The final push for EU Russian gas phase-out

With just two years left to meet the 2027 Russian gas phase-out goal, the EU needs to step up and deliver on commitments, which will bring economic and security benefits in the process.

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Contents

Executive Summary
Taming EU's addiction to gas
EU gas imports from Russia increased in 2024
The pathway towards a 2027 Russian gas phase-out
Gas market volatility remains elevated
Supplier volatility remains at an all time high, posing a security threat
EU gas infrastructure is expanding beyond needs
Recommendations
1. Introduce a legally binding target for phasing out Russian gas
2. Avoid locking the EU into another gas dependency
3. Reduce gas demand across all sectors
4. Use existing gas infrastructure more efficiently
5. Improve whole-system planning
6. Improve data availability to support monitoring and planning
Supporting Materials
Methodology
Acknowledgements

About

This report analyses data on natural gas imports into the EU, comparing recent developments with a Russian gas phase-out commitment – a key objective of the European Commission and the Polish EU Council Presidency. The analysis also contrasts the EU's gas infrastructure expansion plans with its security and affordability objectives, highlighting risks coming from the reliance on expensive and volatile imported fossil gas.

Highlights

18%

Russian gas imports increased by 18% in 2024, despite plan for 2027 phase-out

59%

EU gas prices rose by 59% throughout 2024, driving a rise in power prices

131 bcm

Due to large-scale expansion, EU gas supply is set to exceed demand by 26% (131 bcm) in 2030

Executive Summary

Taming the EU's gas addiction will bring security and affordability benefits

Starting with the phase-out of Russian gas, reducing long-term fossil gas reliance can help the EU to better align with broader economic, climate and security agendas.

Ending Russian gas dependency has been a top priority of both the European Commission and the Polish EU Council presidency. However, a Russian gas phase-out plan has still not been published.

While the EU waits for a roadmap to exit Russian fossil fuels, Ember analysis finds that Russian imports into the EU have in fact been rising, financing Russia's war in Ukraine. This is despite readily available alternative supply options even for countries that currently oppose a phase-out of Russian fuel imports, such as Hungary and Slovakia.

At the same time, EU Member States are investing heavily in gas infrastructure despite stagnating demand. By 2030, a significant portion of that capacity could be underutilised, diverting financial resources away from long-term investments like renewables and efficiency measures. The EU needs to move away from pricey and volatile fossil gas to meet its own security, economic and climate objectives, starting with a clear pathway for the Russian gas phase-out.

01 Russian gas imports increased by 18% in 2024, despite plan for 2027 phase-out

Total EU gas demand remained flat in 2024, but imports of Russian gas rose by 18% in 2024 (from 38 bcm to 45 bcm), mainly due to increased imports into Italy (+4 bcm), Czechia (+2 bcm) and France (+1.7 bcm). Russian imports continue to grow in 2025. These increases could threaten the 2027 Russian gas phase-out pathway.

02 Gas prices rose by 59% in 2024, with supplier volatility at an all-time high

Going into 2025, the European gas price benchmark (the TTF) is around double its pre-crisis levels. Throughout 2024 alone it rose 59%, from 30 to 48 EUR/MWh. This has in turn pushed European power prices up, with industry now paying double compared to the US and China. Supplier volatility is also at an all-time high amid geopolitical instability, exposing the risks of overreliance on imported fossil fuels.

03 EU's fossil gas supply is set to exceed demand by 26% in 2030

Driven largely by a 54% increase in LNG import capacity and the construction of new gas pipelines, 131 bcm of gas supply capacity is likely to be underutilised in the EU by 2030, leading to a potential waste of public funds and driving up consumer costs.

With one hundred days of the new European Commission already behind us, the flagship pathway towards a Russian gas phase-out is still missing. It is not technical challenges impeding progress, but some EU Member States making perilously shortsighted decisions. This cannot be allowed to happen, as financing Russia's war is a direct threat to the bloc's security.

It is vital for the EU to maintain consistent strategic leadership, instead of proposing short-term actions that work against its own long-term goals. Ideas such as subsidizing volatile imported gas or reopening the Nord Stream pipeline to improve energy affordability are like adding fuel to the fire and expecting it to go out.

