ENTSOG SUMMER SUPPLY OUTLOOK

2026

WITH WINTER 2026/27 OVERVIEW

Contents

Executive Summary

In line with Art. 26(3)(g) of Regulation (EU) 2024/1789, ENTSOG has undertaken an assessment of the European gas network for the upcoming summer (1 April 2026 to 30 September 2026). **Reaching an adequate filling level in the European gas storage facilities at the end of the summer season is essential to ensure security of supply in the winter**. Therefore, the analysis investigates the possible evolution of the gas supply as well as the ability of the gas infrastructures to meet the demand, exports, and the storage injection needs during summer 2026.

Furthermore, following the interest expressed by institutions and stakeholders, ENTSOG has run an overview analysis for the winter 2026/27 season. The analysis investigates the possible evolution of supplies and UGS inventory along the next winter season, as well as the ability of the gas infrastructure to meet demand under different scenarios. Winter preparedness is consistently one of the most important topics being discussed by energy stakeholders, and, based on the findings of previous analyses it needs to be considered as early as possible.

The escalating conflict in the Persian Gulf is creating a significant shock to global LNG markets, primarily due to disruptions in Qatari supply and increased risk to the Strait of Hormuz, a key transit route for around 20% of global LNG flows. At the publication date, attacks on major infrastructure have reportedly destroyed around 17% of Qatar's LNG export capacity, tightening global supply and triggering sharp price increases[1]. For the EU, the direct supply impact is relatively limited - Qatari LNG accounted for around 8% of imports in 2025, although some Member States remain more exposed than others - but the market remains highly exposed to global price dynamics and competition for cargoes, particularly with Asia. As a result, reduced LNG availability is driving higher TTF prices, increasing volatility, and potentially complicating storage refilling ahead of winter, especially given low inventory levels, of 28% across the EU as of 1 April 2026 (similar to pre-crisis levels).

The analysis evaluates the role of LNG in Europe under different availability scenarios. In addition to LNG Optimal scenario, grounded in historical data, a sensitivity analysis considers lower availability in the LNG Tight scenario, reflecting limited LNG supply attraction to Europe.

In accordance with the Regulation 2017/1938 of the European Parliament and of the Council on the phasing out Russian natural gas imports by November 2027 at the latest, the Summer Supply Outlook 2026 with winter 2026/27 overview assumes that the maximum supply potential of Russian pipeline gas reflects the continuation of existing long-term contracts and is set at 131 TWh per year/~12 bcm (based on ENTSOG's members' estimate), with flows limited to the TurkStream route. In addition, ENTSOG has assessed the EU's dependence on Russian supply during the summer 2026 and winter 2026/27 seasons.

[1] Source: Global S&P (Platts)

Summer Supply Outlook 2026 with Winter 2026/27 Overview main findings:

- On 1 April 2026, EU gas storage levels stood at 28% (314 TWh/~29 bcm), lower than in the previous three years and at the same level as pre-energy crisis averages. These levels represent an average across the EU, with national storage levels ranging from above 88% to as low as 5%. EU gas storage played a key role in ensuring energy security last winter, with extensive utilisation. The EU had started the previous withdrawal season with storage levels of 83% on 1 October 2025, and the colder weather during the 2025/26 winter season, compared to the mild conditions observed in recent years, contributed to the extensive use of storage facilities.
- To replenish gas storage in preparation for the upcoming winter**, Europe will require higher LNG imports than previously observed, combined with increased utilisation of gas infrastructure**. This would require approximately 943 TWh/~86 bcm of LNG to reach the 90% storage level while satisfying the EU gas demand and exports, from 1 April to 30 September 2026. In case of disruption of pipeline imports from Russia, an additional 66 TWh/~6 bcm of LNG during summer season would be needed, with landlocked countries in the CEE and SEE regions being more exposed than others.
- The ongoing conflict in the Persian Gulf is tightening LNG availability, having damaged a portion of Qatar's LNG export capacity and disrupting navigation in the Strait of Hormuz, contributing to higher gas prices in Europe and narrower price spreads, which limit the economic incentive for storage injections. Consequently, **lower LNG availability in Europe would directly constrain storage refill levels.**
- Existing European gas infrastructure, including newly commissioned LNG terminals, is enhancing import capacity and system flexibility, enabling higher LNG inflows and improved cooperation among Member States. Overall, **the system remains sufficiently flexible**, with European LNG regasification capacity of approximately 1,600 TWh per winter season/~145 bcm, which can partially compensate for lower storage levels at the beginning of the withdrawal season and support meeting winter demand. However, under specific circumstances, some possible supply limitations and bottlenecks may occur and foremost **adequate supply needs to be secured.**

Summer Outlook 2026 – different scenarios (1 April to 30 September 2026)

- **The European gas network can enable market participants to reach 90% stock level in all underground gas storage facilities by the end of the summer season 2026** in the reference demand scenario (based on demand estimates provided by TSOs for the summer season 2026) but import of LNG need to be maximised every day of the period with the LNG terminals in CEE and SEE operating at high capacity during the injection season. An injection period starting as early as April and prolonged until November can provide greater flexibility to fill storage in preparation for the next winter season.

Nevertheless, considering high gas prices in Europe and narrower price spreads, lower LNG availability would directly constrain storage refill levels, with injections occurring mainly during periods of lower prices rather than being steadily executed throughout the summer.

> Additional sensitivity simulations were performed assuming limited LNG availability. In the LNG Tight supply scenario (20% lower than the LNG Optimal case), LNG availability is limited to 778 TWh/~71 bcm of LNG (LNG utilisation rate ~48%) for Europe during the 2026 summer season. Under these conditions, storage levels would reach only around 76% by the end of September 2026. The results highlight the critical importance of securing adequate LNG supplies to Europe and start injection as early as possible. **Any unplanned maintenance or unexpected disruptions in the global LNG market could place additional pressure on the storage refilling season.**

> In case of full Russian pipeline disruption an additional 66 TWh/~6 bcm of LNG would be required during the 2026 summer season to replace pipeline gas from Russia. Under LNG Optimal scenario EU can meet demand and achieve an average inventory of 86%, **with different impacts and results for specific EU regions where landlocked countries in the CEE and SEE regions may be more exposed than others**. The simulations show that extended injection period to November 2026 in combination with demand side response (either price-based or policy-based) would be needed to reach 90% target in all storage facilities. In the scenario combining a Russian pipeline disruption with the LNG Tight case, the average storage level would reach 70%.

> The combination of the investigated sensitivities underlines **the need to initiate gas storage replenishment as early as possible and the importance of securing an adequate gas supply to Europe.** As the summer period typically coincides with planned maintenance in gas infrastructure, maintenance schedules should be carefully coordinated and aligned with neighbouring countries to avoid potential supply constraints. In addition, maintaining operational flexibility in LNG import capacity is important to accommodate diverted or delayed cargoes to Europe and support storage refilling.

LNG Scenario	Russian supply	Storage Target	Demand curtailment	Final UGS filling level *
Optimal	Yes	Max	No	92%
	No	Max	No	86%
Tight	Yes	Max	No	76%
	No	Max	No	70%

* Storage filling level on 2026 October 1

Table 1– Summer Outlook Results Summary

Winter 2026/27 overview – different scenarios (1 April 2026 to 31 March 2027)

- Starting from a stock level of 28% on 1 April 2026, the injection and withdrawal capacities of gas storage facilities, combined with the supply flexibility of imports under the LNG Optimal scenario, are sufficient to cover reference demand (based on TSOs' estimates for the 2026 summer season) and reach a storage level of over 30% at the end of winter season across the EU. This demonstrates that **infrastructure flexibility is sufficient for the upcoming summer 2026 and winter 2026/27 seasons, assuming that adequate gas supplies are ensured.** This scenario (beginning from a 28% stock level, with storage at 85% at the start of the withdrawal period and 32% at the end) would require approximately 904 TWh/~82 bcm of LNG throughout the winter season, equivalent to a 56% utilisation of European LNG regasification capacity.
- The European Commission invited EU Member States to make use of the flexibility provisions in the Gas Storage Regulation and to consider reducing their filling target to 80% in order to provide certainty and reassurance to market participants[2]. Following this recommendation, starting the withdrawal season with 80% storage level, would require approximately 960 TWh/~87 bcm during winter and a 60% utilisation of LNG capacities.
- The LNG Tight supply sensitivity analysis indicates the importance of ensuring sufficient LNG supplies to Europe during both the summer and winter seasons. **Under the LNG Tight scenario, the withdrawal season with storage levels at 76%, a demand side response during the winter season (either price-based or policy-based) would be required to prevent storage depletion by the end of the 2026/27 winter season**. This scenario considers approximately 801 TWh/~73 bcm of LNG throughout during winter season, corresponding to a 50% utilisation rate of European LNG regasification capacity. Increasing LNG imports next winter would bring additional flexibility and could mitigate the impact of low storage fillings on November.
- In the case of a full disruption of Russian pipeline supplies, storage facilities are sufficient to meet demand and achieve an average inventory target level of 30% across the EU. However, in the case of limited LNG availability as in the LNG Tight scenario coupled with demand response (either policy-based or price-based) the storage level is at the level of 19% at the end of winter season. Nonetheless, the simulation results show that **maintaining a sufficient storage level at the beginning of the 2026/27 winter season, coupled with demand response (either policy-based or price-based) or additional LNG supply, could mitigate risks during the winter allowing to end withdrawal season above 30%.**

[2] https://energy.ec.europa.eu/news/gas-coordination-group-confirms-readiness-prepare-upcoming-winter-season-2026-03-26_en

- Additional 10 bcm of storage offered for the European market in Ukraine could contribute to demand satisfaction and optimise usage of the other European storages. Ukraine storages offered to the EU market corresponds to an additional approx. 10% of total working gas volumes located in the EU.
- More scenarios for winter demand profiles, along with cold winter and high-demand cases such as a 2-week cold spell or peak day demand, will be investigated in the Winter Supply Outlook 2026/27, as in previous editions.

