gas in their respective energy mixes.

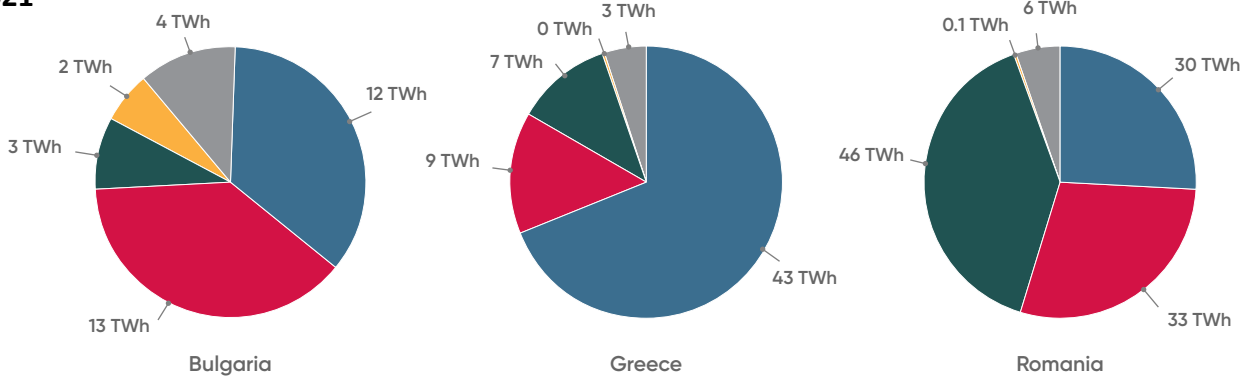
Maximizing the potential to reduce natural gas consumption could transform, for example, Romania into a net exporter without requiring additional investments in gas production. For Bulgaria and Greece, while lowering natural gas demand may not eliminate import dependence, it would significantly reduce import requirements in terms of volume. This reduction would greatly facilitate supply diversification without the need for additional infrastructure investments or the initiation of new long-term supply contracts. Signing new long-term deals is particularly challenging given the current tight global market, with fierce competition from larger consumers in Europe such as Germany and Italy, as well as from China, which are consuming all available gas supplies. Therefore, SEE countries seeking new supply contracts may face difficulties in securing favorable pricing offers.

Phasing out Natural Gas

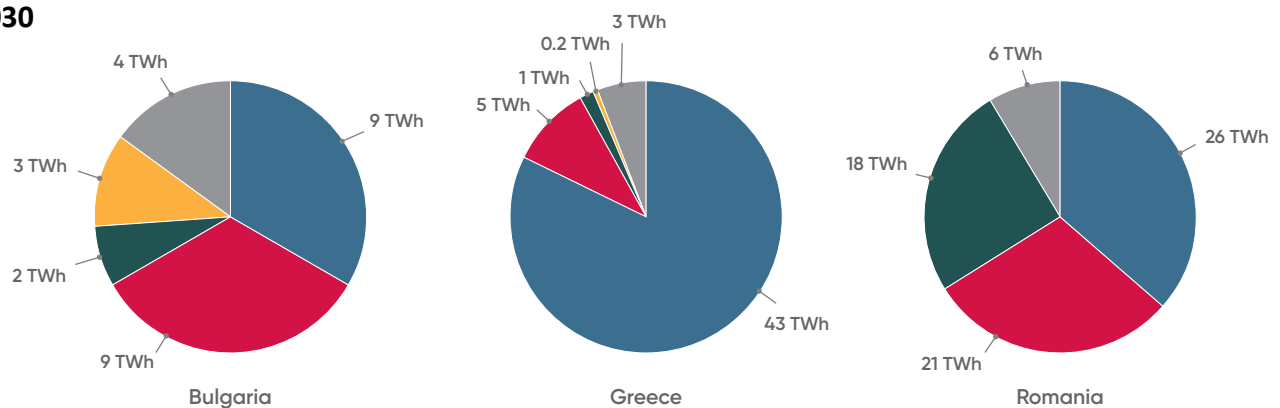
Implementing ambitious decarbonization policies to reduce natural gas demand can substantially ease the phaseout of Russian gas in Europe. Promoting energy efficiency and electrification across different sectors, alongside encouraging biomass co-firing in district heating and for high-temperature industrial processes such as chemical production, could effectively mitigate