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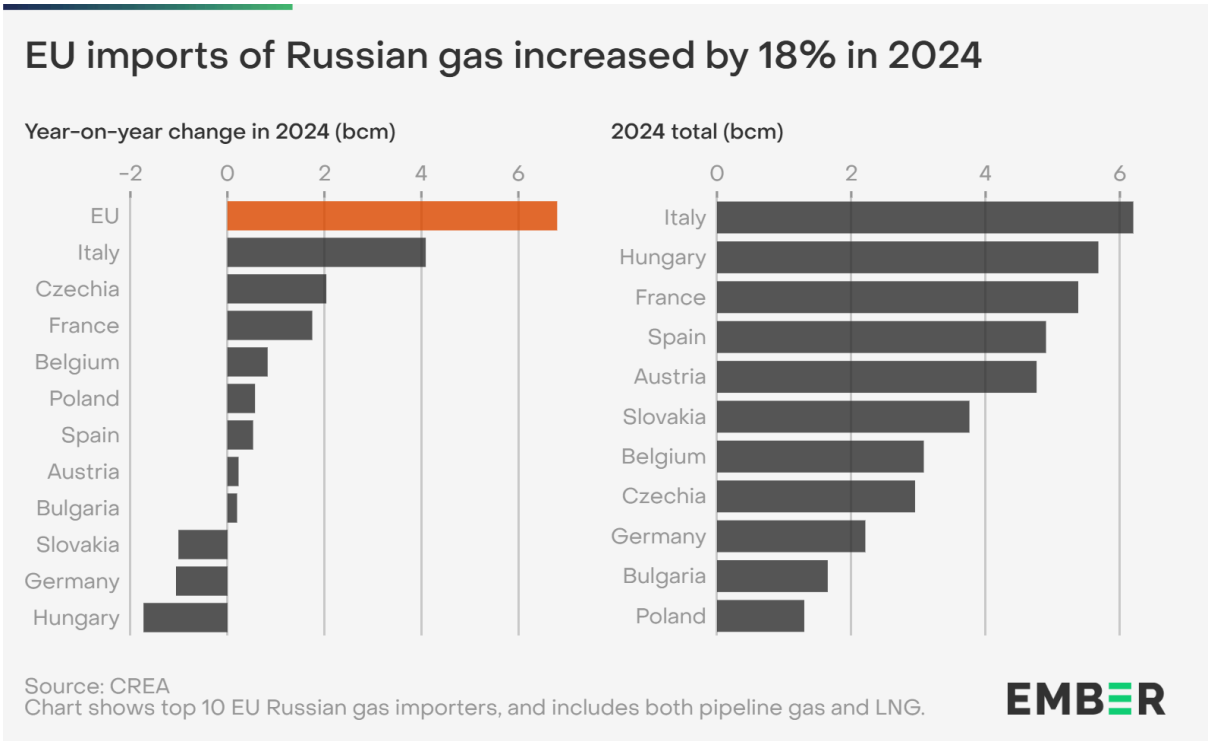
Taming EU's addiction to gas

With no plan to fully phase-out Russian energy imports, EU gas reliance continues

Despite EU commitments to cut off Russian gas imports, no roadmap is yet in place. With imports increasing, and infrastructure locking in longer term dependence on gas, the EU needs to change paths to align with its economic, security and climate priorities.

EU gas imports from Russia increased in 2024

The EU introduced several measures under the REPowerEU plan in May 2022 to progressively reduce gas consumption, with the headline goal of ceasing Russian gas imports by 2027. The phase-out of Russian energy has been a priority of both the new European Commission and the Polish EU Council presidency. Yet in 2024, Russian gas still made up 14% of the EU's total gas consumption. Imports of Russian gas rose by 18% in 2024 from 38 billion cubic metres (bcm) to 45 bcm, mainly due to increased imports into Italy (+4 bcm), Czechia (+2 bcm), and France (+1.7 bcm). This is despite countries like Czechia declaring their intention to end its dependence on Russian energy.



The uptick was largely driven by growing imports of Russian LNG. This trend continues in 2025, with the EU averaging 74.3 million cubic meters per day (mcm/day) of Russian LNG imports in February, a 11% monthly increase. The use of 'shadow' vessels and the practice of 'whitewashing' Russian LNG are also becoming increasingly widespread, allowing Russian gas to enter European markets unsanctioned. For instance, despite Germany's ban on importing Russian LNG directly, the country continued purchasing Russian LNG through other European ports. This was made possible partially by the lack of transparency within the EU's internal gas market.

Pipeline imports from Russia also continue, despite the end of flows through Ukraine on the 1st of January 2025. In February 2025, the EU received 56 (mcm/day) of Russian gas via the TurkStream pipeline, a 11% monthly increase.

In total, the EU's imports of Russian fossil fuels reached €21.9 billion in 2024, exceeding the €18.7 billion in financial aid provided to Ukraine.