Winter Overview Demand	LNG Scenario	Russian supply	Storage Target	Demand curtailment	UGS levels on Nov 1	Final UGS filling level *
Reference Demand	Optimal	Yes	Max	No	95%	47%
		No	Max	No	89%	36%
		Yes	30%	No	85%	32%
		No	30%	No	86%	32%
	Tight	Yes	Max	No	76%	14%
		No	Max	3%	72%	11%
5YA -15% Demand	Optimal	Yes	Max	No	97%	63%
		No	Max	No	90%	52%
	Tight	Yes	Max	No	77%	30%
		No	Max	No	70%	19%

* Storage filling level on 2027 March 31

Table 2– Winter Overview Results Summary[3]

[3] To investigate whether the transmission and import infrastructure enables the demand and to assess if the ability to store gas during the winter period is not limited or deteriorating, the maximum storage target levels were set at the end of winter 2026/27 overview simulations. This should not be interpreted as a recommendation to enforce equally ambitious storage levels at the end of the winter but rather as an evaluation of the situation during the winter season

Conclusions

- **Infrastructure and flexibility**: The gas infrastructure, including new projects commissioned over the last years, allows for efficient import capacity and system flexibility to support summer storage injections and meet winter supply needs. Overall, the system remains sufficiently flexible, with European LNG regasification capacity of approximately 1,600 TWh per winter season/~145 bcm, which can partially compensate for lower storage levels at the beginning of the withdrawal season and support meeting winter demand.
- **Global LNG market:** The escalating conflict in the Persian Gulf, including disruptions to Qatari supply and increased risks of prolonged disruption of navigation in the Strait of Hormuz, is tightening global LNG availability, contributing to higher gas prices in Europe, narrower price spreads, and directly constraining storage injections.
- **Significant LNG volumes required during summer**: Reaching the 90% storage level by the end of summer 2026 will require higher LNG imports (approximately 943 TWh/~86 bcm) than previously observed and increased utilisation of gas infrastructure, including additional LNG volumes of 66 TWh/~6 bcm to replace pipeline gas from Russia, particularly in South-Eastern Europe.

  A scenario with limited LNG availability (LNG Tight case) highlights the critical importance of securing adequate supplies to avoid the risk of insufficient storage levels by the end of the 2026/27 winter season. This risk can be mitigated through demand side response during winter (either price-based or policy-based).
- **Winter season 2026/27 preparedness:** Storage plays an essential role to ensure security of supply, providing seasonal flexibility needed during the winter season. Too low storage levels and early significant withdrawal from storage facilities will result in low storage levels at the end of the winter season. This might have a negative impact on the flexibility of the gas system and on gas prices, especially during high demand events. From the security of supply perspective, it would be important to inject gas during the summer season and keep storage at an adequate level until the end of the winter. However, some European countries are reserving a part of their own gas stock, constituted as strategic reserves, and using only for the purpose of mitigating demand curtailment. The availability of strategic storage reserves depends on the country's specific regulation.
- **Early and coordinated actions are critical:** Sensitivities performed to understand potential supply limitations and storage levels show that injections should start as early as possible. Securing LNG supplies, coordinating maintenance schedules, and maintaining operational flexibility in storage and import capacity are essential to avoid risk of insufficient storage levels and support system flexibility.

Important:

ENTSOG's Summer Supply Outlook 2026 with winter 2026/27 overview is an assessment of the readiness of the gas infrastructure to cope with the upcoming summer and winter seasons under different scenarios, but this assessment is not a forecast of the expected gas supply situation and actual availability of gas from different sources is not guaranteed. The actual utilisation of the gas infrastructure, including the development of the gas storage levels, will be determined by the decisions of the market participants and influenced by external factors such as policy decisions.

Outlooks are not forecasts of the future. Rather, they identify potential resource adequacy risks at a specific point in time for the upcoming season which can be addressed proactively with preparation or mitigation measures. The identified risks are based on the assessment of a reference scenario and of various sensitivities, which consider uncertainties that could materialise.

1. INTRODUCTION

The Summer Supply Outlook 2026 with Winter 2026/27 overview aims at assessing the ability of the European gas infrastructure to provide sufficient flexibility to shippers during the storage injection season and enough flexibility to meet demand during the withdrawal season.

The escalating conflict in the Persian Gulf is creating a significant shock to global LNG markets, primarily through disruptions to Qatari supply and increased risk to the Strait of Hormuz, a key transit route for around 20% of global LNG flows. At the publication date, attacks on major infrastructure have reportedly destroyed around 17% of Qatar's LNG export capacity, tightening global supply and triggering sharp price increases[4]. For the EU, the direct supply impact is relatively limited - Qatari LNG accounted for around 8% of imports in 2025, although some Member States remain more exposed than others - but the market remains highly exposed to global price dynamics and competition for cargoes, particularly with Asia. As a result, reduced LNG availability is driving higher TTF prices, increasing volatility, and potentially complicating storage refilling ahead of winter, especially given low inventory levels, of 28% across the EU as of 1 April 2026 (similar to pre-crisis levels).

The analysis evaluates the role of LNG in Europe under different availability scenarios. In addition to LNG Optimal scenario, grounded in historical data, a sensitivity analysis considers lower availability in the LNG Tight scenario, reflecting limited LNG supply attraction to Europe.

In accordance with the Regulation 2017/1938 of the European Parliament and of the Council on the phasing out Russian natural gas imports by November 2027 at the latest, the Summer Supply Outlook 2026 with winter 2026/27 overview assumes that the maximum supply potential of Russian pipeline gas reflects the continuation of existing long-term contracts and is set at 131 TWh per year/~12 bcm (based on ENTSOG's members' estimate), with flows limited to the TurkStream route. ENTSOG also evaluates the EU's dependence on Russian supply during summer 2026 and winter 2026/27.

Following the expiry of the Russia-Ukraine transit contract at the end of 2024, Russian gas transit via Ukraine to the EU has ceased, leaving TurkStream as the only remaining pipeline route. Ukraine and Moldova are included in the modelling perimeter, with exports to both countries considered. The analysis also incorporates gas demand on the left bank of the Dniester in Moldova. The transit of EU gas through Ukraine (considering technical firm capacities available) can be utilized by EU shippers.

2. ASSUMPTIONS

The Summer Supply Outlook 2026 with winter 2026/27 overview is based on assumptions specific to the upcoming summer and winter seasons, as well as short-term trends. In any case, the actual injection, withdrawal, and supply mix will result from market behaviour and other external factors such as policy decisions.

[4] Source: Global S&P (Platts)

The detailed model description, as well as the data used in the simulations, are available in the annexes.

2.1. Infrastructure

The topology of the network model considers the existing European gas infrastructure, the firm technical capacities[5] provided by TSOs, which include maintenance plans known as of March 2026 and new upcoming projects as of their respective expected start of commercial operations:

- Croatia – expansion of the Krk LNG terminal (to 6.1 bcm/y from October 2025), reinforcement of the Zlobin–Bosiljevo–Sisak-Kozarac corridor increases evacuation capacity from the Krk LNG terminal, enabling flows of up to ~3.5 bcm/y towards Hungary (direction-dependent) and ~1.5 bcm/y towards Slovenia, supporting regional supply and cross-border flexibility from 2027.
- Germany – expansion of the capacity towards Czeck Republic through VIP Brandov enabling flows of up to ~20 bcm/y, to be commissioned by the end of 2026.

It should be noted that some large-capacity infrastructure has also been decommissioned, namely the Le Havre LNG terminal.

In relation with the storage capacities, in order to capture the influence of the UGS inventory level on the injection and withdrawal capacities, ENTSOG has used the injection and deliverability curves made available by GIE[6]. These curves represent a weighted average of the facilities (salt caverns, aquifers or depleted fields) of each area (see **Annex A**).

In the case of regasification capacities, all the LNG offshore facilities have been restricted to a maximum utilization of 90% of their send-out capacity (DTRS in GIE ALSI[7] platform) for the monthly simulations as this limitation has been observed from the average historical utilization.

2.2. Seasonal Demand

The Reference demand (from 1 April 2026 to 31 March 2027) is based on TSOs' estimates and is provided with a monthly granularity. An average daily demand has been considered within each month (see **Annex B** for country details).

The average historical demand of the five summer seasons from 2017 to 2021 reduced by 15% in the spirit of the coordinated demand reduction measures defined in the Council Recommendation of 25 March 2024 on continuing coordinated demand-reduction measures for gas. The 5-year average demand values have been updated for the simulations in this

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[5] According to EC Regulation 2024/1789 of 13 June 2024 'technical capacity' means the maximum firm capacity that can be offered to the network users, taking account of system integrity and the operational requirements of the transmission system operator; 'firm capacity' means natural gas transmission and distribution capacity contractually guaranteed as uninterruptible by the transmission system operator.

[6] https://www.gie.eu

[7] https://alsi.gie.eu/#/

report to consider the latest market conversions from L-gas to H gas in Germany, France, and Belgium. An average daily demand has been considered for each month.

Additionally, taking into account that the transit contract between Ukraine and Russia expired in December 2024, effectively blocking Russian gas transit to Moldova and Transnistria, the Outlook includes the demand on both banks of Dniester River aggregated in the overall Moldovan demand.