Figure 7. Natural Gas Demand by Sector in Bulgaria, Greece, Romania in a Scenario for Accelerated Gas Phaseout

2021



2030



Power Sector

The pivotal factor determining the success of gas phaseout will be whether governments will move forward to build new gas-fired power generation capacity and how fast these plants are going to be replaced in the future. **Greece** is moving forward with five new gas-fired power plants, collectively exceeding 4 GW in capacity, scheduled to begin operations between 2024 and 2026. Meanwhile, **Romania** has two active gas power plant projects supported by EU financing. In **Bulgaria**, an initial plan to construct a 1 GW gas-fired generation facility was scrapped by the country's long-term energy planning documents. However, the risk of a policy reversal remains significant, given the current volatility in the national energy strategy owing to political instability since 2021.

Relying on **natural gas as a transitional fuel** for decarbonizing the power sector is a short-sighted strategy that leads to higher costs and stranded assets, along with increased energy and climate security risks due to heightened dependence. The recent surge in power tariffs in Europe is largely attributed to soaring natural gas prices and inadequate low-carbon electricity sources. Expediting decarbonization while **avoiding entrenchment in gas-based energy systems** necessitates a stronger focus on innovative technologies such as advanced renewables, grid modernization, and battery storage. These efforts should be prioritized post-2030, alongside market mechanisms encouraging demand-response initiatives from households and industry. This approach could yield substantial cost savings, with potential reductions in fuel costs of up to 50% and CO₂ emission costs of up to 70%, more than offsetting higher capital expenditures. Preventing a gas lock-in could lead to an overall cost reduction exceeding 10%.

Furthermore, natural gas power plants face a considerable risk of becoming **stranded assets**. ENSTOE's latest Resource Adequacy Assessment identifies significant gas-fired electricity capacity across Europe that could be economically decommissioned by 2030, with many such plants located in Greece. To maintain economic viability, these generation facilities will require capacity remuneration mechanisms in the coming years, which could encounter state aid challenges and jeopardize fiscal stability.

To replace natural gas-fired power production, Europe should expedite the adoption of renewables by addressing existing market and administrative obstacles. This could result in the addition of over 25 GW of solar and wind capacity across the region by 2030.

Industry

The energy transition debate remains painfully shortsighted largely ignoring the critical issue of industrial decarbonization. The low energy and material efficiency of national industries offers a huge potential in terms of energy efficiency measures and for low-hanging fruit innovation. Such measures can deliver considerable reductions in gas demand already by 2030 and contribute to improving national energy and climate security.

The surge in natural gas prices has already introduced a strong price incentive for industry players to invest in energy efficiency, fuel and technology switching, contributing to the significant gas savings realized in 2022 across the region.

Phasing out natural gas in the industry sector requires a complex approach adapted to the different ways gas is used with a particular focus on the **different temperatures required for the various industrial processes**. Typically, industrial heat demand is associated with very high temperature processes (>1000°C) such as cement and virgin steel production, where direct electrification solutions are not yet fully mature. In such cases, waste and biomass can be used in co-firing. More importantly, however, direct electrification solutions are already competitive in low and medium-temperature processes. The use of natural gas in low and medium temperature processes is very inefficient and wastes the fuel's potential, as it is capable of reaching 2000°C. Industrial heat pumps can provide up to 170°C of heat with very high energy efficiency that leads to lower overall energy consumption than using natural gas, making them a very suitable solution for the food, paper, and textile industries and even in ceramics for drying.

For **low temperature processes** other energy efficiency measures, including better insulation of industrial buildings and more efficient waste heat recovery also offer a strong potential for reducing overall energy demand and gas demand in particular. Electric boilers, especially in combination with renewables for self-consumption, and concentrated solar power technologies (albeit mostly after 2030) are very suitable for medium and even high temperature processes. They also offer industrial players the additional opportunity to monetize their systems for storing heat by providing demand response services for balancing in the electricity market. The deep decarbonization of the industry sector requires a structural shift in all industrial production processes, especially in chemicals, iron, steelmaking, cement and ceramics, which still have a dominant role and have poor sustainability performance. Additionally, it requires a reorientation of the economy towards lighter industries with higher added value.