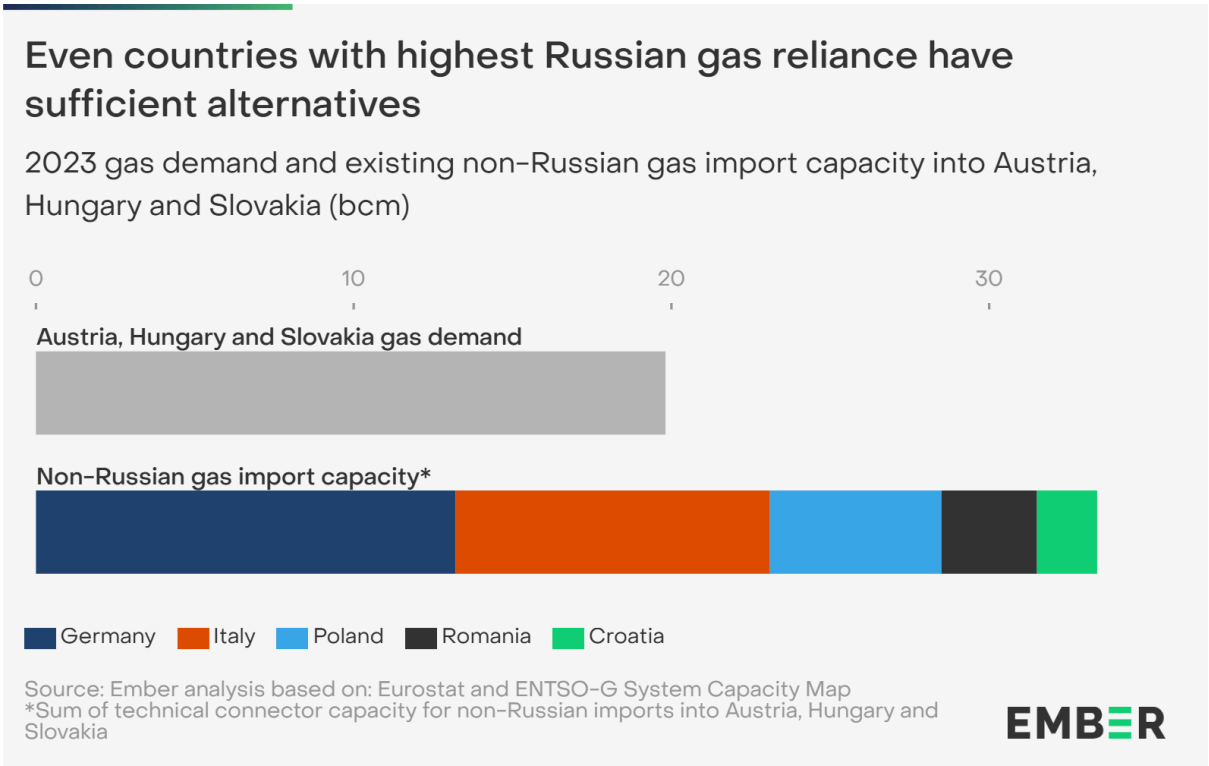
The pathway towards a 2027 Russian gas phase-out

With these continuing Russian gas imports, the EU is not only falling short of its REPowerEU commitments, but also threatening its own security. The rebound in imports in 2024 is particular cause for concern given that there are only two years left to meet the 2027 Russian gas phase-out target. And there are further challenges that complicate the EU's path forward. Slovakia and Hungary continue to support the use of Russian gas, while talks between the US and Russia reportedly included the opening of Nord Stream 2. A return to Russian gas is also rumoured to be part of a potential settlement to end the war in Ukraine.

Previous analysis from Ember demonstrated that accelerated deployment of renewable electricity, energy efficiency and electrification could have enabled the EU to achieve independence from Russian gas already by 2025. However, despite commitments from Von der Leyen's Commission and the Polish EU Presidency, the EU is at risk of failing to achieve this even by 2027. The awaited publication of the European Commission's roadmap for phasing out Russian energy imports has already been delayed twice, with no new date announced.

Not all EU countries have equal opportunities to diversify their gas supply. However, even the most dependent on Russian gas today, notably Austria, Hungary and Slovakia, already have adequate alternative supply options, thanks to EU-funded grid upgrades. In fact, the technical capacity of non-Russian gas import infrastructure in these three countries already exceeds their gas demand. This is why the cessation of Ukrainian transit in January did not cause any supply issues for Central European gas consumers. Even now, a full phase-out of Russian gas would be expected to only cause a minor (~10%) uptick in gas prices in these landlocked countries, and this would be mitigated by 2030.