For comparison purposes, **Figure 1** shows the European aggregated daily demand for the Summer 2026 compared to the historical daily demand over the last five summers. Despite the slight increase forecasted, demand is expected to be in line with the average of the last five summer seasons.

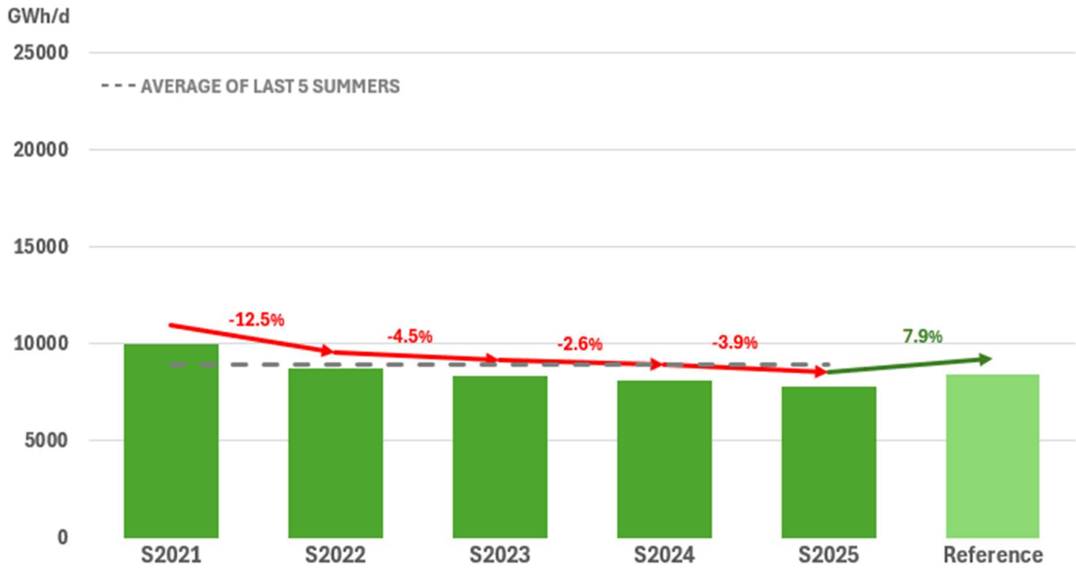

Figure 1 - Forecast Summer 2026, GWh/day

For comparison, **Figure 2** shows the European aggregated daily demand for the Winter 2026/27 overview and the historical daily demand over the winters of the years 2019/20 to 2024/25.

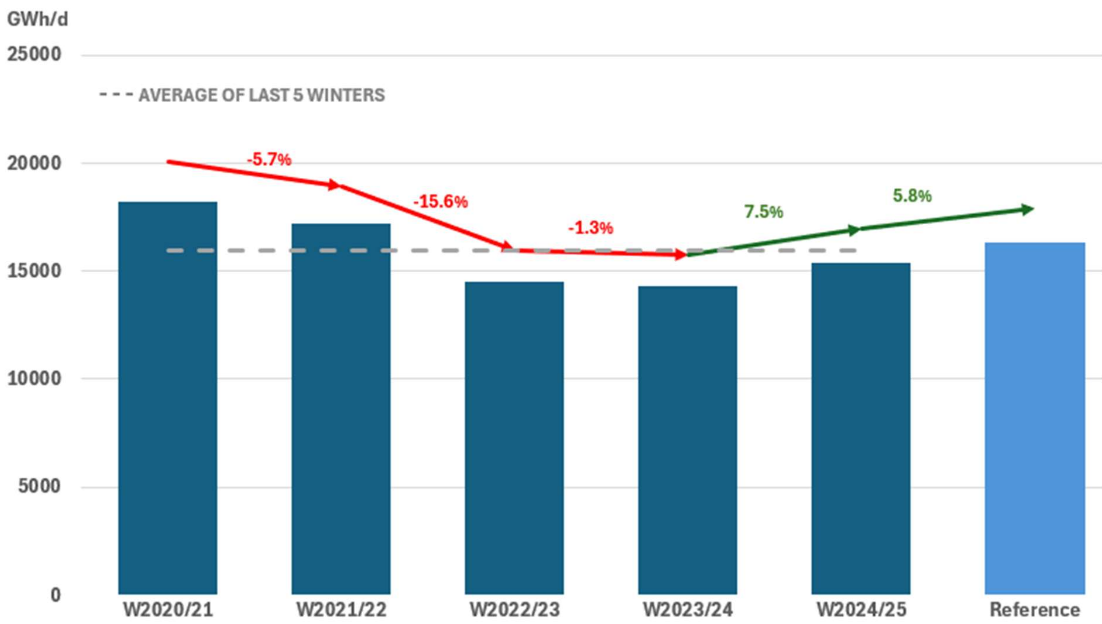

Figure 2 - Forecast Winter 2026/27, GWh/day

Figure 3 summarizes demand across all countries for each scenario used in the Summer Supply Outlook 2026 with winter 2026/27 overview. Two demand scenarios are considered for the summer and winter season simulations: a Reference demand scenario and a 5-year average demand scenario (2017–2021/22) reduced by 15% in the spirit of the coordinated demand reduction measures defined in the Council Recommendation of 25 March 2024 on continuing coordinated demand-reduction measures for gas.

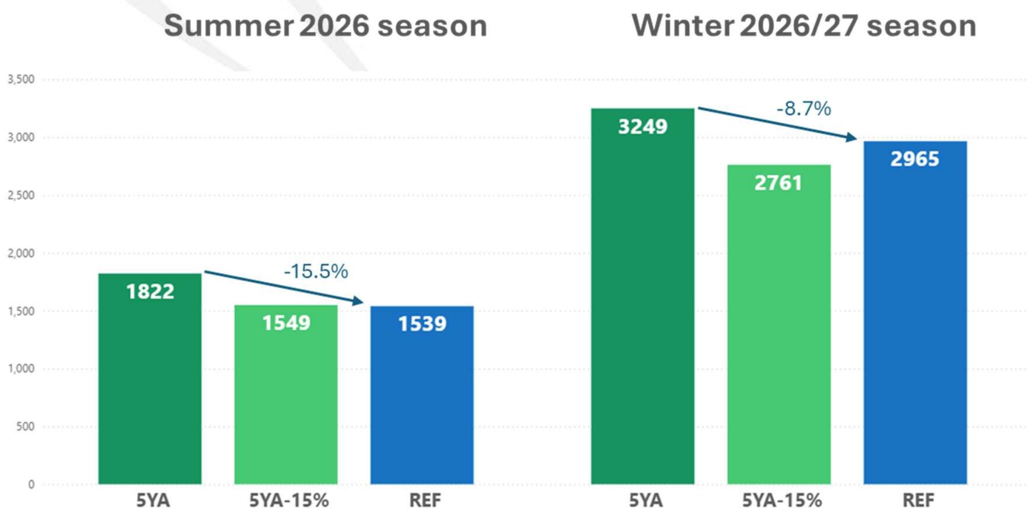

Figure 3 - Demand Summer 2026 and Winter 2026/27, TWh/season

2.3. National production

Regarding the European domestic production, **Figure 4** and **Figure 5** provide a comparison between the last five summer and winter seasons and the national production forecasted by the TSOs for summer 2026 and winter 2026/27 (see **Annex B** for monthly details).

Domestic production is following a long-term declining trend, primarily due to the end of production in October 2023 of the EU's largest gas field, the Netherlands' Groningen field. In addition, the United Kingdom's gas production continues to decline following a temporary recovery in 2022.

After a sharp drop following the Groningen shutdown, domestic production partially recovered between summer 2024 and summer 2025, mainly driven by the reactivation and ramp-up of the Tyra field in Denmark, with smaller contributions from incremental increases in Romania and stabilisation in parts of Southern Europe.

In summer 2026, domestic production is estimated to decrease by around 7% compared to the previous summer, while for winter 2026/27 it is forecast to decline by approximately 1% compared to winter 2025/26. This trend remains largely structural: beyond the Groningen shutdown, UK offshore production continues to fall, and output from mature fields in Germany, Italy and other Member States is declining due to natural depletion and the lack of major new developments.

While the Tyra redevelopment has temporarily supported production, it is insufficient to offset the broader decline across Europe. Additional factors provide only limited mitigation, including incremental increases in Romania's Black Sea production and stabilisation in parts of Southern Europe. Overall, European domestic production is expected to remain on a declining path in the short to medium term.