Buildings

The buildings sector presents the greatest opportunity for reducing natural gas demand by 2030, accounting for half of the total estimated gas savings. To fully realize this potential and achieve deep decarbonization of the sector, a comprehensive policy strategy is essential, focusing on electrification, energy efficiency, and addressing energy poverty risks.

Natural gas has seen significant uptake in the buildings sector, particularly in Romania, where individual gas boilers have replaced district heating and biomass, making natural gas the dominant heating energy source, especially in urban areas. In contrast, Greece and Bulgaria are motivated to phase out natural gas in buildings due to high prices. Greece has a lower dependence on natural gas for heating, with less than 10% of demand met by gas, while Bulgaria has only 2.5% of households connected to the gas grid, presenting fewer challenges for natural gas phaseout.

The buildings sector suffers from poor energy efficiency due to an aging building stock that falls short of European energy performance standards. Despite efforts to implement energy efficiency policies and measures, significant renovation of the building stock has not occurred. This is mainly attributed to inefficient financing mechanisms that underutilize household and tertiary sector participation in renovation investments. Furthermore, deep renovation measures lack adequate incentives compared to superficial measures like wall insulation.

Overcoming these barriers could potentially reduce energy demand in the buildings sector by 9% by 2030 compared to 2018 levels, leading to a 56% decrease in natural gas consumption within the sector alongside increased electrification efforts. This highlights the critical role of targeted policies and financial mechanisms to drive comprehensive energy efficiency improvements and transition away from natural gas reliance in Southeast Europe's buildings sector.

Policy Action for Gas Phaseout and Security of Supply

The EU should accelerate the implementation of the REPowerEU targets by prioritising the complete phaseout of Russian oil and gas supply to Europe. By providing derogations to the oil embargo and closing its eyes to rising Russian LNG imports, the EU allows individual member states to profit from their special relationship with Russia, undermining European unity. To secure the 100% Russian gas phaseout in 2025, European governments would have to undertake a

series of short and long-term measures that overcome the congestion and contractual risks, linked to the halt of TurkStream:

Improving Security of Supply

- **The EU should expand the scope of sanctions to include natural gas.** While blocking Russian LNG exports to Europe is unlikely to hurt consumers as most of that gas goes to markets with many alternative suppliers (i.e. Spain, France, Italy, Portugal, Belgium), stopping Russian pipeline gas imports would be more challenging, especially when we consider the supply options of the Western Balkans and, to an extent, of Hungary. A sanctions regime with targeted derogations for the most vulnerable countries would be an appropriate approach. Such exemptions should, however, be tied to a clear timeline for the phaseout of long-term natural gas contracts by the end of 2025 and specific steps for lowering overall natural gas demand.
- Full decoupling from Russia would not be possible without **targeting the state capture networks** that have enabled strategic partnerships between Russian and European energy companies. The EU's economic security and strategy for the new global realities require sophisticated mechanisms for screening and halting overt and covert Russian strategic investments in Europe linked to state-owned companies and oligarchic networks close to the Kremlin. Such screening needs to be complemented by measures for ensuring intra-EU corporate ownership transparency and the strengthening of the European anti-money laundering infrastructure and efforts on reducing the Kremlin's hidden economic footprint in Europe.
- European countries should accelerate the **ending of all long-term gas supply contracts with Gazprom.** A number of gas trading companies in the region still have long-term supply contracts with Gazprom ending earliest at end of 2025 with Srbijagas and in 2036 and 2040 with Hungary's MOL and Austria's OMV, respectively. The simultaneous halt of the gas transit through Ukraine and through TurkStream should trigger the *force majeure* clause, allowing Gazprom's clients to suspend or renegotiate their agreements with the Russian company.
- Ensure that Russia does not circumvent sanctions on Gazprom's sales by facilitating **its gas exports** via intermediaries with close ties to Gazprom or by supplying the CEE region with LNG cargoes. There is strong indication that Botas in Turkey in cooperation with SOCAR are acting as fronts for increased Russian gas sales.