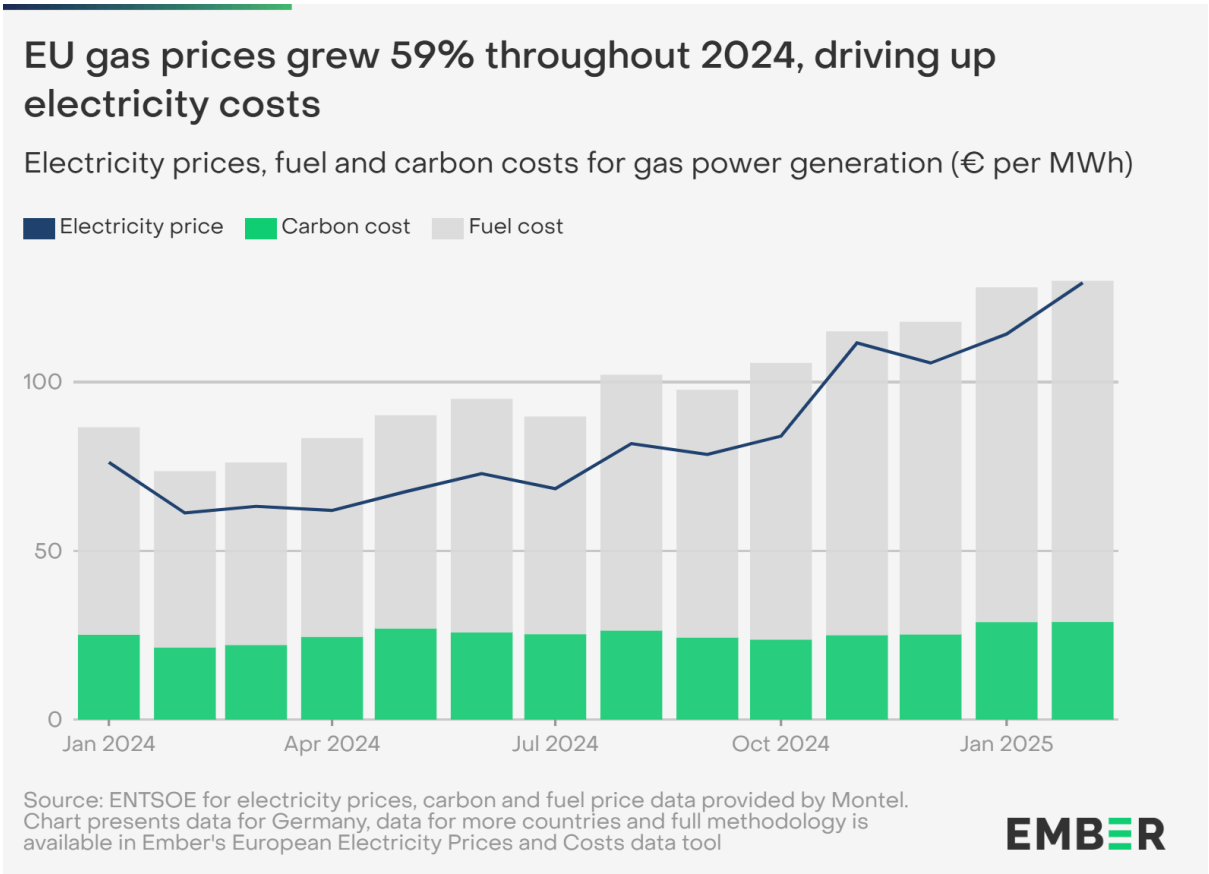
For Hungary and Slovakia, there are clear motivations to continue importing Russian gas due to discounted prices and transit revenues. However, by continuing this status quo, Russian gas importers are directly compromising national and EU-wide energy security and providing profits to Russia.



Gas market volatility remains elevated

Russia's invasion of Ukraine and the related energy crisis from 2021 and 2022 have revealed the potential consequences of Europe's reliance on imported fossil fuels. These consequences are still visible today, with the EU bloc struggling to maintain its competitiveness and stabilise the costs of living amid the impact of high and volatile gas prices. Replacing Russian pipeline gas with a limited amount of globally-sourced LNG was a short-term necessity, but this made price volatility a permanent feature of the European energy markets. The EU is now fully exposed to the global supply and demand dynamics of LNG, competing with Asian markets for spot natural gas volumes. Yet the idea of resuming Russian pipeline gas flows to "stabilise prices" exposes Europe to the conditions that pushed it into a crisis in the first place, risking financing future aggression from Russia in the process.

Going into 2025, the European gas price benchmark (the TTF) is around double its pre-crisis levels. Throughout 2024 alone, it rose 59%, from 30 to 48 EUR/MWh. This has in turn pushed European power prices up, with industry now paying double compared to the US and China.