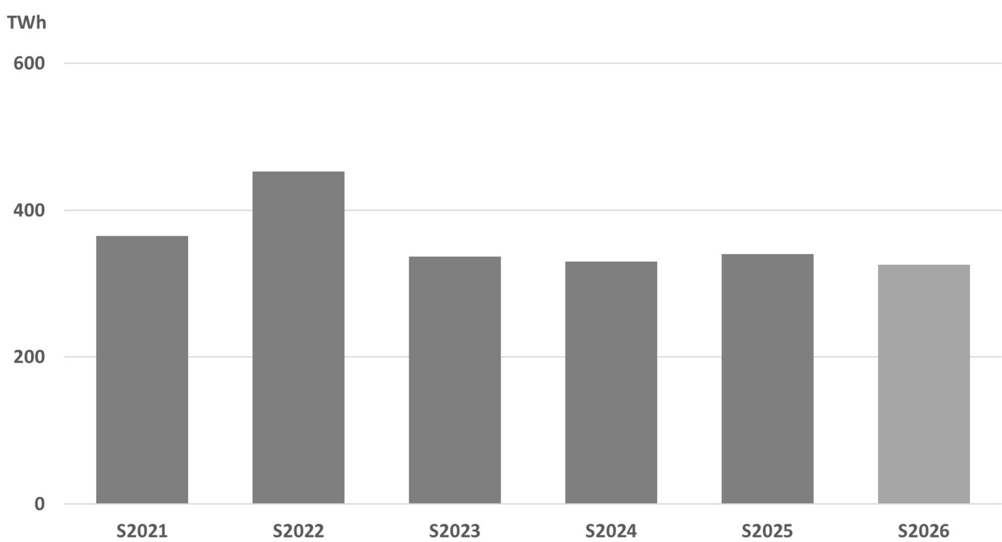

Figure 4 - European national production comparison with Summer 2026 forecast, TWh/season

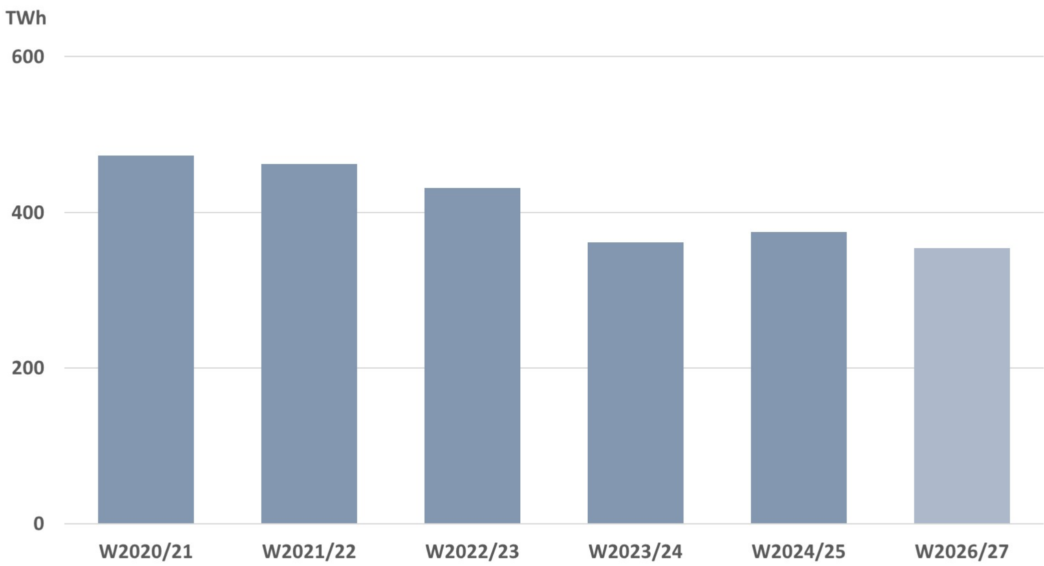

Figure 5 - European national production comparison with Winter 2026/27 forecast, TWh/season

2.4. Import supply potential

The maximum supply potential of the different sources providing gas to Europe (Algeria, the Caspian Sea, Libya, Norway, and LNG Optimal) is based on historical availability over the past five years and on TSOs information. Maintenance works on Norwegian gas fields are taken into account in line with the maintenance plan published in March 2026[8].

Supply limitations are defined on a monthly basis for both winter and summer seasons, ensuring that flows from each source do not exceed reasonable levels derived from historical observations.

The maximum supply potential of Russian pipeline supply assumes the continuation of long-term contracts and is set at 131 TWh per year/~12 bcm (based on ENTSOG's members' estimate), with flows limited to the TurkStream route. To assess the EU's dependence on Russian gas, all simulations minimise the use of this supply source to the extent possible, prioritising alternative sources. A sensitivity case assuming a total disruption of Russian pipeline supply is also included.

For LNG, two different cases of supply availability are considered: LNG Optimal and LNG Tight.

The maximum supply potential for seasonal assessments is, by default (unless otherwise specified by TSOs or in the case of Russian pipeline supply or LNG sensitivities), calculated as the maximum 30-day rolling average supply from each source over the past five years for the relevant season. The LNG Optimal scenario is derived using this same methodology. The LNG Tight scenario assumes a 20% reduction relative to the LNG Optimal, anticipating a situation in which Europe would not be able to attract enough LNG.

Maximum supply potential	Summer Season GWh/d	Summer Season TWh/season	Winter Season GWh/d	Winter Season TWh/season
LNG Optimal	5,300	970	5,500	1,000
LNG Tight	4,250	778	4,400	800
Norway	3,800*	636	3,800*	686
Algeria	1,155	211	1,220	222
Libya	125	23	150	27
Caspian	375	69	390	71
Russia	360	66	360	66

* Supply is reduced some months according to Gassco's maintenance plan

Table 3 - Maximum supply potential, GWh/day and TWh/season

When assessing the supply adequacy at European level, ENTSOG considers the interactions with the countries neighbouring the EU: the United Kingdom, Switzerland, North Macedonia, Serbia, Bosnia Herzegovina, Ukraine, Turkey and Moldova.

[8] Gassco website: https://umm.gassco.no/

Important: The supply assumptions (supply potentials) are based on the supply observed in the past and should not be considered as a forecast. The actual supply mix will depend on market behaviour and other external factors. Moreover, the model does not factorize commercial supply agreements.

LNG has become a strategically important and balancing component of gas supply to Europe. **Figure 6** presents indicative parameters of the LNG market situation in 2025.

Global LNG liquefaction capacity is projected to increase in 2026, with the United States leading new investment activity. Global demand growth remained subdued, particularly in Asia, whereas Europe emerged as the primary driver of LNG demand due to its structural shift away from Russian pipeline gas, increased storage refilling requirements, and lower renewable power generation in 2025. The United States remained the largest LNG supplier to Europe, while Russia continued to represent a secondary but notable source of supply. Qatar maintained a significant role in the global LNG market, although its share in European imports remained comparatively limited.

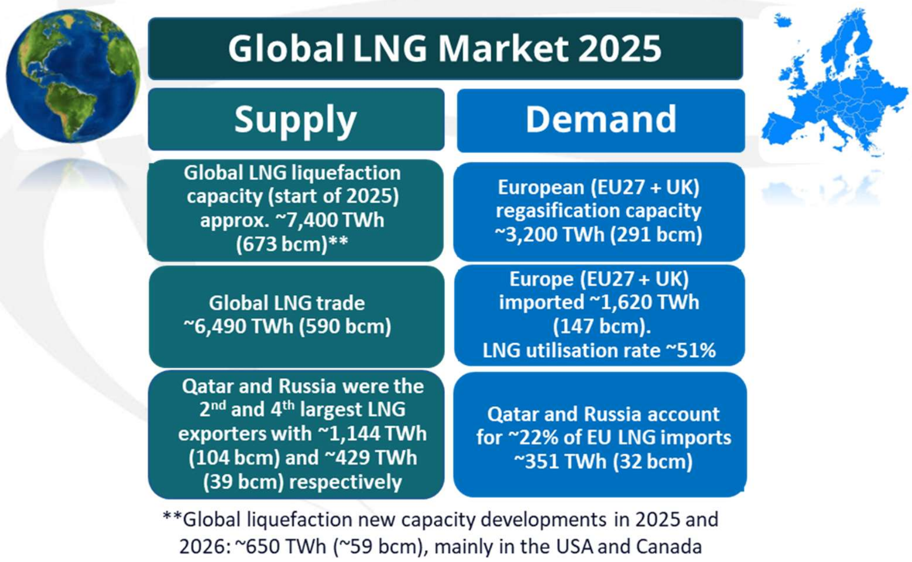

Figure 6 – Global LNG Market 2025 overview[9]

Finally, it is important to note that 30% of total LNG trade is imported on a spot basis, representing a crucial component of market liquidity[10].

[9] The data are sourced from multiple references, including the ENTSOG Gas Flow Dashboard, ACER Analysis of the European LNG Market Developments (2025 Monitoring Report), S&P Global (Platts), GIIGNL, IEEFA, and other publicly available sources, and should be interpreted as indicative rather than precise.
Conversion factor: 1 Mt LNG ≈ 1.38 bcm ≈ 15 TWh

[10] GIIGNL Annual LNG Report 2025

2.5. Storage inventory

UGS behaviour in the simulations is defined as follows:

Summer Supply Outlook 2026. The actual gas storage level at the beginning of April 2026 is set according to the AGSI+ platform[11]. The target level is 90% to be reached at the end of injection season (30 September 2026 and 31 October 2026) and is defined for each storage facility. This target is not mandatory, i.e. the storage level goes below 90% if other supply sources otherwise cannot satisfy demand.

In the Summer Outlook the Ukrainian UGS that is considered available for EU shippers is modelled as a last resort UGS, i.e., it is only filled after all the other EU UGS meet the established UGS stock level target.

Winter 2026/27 overview. The target level for the withdrawal season (31 March 2027) is to reach the maximum storage level for each storage facility. The target is not mandatory, i.e. the storage level goes below it if other supply sources otherwise cannot satisfy demand. This assumption with maximum storage target levels were set to investigate whether the transmission and import infrastructure allows to satisfy the demand and, also to assess whether the ability to store gas during the winter period is not limited or deteriorating. It should not be interpreted as a recommendation to enforce equally ambitious storage levels at the end of the winter but rather as an evaluation of the situation during the winter season, particularly in the case of high demand events.

In the Winter overview some European countries reserving a part of their own gas stock constituted as strategic reserves to be used only for the purpose of mitigating demand curtailment. The model assumes actual strategic storage facilities constraints, but simulation results do not consider the utilization of strategic storage reserves. This means that strategic reserves remain available to reduce or avoid demand curtailment in some countries. Availability of strategic storage reserves is depending on the country's specific regulation and more information about it for selected countries is aggregated in **Annex A**.

Figure 7 below illustrates the percentage of gas in storage (filling level) recorded on the first day of each month.