- Complete **gas diversification strategies** until 2025-2026 by finalising strategic projects such as regional gas interconnectors, storage facilities, and LNG regasification plants. It is crucial that Bulgaria accelerates the expansion of the Chiren underground gas storage facility to 1 bcm. Greece does not have a gas storage facility and for the regional gas market to function effectively, the country would need to either build a storage or use facilities in Bulgaria and Italy to manage the huge uptake of alternative supply. Greece is also planning a new LNG regasification facility near Kavala and U.S. investors are mulling building an LNG plant in Albania to bring U.S. supply directly to the Western Balkans without relying on potentially congested facilities in Greece and Croatia.
 - Gas imports at the **LNG regasification terminals in Greece and Turkey** will play a crucial role in maintaining security of supply. It is imperative that Bulgaria, Greece, and Romania sign solidarity agreements along the model of other EU member states to optimize the allocation of limited volumes of alternative gas supplies entering the region. Without a non-discriminatory interconnection agreement between Turkey and Bulgaria that opens up the Turkish market to foreign gas traders, Turkey's potential as a hub for secure and competitive gas supply would not be fulfilled.
 - Avoid signing **LNG supply agreements which last beyond 5 years**, which is the standard gas contract length in most of Europe. Priority should be given to new floating regasification terminals leased on a temporary basis rather than fixed facilities, whose commercial viability is also questionable.
 - The security of supply crisis should not be a justification for **replacing the dependence on one gas supplier with another**. Where possible, European gas consumers should friendshore supply agreements, ensuring that they are based on beneficial commercial relationships that will facilitate the entry of constructive capital in the region.
 - CEE countries should ensure **physical and contractual reversibility on existing interconnection pipelines**, including the Transbalkan transit pipeline, which is no longer in use by Gazprom. The pipeline should be able to evacuate the expected surplus gas volumes of around 10 bcm in the next five years to Hungary, Slovakia, Moldova and Ukraine via the planned Vertical Gas Corridor, which would require additional expansion works on the Greece-Bulgaria section (2.3 to 3.5 bcm/yr) and on Bulgaria-Romania border (from 6 to 10 bcm/yr).
 - A common **EU gas purchasing mechanism** should be introduced in order to secure gas stocks and achieve economies of scale in mobilizing alternative gas supplies. Russian and Azeri gas pipeline sales are cheaper than LNG imports on the spot market, which has been dissuading SEE gas companies to seek alternatives. If several SEE gas companies do not sign a joint contract with a major LNG supplier, it may be too difficult to attract competitive supply at affordable prices.
- ## Gas Phaseout and Decarbonization
- The only sustainable long-term strategy for reducing security of supply risks is to **phase out the overall use of natural gas**. The untapped potential for energy efficiency remains a key security of supply risk. Cutting the overall gas consumption will mean fewer fossil fuel imports, and therefore greater energy independence. The CEE countries should undergo **an accelerated energy efficiency investment strategy**, focusing specifically on energy-poor households and deep renovation programs to reduce consumption faster than the current 2030 targets.
 - Weaken the overall role that natural gas plays in the energy mix by **replacing it with locally sourced renewable energy**. This would not only limit the exposure to Russian imports and geopolitical risks more generally, but also to the inherent volatility of fossil fuel prices.
 - Natural gas phaseout is possible Europe increases efforts to:
 1. Replace natural gas in heating with a **heat pump rollout and electrification**;
 2. Accelerate **offshore wind and power storage projects** to replace natural gas power plant use for covering peak power demand;
 3. Avoid a **natural gas lock-in** by rejecting any new EU-financed natural gas transmission and gas-fired power plant projects, unless they contribute to reducing short-term natural gas supply risks. Optimizing the use of the existing gas infrastructure could limit the need for a major expansion of the gas assets base;
 4. Avoid a **blue hydrogen uptake based on the increased use of natural gas**, as well as the unnecessary construction of new gas transmission networks repurposed for hydrogen transportation or expansion of existing ones;
 - A complete gas phaseout would not be possible without major **industrial decarbonization measures** directed towards the electrification of production, especially in the most energy-intensive sectors such as mining, metallurgy and cement.