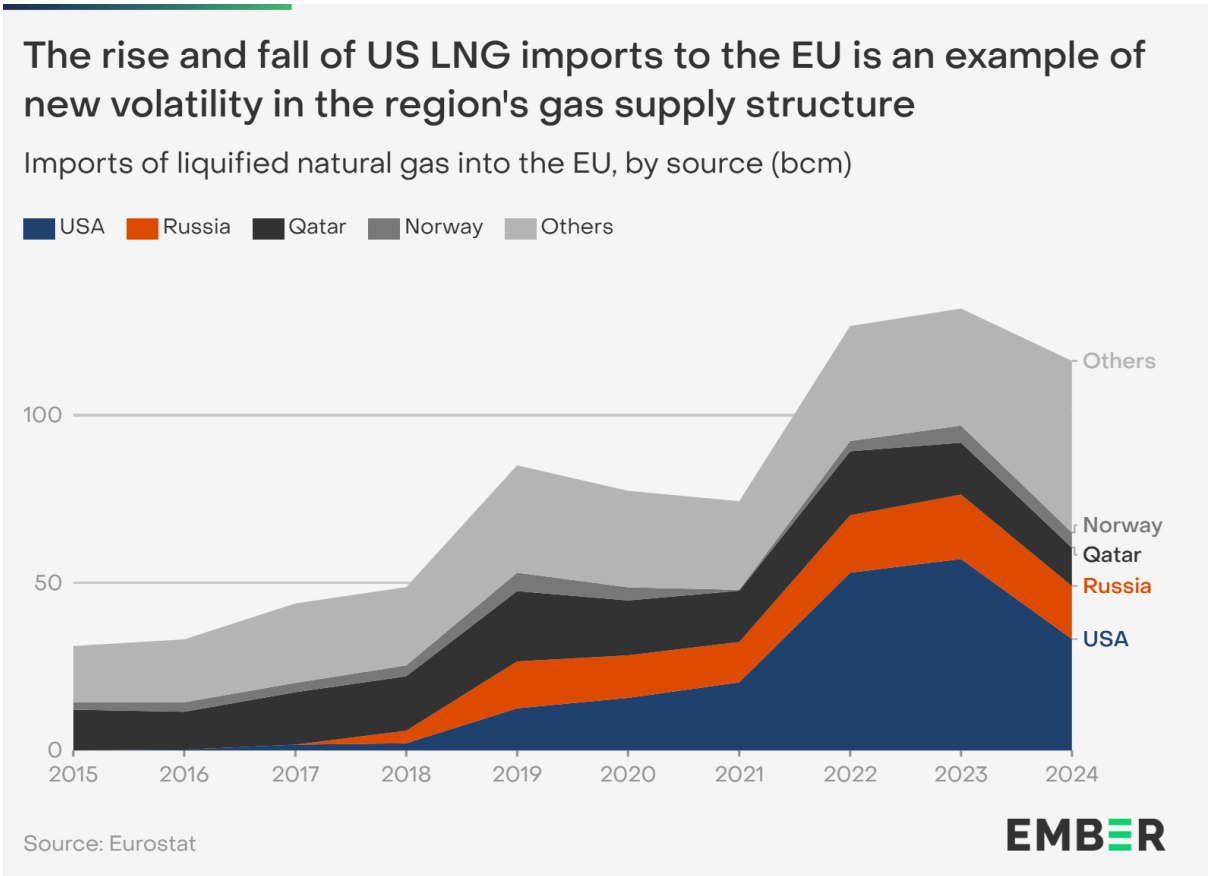
This situation continues to accrue lasting impacts. Gas prices have slightly decreased since mid-February 2025. However, overall elevated prices and continued volatility are significantly impeding investment into alternatives. In the UK, recent analysis estimates that the country has spent £90-100bn more on wholesale gas over the past four years than it would have prior to the energy crisis. This is almost triple the amount the UK has planned for transmission grid expansion over the next five years. The continued reliance on imported and volatile fossil gas not only harms European economies, but risks pulling limited finances away from the energy transition, impeding the implementation of the Clean Industrial Deal.

Supplier volatility remains at an all-time high, posing a security threat

The volatility of gas manifests not only through prices, but through supplier stability as well. As recently as 2018, LNG imports from the US were almost negligible. Yet, in five years they rose to 43% of EU LNG imports, only to drop to 29% in 2024. Trends in 2025 remain uncertain due to continued political hurdles in the US. North African imports from Algeria and Egypt faced technical difficulties in 2024, while Nigeria's gas exports are constrained by security challenges. This unpredictability of the gas supplier structure is the EU's new reality.

This volatility of gas suppliers requires constant public measures that stabilise consumer costs in the short term. However, these are becoming a major burden for state budgets. EU natural gas subsidies were relatively stable until 2021, hovering between EUR 7-10 billion annually, but increased five times in 2022 to protect households and industries from skyrocketing energy prices with Russia's invasion of Ukraine. In 2023, this support remained four times above pre-crisis levels. The European Commission has proposed taking even more drastic steps in the name of lower short-term retail gas prices, such as funding foreign LNG infrastructure projects and signing up for long-term LNG contracts. While these may not be implemented, these suggestions work directly against decarbonisation objectives and risk exacerbating the root cause of high energy prices: the EU's dependence on expensive imported fossil fuels.