[11] https://agsi.gie.eu

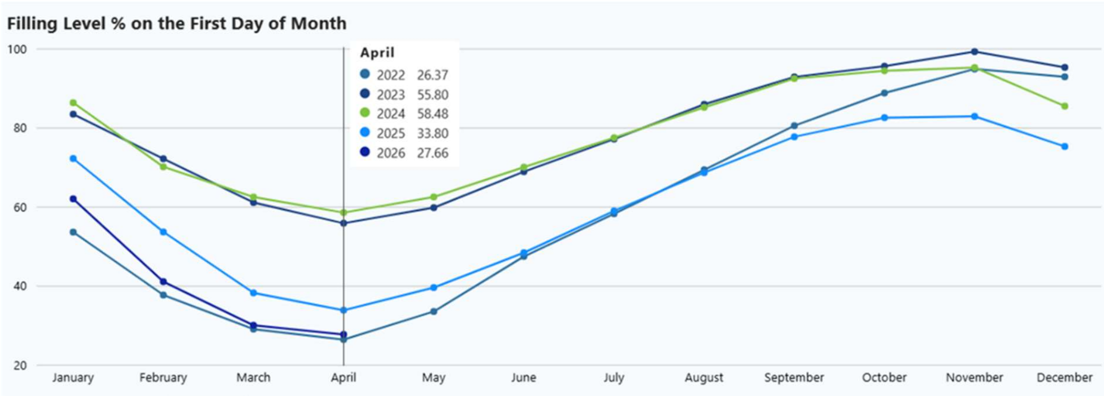

Figure 7 - Monthly UGS stock level development since 2022, %

On 1 April 2026, EU gas storage levels stood at 28% (314 TWh/~29 bcm), lower than in the previous three years and at the same level as pre-energy crisis averages. These levels represent an average across the EU, with national storage levels ranging from above 88% to as low as 5%.

Figure 8 shows the total WGV, the initial gas in the storages on 1 April and the gas injected during the summer season (until end of September) between 2012 and 2026.

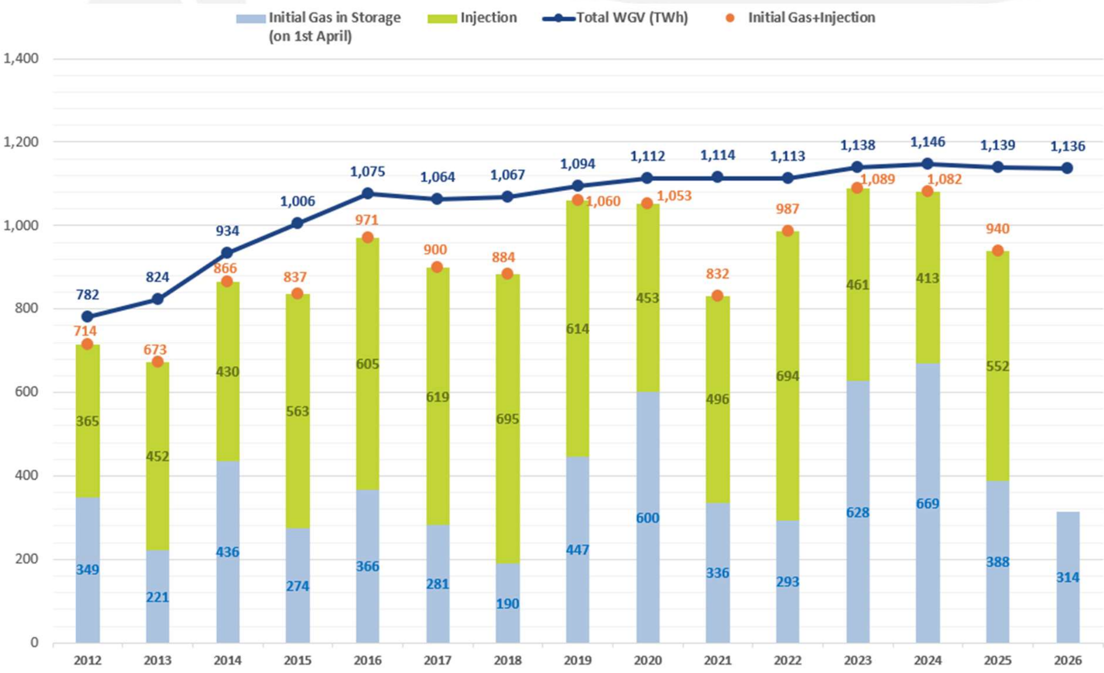

Figure 8. Situation of the storage during summer seasons (2012 to 2026)

- **Initial storage level on 1 April 2026**

On 1 April 2026, EU underground gas storage reached 28% of WGV, equivalent to 314 TWh. The EU had started the previous withdrawal season with storage levels of 83% on 1 October 2025, and the colder weather during the 2025/26 winter season, compared to the mild conditions observed in recent years, contributed to the extensive use of storage facilities.

For the modelling of the different scenarios, the Summer Supply Outlook 2026 considers the initial storage inventory levels per country as of 1 April 2026, as presented in **Figure 9**.

In terms of absolute gas volumes in storage, considering the larger total storage capacities in certain countries, the highest volumes on 1 April 2026 are observed in Italy, Germany, and Austria. In relative terms, the highest filling levels (above 50%) are recorded in Portugal and Spain, while the lowest levels (below 20%) are observed in Netherlands, Croatia and Sweden.

These country-specific storage levels are used as the starting point for the Summer Supply Outlook 2026.

Country	WGV, GWh	Gas in storage	Full, %
Austria	100,791	31,937	31.7%
Belgium	8,980	1,946	21.7%
Bulgaria	7,004	2,393	34.2%
Croatia	4,773	704	14.8%
Czechia	47,053	13,260	28.2%
Denmark	9,790	3,204	32.7%
France	125,723	27,416	21.8%
Germany (H)	241,498	52,665	21.8%
Germany (L)	5,873	2,061	35.1%
Hungary	67,991	22,072	32.5%
Italy	203,348	88,248	43.4%
Latvia	24,865	5,765	23.2%
Netherlands	141,466	6,439	4.6%
Poland	36,309	16,235	44.7%
Portugal	3,570	3,138	87.9%
Romania	33,864	8,109	23.9%
Slovakia	37,216	8,294	22.3%
Spain	35,832	20,498	57.2%
Sweden	83	8	9.9%
Total	1,136,029	314,393	27.7%
Serbia	4,100	2,000	48.8%
Ukraine	106,400	0	0.0%
United Kingdom	39,017	9,598	24.6%

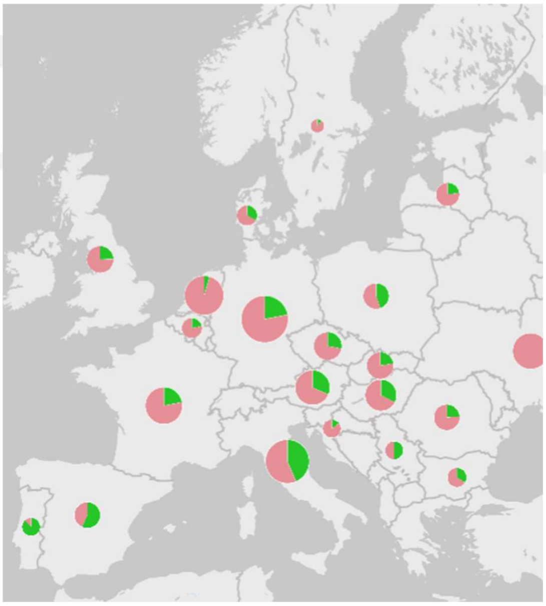

Figure 9 - Actual storage inventory levels on 1 April 2026, TWh

2.6. Seasonal spreads

The seasonal spread is defined as the price difference between natural gas contracts with future deliveries across seasons, particularly between summer and winter, and serves as an important market signal for participants. Specifically, the summer - winter spread (summer price vs winter price) indicates incentives for injections, while the winter - summer spread (winter price vs the following summer price) guides withdrawal strategies.

The Dutch TTF forward curve shows a weak Summer 2026 - Winter 2026/27 spread, which remains positive and limit the economic incentive for storage injections, while the Winter 2026/27 - Summer 2027 spread is comparatively wider, indicating stronger market value in winter. These spreads indicate that injections occur mainly during periods of lower prices rather than being steadily executed throughout the summer. Conversely, withdrawals are more flexible and value - driven, with storage optimisation focused on capturing price spikes rather than following a fixed withdrawal pattern.

However, actual injection decisions are also dependent on other factors such as, market liquidity, supply security considerations, capacity limitations, and regulatory targets in place. Nonetheless, withdrawal strategies are also shaped by weather, supply disruptions, LNG availability, and strategic considerations. In milder winters or when spreads are narrow, withdrawals might be more gradual to preserve flexibility by ensuring there is enough gas in storages in case of unexpected events during the winter season.

Season	EUR/MWh
Summer 2026	50.345
Winter 2026/27	49.810
Spread S2026 - W2026/27	**0.535**

Season	EUR/MWh
Winter 2026/27	49.810
Summer 2027	38.500
Spread W2026/27 - S2027	**11.31**

Figure 10 - Comparison of forecast winter and summer Dutch TTF gas prices as of 31 March 2026, EUR/MWh[12]

Important: The ENTSOG Summer Supply Outlook 2026 with winter 2026/27 overview, provides an assessment of infrastructure readiness to manage different scenarios rather than a forecast of actual supply situations. Furthermore, these seasonal price spreads are not implemented in the model but serve as contextual signals to illustrate potential market incentives. Actual infrastructure utilisation and storage developments ultimately depend on market participants' decisions.