The idea of supporting foreign LNG projects comes at a time of gas export renaissance in the US. The United States' LNG export capacity, bolstered by the new administration, is on track to expand 72% by 2028. However, with shifting geopolitical relationships, relying on the US as a major supplier of Europe's gas presents heightened risks to energy security and price stability. This has been underlined by the recent speech from US vice-president JD Vance during the Munich Security Conference, as well as the increased possibility of US tariffs. Additional to the security and cost risks of this reliance is the significant climate impact of US LNG, which has emissions comparable to coal. While the EU has made a successful push on reducing its coal reliance, it now risks replacing one costly and polluting fossil fuel with another.



EU gas infrastructure is expanding beyond needs

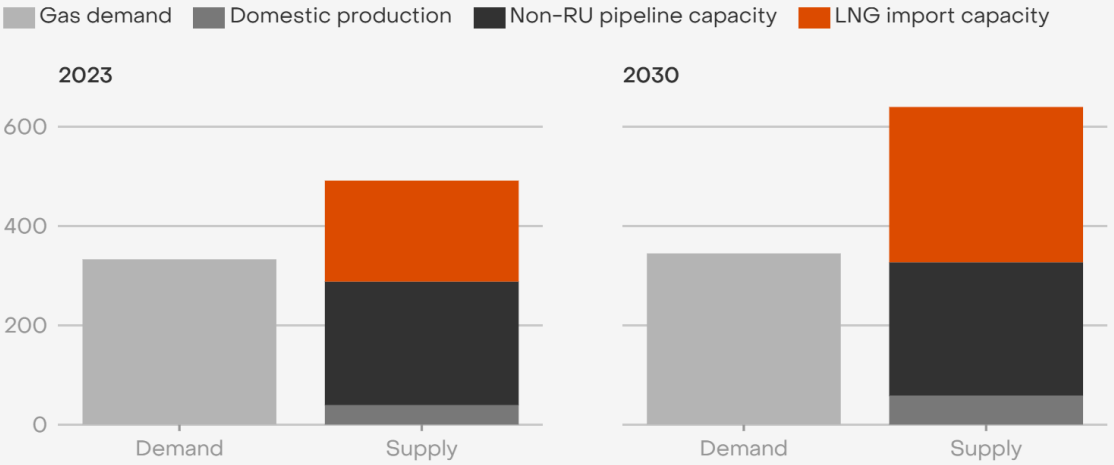
Despite concerns about cost and security impacts of fossil gas imports, the EU is still significantly expanding gas import infrastructure. Ember analysis estimates that LNG import capacity will increase from 203 bcm in 2023 to 313 bcm in 2030, a 54% rise. Pipeline capacity is also set to increase, with at least 20 bcm added from the TAP expansion and EastMed projects. Across LNG terminals, pipelines and domestic production, total gas supply capacity is expected to increase 30% by 2030 compared to 2023.

This increase stands in stark contrast to a forecasted stagnation in gas demand. Even a conservative scenario by European power and gas grid operators anticipates only 4% growth in gas demand between 2023 and 2030. Assuming the same utilisation of assets as in 2023,

the diverging pathways of gas supply and demand will lead to 131 bcm of costly supply capacity potentially being unneeded and underutilised. This scale of overinvestment is equal to the combined annual gas demand of Germany, France and Poland.

EU gas supply capacity will rise 30% by 2030 despite stable demand, likely leaving 131 bcm of assets underutilized

Demand and supply of natural gas in the EU, 2023 historical values and 2030 projections (bcm)



Source: Ember analysis based on: ENTSO-G System Capacity Map, Gas Infrastructure Europe, Eurostat, ENTSO-E TYNDP 2024
Demand and domestic production forecast from ENTSO-E TYNDP 2024 National Trends+ scenario. Pipeline capacity includes Norway, North Africa and Türkiye routes, and excludes Russia. Utilization of supply assets is assumed to remain at 2023 levels of around 68%. Baseline year is 2023 because of unavailability of Eurostat demand and production data for 2024.

This gap is likely to widen. Three years on from Russia's invasion of Ukraine, scaled up EU efficiency measures and renewable deployments have put the continent in a stronger position to continue reducing gas consumption. This is partially why LNG utilisation rates across the EU have already been dropping. Between 2022 and 2023, utilisation rates across Europe's 37 LNG terminals dropped from 63% to 58.5%. In 2024, half of the EU's LNG terminals had a utilisation rate below 40%. With a planned expansion of over 100 bcm, these terminals are at risk of becoming stranded assets and a burden for tax payers.

Even where gas infrastructure is now consistently operating near peak capacity, like in the Baltics, creative solutions using existing infrastructure can negate the need for new projects.