[12] Source: Global S&P (Platts)

3. MODELLING RESULTS FOR THE SUMMER SUPPLY OUTLOOK 2026

The following table summarizes the Summer Supply Outlook 2026 results across the main demand scenarios, key assumptions, and configurations. Detailed analyses of these simulation results follow in this chapter.

LNG Scenario	Russian supply	Storage Target	Demand curtailment	Final UGS filling level *
Optimal	Yes	Max	No	92%
	No	Max	No	86%
Tight	Yes	Max	No	76%
	No	Max	No	70%

* Storage filling level on 2026 October 1

Table 4 – Summer Outlook Results Summary

For the summer scenario, the overall summer season injection target is defined to reach 90% of the stock level in each European storage facility on October 2026 starting with total European stock level of 28% on 1 April 2026 (see **Figure 9**).

To assess whether the transmission and import infrastructure can meet demand and whether the capacity to inject and store gas during the summer period is not constrained or deteriorating, maximum storage target levels were defined at the end of summer period. This should not be interpreted as a recommendation to enforce equally ambitious storage levels at the end of the summer, but rather as an evaluation of system conditions during the injection season.

The distribution of injection and supply during the summer months results from the modelling and the following assumptions:

- The monthly gas demand estimated by TSOs (reference demand)
- The monthly national gas production estimated by TSOs
- The monthly capacity provided by TSOs
- The storage injection capacities as defined in **Annex A**
- The flexibility given to the model for the definition of the supply potentials derives from the historical supply mix (see **Annex B**)

Based on these assumptions, the modelling has been used to check if any physical congestion or dependence on an import source may limit the injection.

3.1. Reference summer scenario - storage target by 30 September 2026

The simulation results show that, without any supply disruptions, a 92% average stock level can be achieved by October 2026. **Table 5** shows the evolution of the stock level per country as result of the model for the baseline scenario (Reference demand with LNG Optimal).

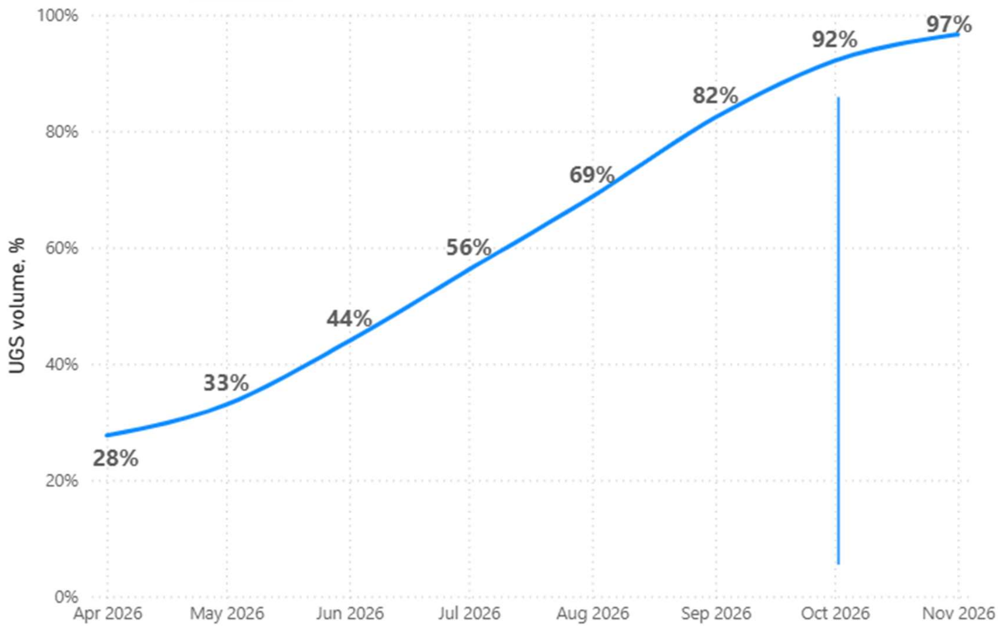

Figure 11 – Reference demand with LNG Optimal. Evolution of the aggregated European UGS stock level, %

The results of the maximum storage target sensitivity analysis indicate that the flexibility of the gas system infrastructure is sufficient to achieve higher storage filling levels. Under the assumed supply conditions (LNG Optimal), storage levels can reach up to 97% by the end of October 2026 over the seven-month injection period.

Figure 12 and **Figure 13** show the level and composition of the supply mix in the reference summer scenario when the storage filling level at the end of October 2026 is 92% (import levels shown represent one possible supply option).

Significant LNG volumes are required during summer to reach the 90% storage level by the end of summer 2026 with LNG imports reaching approximately 943 TWh/~86 bcm. Additional 66 TWh/~6 bcm of LNG would be needed to replace pipeline gas from Russia.

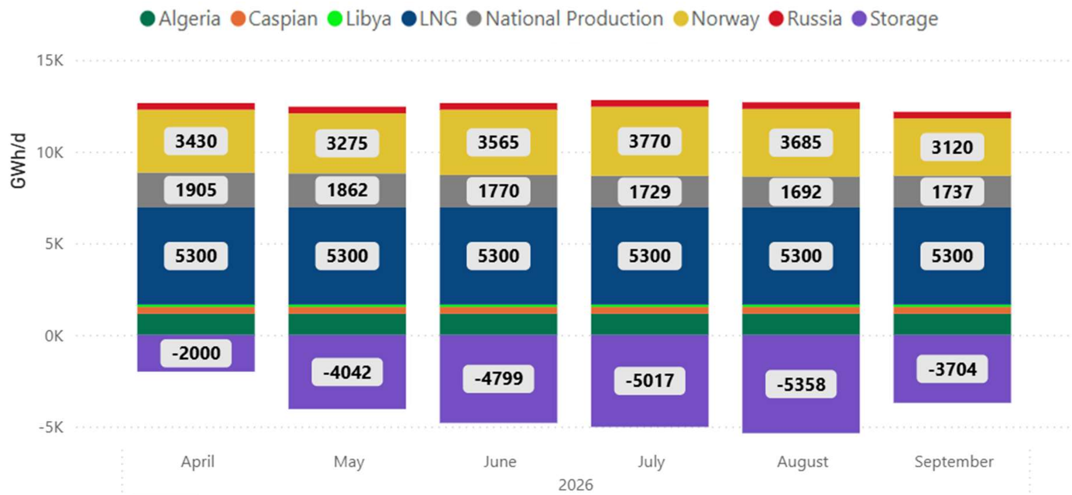

Figure 12 - Reference demand with LNG Optimal. Monthly supply mix, GWh/d[13]

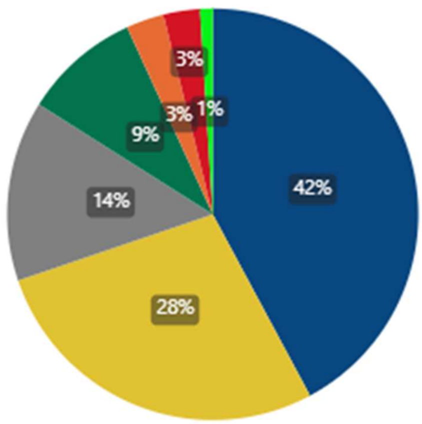

Figure 13 - Reference demand with LNG Optimal. Supply mix, %

The monthly supply mix is stable over the summer season 2026 period. LNG supply and supply from Norway represent the largest sources of supply with 42% and 28% respectively. Pipeline gas supply from Russia accounts for 3% of the total supply.

[13] The import levels shown represent one possible supply option

Country	01/04/2026	01/05/2026	01/06/2026	01/07/2026	01/08/2026	01/09/2026	01/10/2026
Austria	32%	38%	48%	58%	69%	82%	92%
Belgium	22%	22%	33%	48%	65%	85%	93%
Bulgaria	34%	34%	46%	60%	71%	85%	93%
Croatia	15%	22%	34%	53%	65%	80%	92%
Czechia	28%	34%	44%	56%	69%	81%	92%
Denmark	33%	36%	41%	57%	70%	84%	92%
France	22%	23%	34%	49%	66%	84%	93%
Germany	22%	28%	39%	51%	66%	80%	92%
Hungary	32%	40%	50%	60%	71%	82%	92%
Italy	43%	47%	55%	66%	75%	87%	93%
Latvia	23%	29%	45%	60%	70%	77%	92%
Poland	45%	50%	70%	70%	78%	88%	92%
Portugal	88%	88%	88%	88%	90%	93%	93%
Romania	24%	33%	47%	60%	70%	81%	92%
Serbia	50%	50%	57%	68%	76%	87%	92%
Slovakia	22%	30%	43%	56%	67%	80%	92%
Spain	57%	57%	62%	70%	79%	88%	93%
Sweden	10%	10%	10%	43%	68%	90%	92%
The Netherlands	5%	14%	29%	45%	62%	78%	92%
United Kingdom	25%	25%	25%	36%	67%	93%	93%

Table 5 - Reference demand with LNG Optimal. Evolution of the aggregated UGS stock level per country[14]

The main conclusion of the Summer Supply Outlook 2026 for the reference summer demand scenario with LNG Optimal is that the European gas network can enable market participants to reach 90% stock level in all underground gas storage facilities by the end of the summer season 2026, but import of LNG need to be maximised every day of the period with the LNG terminals in CEE & SEE operating at high capacity during the injection season.