The years 2023 and 2024 have already shown that Europe can cover its gas needs without Russian pipeline gas, using other existing infrastructure. Even in 2022, when Europe was unprepared and scrambling to immediately substitute for Russian gas supplies, a gas shortage was avoided. Additional infrastructure is therefore likely to be redundant, providing little added security and economic benefits in the short and medium term, while raising major concerns in the long term about the misuse of public money, negative return on investment and increased costs passed along to consumers.

Despite this, and the calls from the EU Agency for Cooperation of Energy Regulators (ACER) to plan for the decommissioning of gas projects, more than EUR 37 billion of natural gas infrastructure projects are currently in development in the EU. The inconsistency in the EU's approach to gas goes further: gas projects are no longer eligible for EU financial aid under the TEN-E Regulation, yet a derogation was made for two gas pipelines: EastMed and Melita. Other gas projects have been awarded public funding from the Recovery and Resilience Facility (RRF) or loans from European Bank for Reconstruction and Development (EBRD). Privately financed projects pass the risks and costs onto consumers through regulated and subsidised tariffs. This leads again to indirect public finance support for gas expansion, in contradiction to the EU's wider security, affordability and climate agendas.

Recommendations

Completing Russian gas phase-out

The EU needs to prioritise the phase-out of Russian gas by 2027 at the latest, putting the bloc's security above the perceived short-term financial gains of a handful of Member States.

The complete phase-out of Russian gas is both imperative for the EU and technically feasible. Economic, security, and climate benefits are waiting to be unlocked, but only if the EU's ad-hoc policies are aligned with wider objectives. Delivering this will need a coordinated, concrete approach from EU Member states.

1. Introduce a legally binding target for phasing out Russian gas

Despite political commitments, Russian fossil fuels continue to enter EU markets through several routes. Three years after Russia's invasion of Ukraine, the EU has still failed to introduce legally binding sanctions or bans on Russian LNG and pipeline gas imports. Further delays in the EU's roadmap for Russian gas phase-out raise concerns about the bloc's long-term security. The EU must remain firm in its commitment to ensure that Russian gas does not enter the bloc and finance Putin's war, through a legally binding 2027 phase-out target. If needed, technical assistance should be provided to countries like Slovakia or Hungary to remove any obstacles to Russian gas replacement, through renewable energy deployment, electrification, flexibility measures and diversification.

2. Avoid locking the EU into another gas dependency

Shifting the dependency from Russian pipeline gas to imported LNG exposes households and industries to unpredictable price shocks and the instability of suppliers. This compromises both the bloc's energy security architecture, and the cost-of-living and competitiveness objectives outlined in the Action Plan for Affordable Energy. The latter specifically states that: *reducing the share of fossil fuels in the European energy system would further shield consumers from market volatility*. Subsidising LNG gas projects abroad and committing to long-term LNG contracts or watering down EU methane regulation works against this and derails the EU's climate targets, offshoring emissions rather than reducing

them. Moreover, despite forecasts of stagnant gas demand by 2030, the EU is significantly expanding LNG capacity — leaving up to 131 bcm of supply underutilised and at risk of becoming stranded assets. A strategy better aligned with the EU's wider goals would be to invest in electrification, electricity grids, energy storage, and decentralised renewables.

3. Reduce gas demand across all sectors

The most effective way to phase-out Russian gas is to use less gas. While national energy efficiency programmes adopted under REPowerEU were able to successfully reduce EU household demand in a short period of time, much more can be done in the medium and long term in this sector, along with industry. After energy savings and efficiency measures, building renovations and the electrification of buildings and industry using renewable sources need to be accelerated. The implementation of the EU's Affordable Energy Action Plan must be fully integrated with these measures to ensure that consumers benefit from lower energy costs as fossil gas use declines.

4. Use existing gas infrastructure more efficiently

Ember analysis shows that sufficient gas supply options are available even for land-locked Central European countries. Existing LNG import facilities might already be underutilised, calling into question broad expansion plans. However, there remain West-East gas network bottlenecks that unnecessarily elevate prices such as levies on interconnection and storage entry and exit fees. These should be standardised and designed in a way to ensure fair prices and efficient flows across the EU, in particular to support the decoupling from Russian gas in landlocked Member States. The Western part of Ukraine has significant gas storage assets that can also be better integrated with the EU, strengthening gas supply security in Central Europe even further without overbuilding expensive new infrastructure.

5. Improve whole-system planning

The misalignment of gas expansion plans with the EU's long-term strategies is partially caused by the separate planning of gas and electricity infrastructure, both at the EU and national level. Strategic modelling exercises such as the National Energy and Climate Plans, national grid development plans or the ENTSO-E Ten-Year Network Development Plan, need to adapt to an electrified-future, optimising resources across electricity, gas, hydrogen, heating and transport sectors.