[14] This table shows one possible solution among many other feasible paths based on the defined assumptions. ENTSOG is not suggesting these values as the recommended trajectories of the filling levels

Country	Value
Austria	92%
Belgium	93%
Bulgaria	93%
Croatia	92%
Czechia	92%
Denmark	92%
France	93%
Germany	92%
Hungary	92%
Italy	93%
Latvia	92%
Poland	92%
Portugal	93%
Romania	92%
Serbia	92%
Slovakia	92%
Spain	93%
Sweden	92%
The Netherlands	92%
United Kingdom	93%

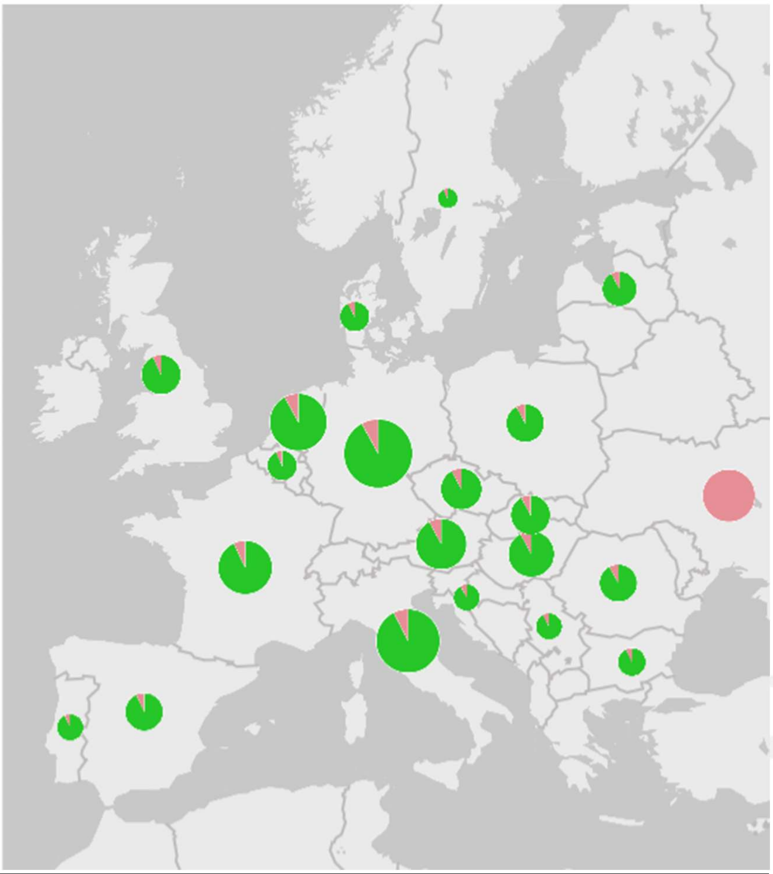

Figure 14 - Reference demand with LNG Optimal. Storage % levels per country

3.2. Summer supply dependence assessment – supply disruption from Russia

This section investigates the potential impact of full disruption of the Russian supply during the injection period to reach 90% of the stock level in each EU storage facility in October 2026, starting with total European stock level of 28% on 1 April 2026.

In this scenario, EU countries storage levels can only reach 86% by the end of September 2026 and 90% by the end of October 2026 over the seven-month injection period.

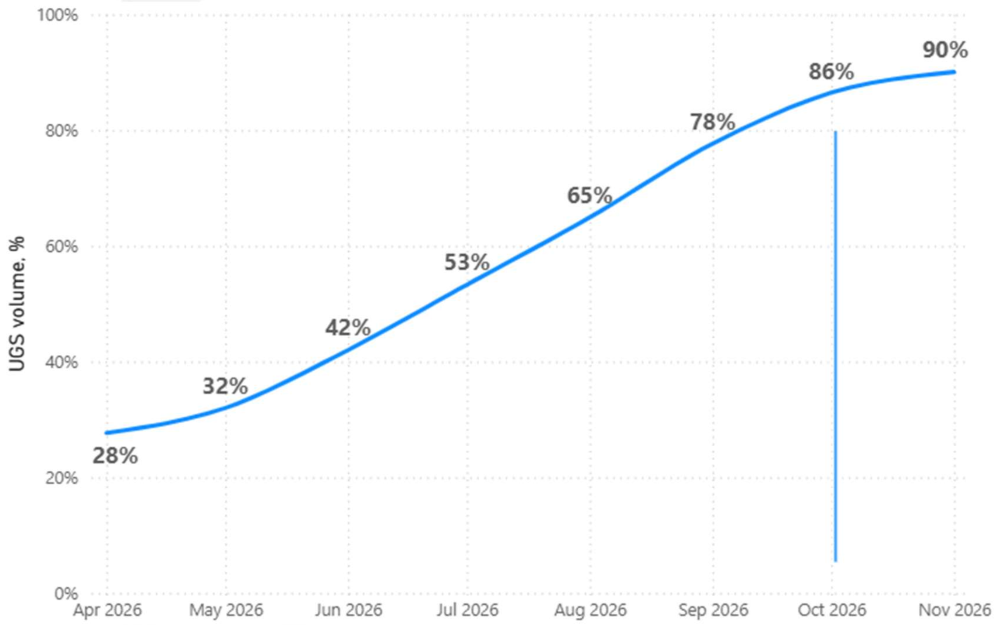

Figure 15 – Reference demand with LNG Optimal and Russian pipeline disruption. Evolution of the aggregated European UGS stock level, %

Figure 16 and **Figure 17** show the level and composition of the supply mix in the scenario the summer supply dependence assessment – supply disruption from Russia. In case of full Russian pipeline disruption an additional 66 TWh/~6 bcm of LNG would be required during the 2026 summer season to replace pipeline gas from Russia, particularly in South-Eastern Europe.

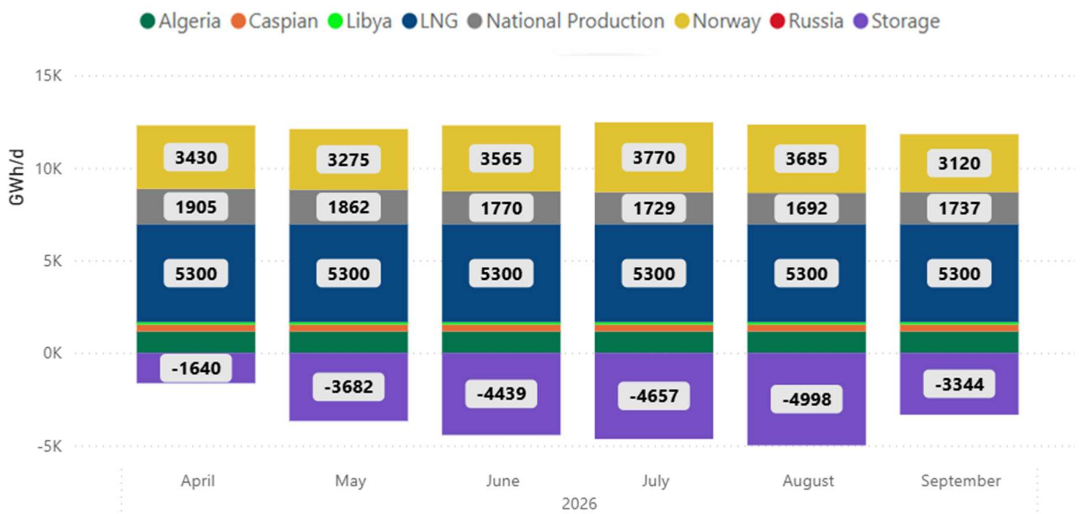

Figure 16 – Reference demand with LNG Optimal and Russian pipeline disruption. Monthly supply mix, GWh/d[15]

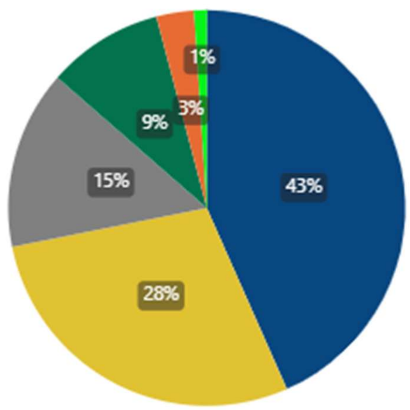

Figure 17 - Reference demand with LNG Optimal and Russian pipeline disruption. Supply mix, %

The monthly supply mix is stable over the summer season 2026 period. Without Russian pipeline gas, LNG and Norway increase their supply share to 43% and 28% respectively.

Table 6 shows the evolution of the stock level per country as result of the model for the summer supply dependence assessment – supply disruption from Russia. According to the simulation results, the European storage filling level at the end of September 2026 is 86% in average with slightly different values across the countries from west to east.

Results show that there is not enough supply flexibility for EU shippers to inject any gas in the Ukrainian storages.

[15] The import levels shown represent one possible supply option

Country	01/04/2026	01/05/2026	01/06/2026	01/07/2026	01/08/2026	01/09/2026	01/10/2026
Austria	32%	37%	48%	58%	66%	75%	82%
Belgium	22%	22%	31%	46%	63%	82%	89%
Bulgaria	34%	34%	44%	53%	61%	70%	78%
Croatia	15%	20%	30%	49%	59%	69%	78%
Czechia	28%	33%	42%	52%	60%	70%	78%
Denmark	33%	35%	42%	52%	66%	77%	89%
France	22%	22%	32%	47%	63%	81%	90%
Germany	22%	27%	37%	48%	62%	77%	89%
Hungary	32%	38%	47%	55%	62%	70%	77%
Italy	43%	46%	54%	64%	72%	83%	89%
Latvia	23%	29%	44%	59%	68%	75%	89%
Poland	45%	48%	54%	65%	77%	90%	90%
Portugal	88%	88%	88%	88%	88%	90%	90%
Romania	24%	31%	42%	52%	61%	69%	78%
Serbia	50%	51%	57%	63%	68%	74%	78%
Slovakia	22%	28%	41%	50%	58%	69%	78%
Spain	57%	57%	62%	70%	77%	86%	90%
Sweden	10%	10%	20%	38%	68%	90%	90%
The Netherlands	5%	13%	28%	44%	60%	76%	89%
United Kingdom	25%	25%	25%	35%	65%	90%	90%

Table 6 – Reference demand with LNG Optimal and Russian pipeline disruption. Evolution of the aggregated UGS stock level per country[16]

The European storage filling level could also increase up to an average of 90% during October 2026 as the injection season typically lasts until November in some countries.