6. Improve data availability to support monitoring and planning

Primary data on key topics such as LNG imports varies greatly between providers. This allows for Russian LNG to enter the EU market unnoticed. Data on gas infrastructure

buildout is lacking too, with ACER repeatedly flagging missing gas project cost estimates. This makes it difficult to see the full scale of planned gas investment, also publicly financed. Several actions can be taken by the EU Energy Commissioner, Eurostat, ENTSO-E, ENTSO-G, ACER and other EU agencies to increase data transparency. This would allow for improved policymaking as well as the enforcement of EU policies, including sanctions.

The EU needs to stop dragging its feet and act immediately to implement legally binding measures—not empty promises—to set a clear timeline for ending Russian gas imports. To break free from Russian gas and constrain the Kremlin's war-chest, the EU should enforce an LNG price cap, ban spot market purchases, and stay firm on a full gas phase-out by 2027. Without policies to restrict the flow of Russian gas into Member States, the EU risks increasing its reliance on this volatile supplier in 2025—just as it did with an 18% rise last year. Reliance on Russian gas exposes Europeans to price volatility, energy blackmail, and undermines support for its allies in Ukraine.

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Supporting Materials

Methodology

EU gas demand and domestic production

EU total gas demand and domestic production based on Eurostat; at time of writing Eurostat annual data for both metrics was only available until 2023, so 2023 was used as the base year in gas infrastructure expansion calculations.

EU gas imports

High accuracy data on Russian gas imports by destination country for 2024 and 2023 provided by the Centre for Research on Energy and Clean Air (CREA). Data on long-term LNG supply routes (2015-2024) sourced from Eurostat due to longer time series availability.

Central Europe gas supply and demand assessment

As in other cases, demand data sourced from Eurostat. Supply based on the current technical capacity of entry points into Austria, Hungary and Slovakia, according to the ENTSO-G System Capacity Map 2025. The analysis excluded entry points supplying Russian gas. No utilisation constraints were applied to technical capacity figures, as several of the connectors have already been used at 100% utilisation in the past (e.g. between Austria and Hungary or Romania and Hungary). In other words, the below-capacity usage of gas interconnectors in previous years was related to economic conditions rather than technical constraints, and thus should not prevent diversification efforts in the future.

In the case of Slovakia, the new interconnector with Poland (4.7 bcm) alone could cover the country's whole gas demand (4.3 bcm in 2023), and in fact was subsidized by the EU with the specific purpose of enabling diversification. Austria has vast connector capacities with Germany and Italy (23 bcm), which can provide access to global LNG markets for not only Austria itself (7 bcm demand), but also downstream to Slovakia and Hungary. The latter country would already be able to source 10 bcm of gas from Austria, Croatia and Romania, again exceeding the 8.5 bcm demand (2023).

Gas and power prices and costs

Electricity prices from ENTSO-E, carbon and fuel price data by Montel.

Full methodology is available in Ember's European Electricity Prices and Costs data tool.

Gas infrastructure buildout against future demand

Baseline demand and domestic gas production for 2023 from Eurostat, future demand and domestic production forecast for 2030 from ENTSO-E TYNDP 2024 National Trends+ scenario - specifically the TYNDP supply tool. Within the TYNDP supply tool, 2030 demand is defined as the total energy demand for methane, converted from TWh to bcm using a 9.77 conversion factor. In that same tool, domestic production of methane is the sum of natural gas, biomethane and e-methane production.

Current pipeline capacity from the ENTSO-G System Capacity Map 2025, assuming only entry points from Norway, North Africa and Türkiye, and excluding Russia (also via Ukraine or Belarus). 2030 pipeline capacity includes 20 bcm added from the TAP expansion and EastMed projects.

Current and 2030 LNG import capacity from Gas Infrastructure Europe LNG Investment Database 2025. 2030 LNG import capacity includes all projects in “planned” and “under construction” status that have a start-up year until 2030.

Utilisation of supply assets is assumed to remain at 2023 levels of around 68% (calculated as demand divided by technical supply capacity). This utilisation rate is a conservative assumption to maintain the same security buffer between technical capacity and real-world gas supplies in 2030 as seen historically. However, the utilisation of assets such as gas pipelines can and has in the past reached or even exceeded 100% of technical capacity, and the underutilisation is caused by economic and geopolitical factors rather than technical constraints. It is therefore likely that the utilisation of gas supply infrastructure in 2030 will be even lower than estimated under the conservative 68% assumption in this analysis.

Baseline year is 2023 because of unavailability of Eurostat demand and production data for 2024.

Acknowledgements

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Cover image

Nord Stream gas pipe terminal in north of Germany deliver russian gas directly from Russia

Renaud Rebardy / Alamy Stock Photo