16 This table shows one possible solution among many other feasible paths based on the defined assumptions. ENTSOG is not suggesting these values as the recommended trajectories of the filling levels.

Country	Value
Austria	82%
Belgium	89%
Bulgaria	78%
Croatia	78%
Czechia	78%
Denmark	89%
France	90%
Germany	89%
Hungary	77%
Italy	89%
Latvia	89%
Poland	90%
Portugal	90%
Romania	78%
Serbia	78%
Slovakia	78%
Spain	90%
Sweden	90%
The Netherlands	89%
United Kingdom	90%

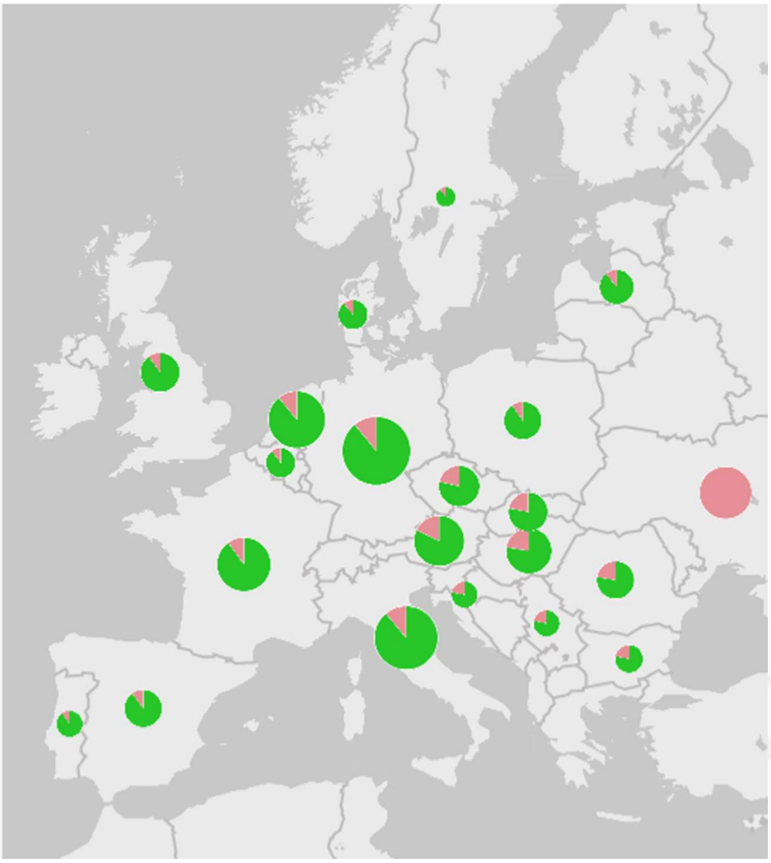

Figure 18 - Reference demand with LNG Optimal and Russian pipeline disruption. Storage % levels per country

The simulations show that landlocked countries in the CEE and SEE regions may be more exposed than others in reaching the storage target. Extended injection period to November 2026 in combination with demand side response (either price-based or policy-based) would be needed to reach 90% target in all storage facilities.

3.3. Summer supply dependence assessment - LNG Tight supply

This section investigates the potential impact of the LNG Tight supply during the injection period to reach 90% of the stock level in each EU storage facility in October 2026, starting with total European stock level of 28% on 1 April 2026.

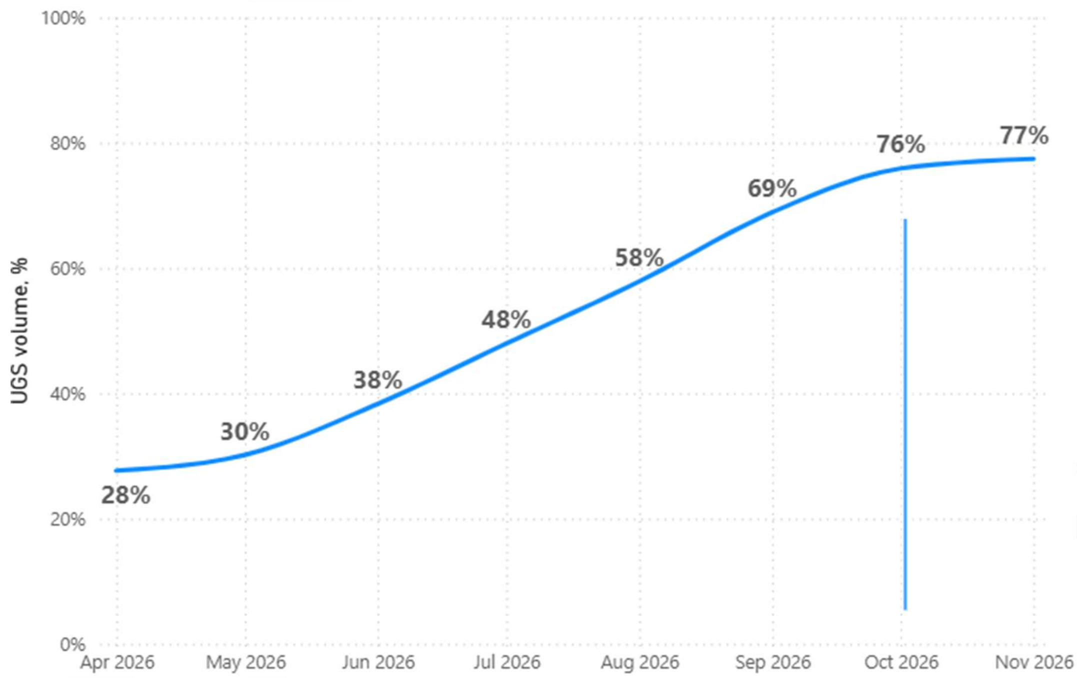

Figure 19 – Reference demand with LNG Tight. Evolution of the aggregated European UGS stock level, %

Under the reference demand scenario, the introduction of the LNG Tight sensitivity during the summer limits storage filling levels to 76% by the end of September 2026 and 77% by the end of October 2026, as shown in **Figure 19**. Even with a prolonged injection period until the end of October, simulations indicate only marginal improvement, as increased demand in October consumes the limited LNG supply, leaving less available for storage injections

Similar results are observed across all countries.

Figure 20 and **Figure 21** show the level and composition of the supply mix in the scenario the summer supply dependence assessment – LNG Tight supply. In the LNG Tight supply scenario, LNG availability is limited to 778 TWh/~71 bcm of LNG (LNG utilisation rate ~48%) for Europe during the 2026 summer season.

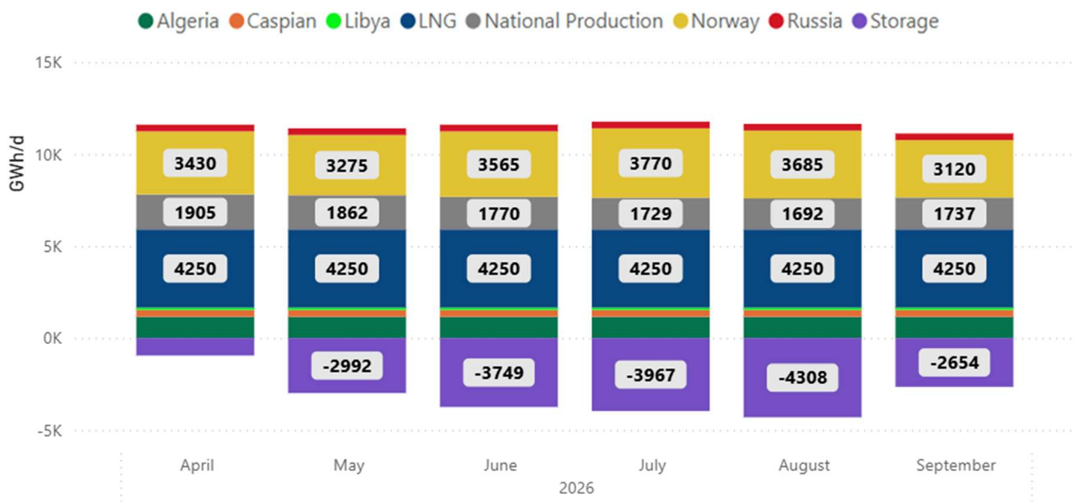

Figure 20 – Reference demand with LNG Tight. Monthly supply mix, GWh/d[17]

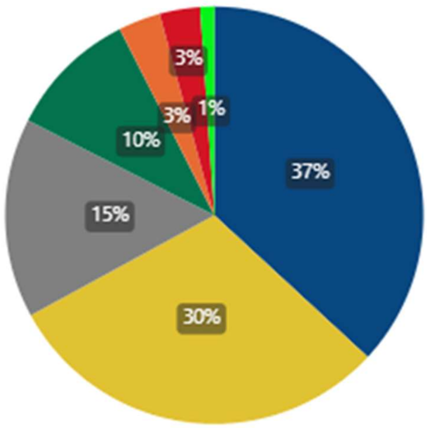

Figure 21 - Reference demand with LNG Tight. Supply mix, %

Moreover, the impact of introducing the LNG Tight sensitivity to the reference summer demand without Russian pipeline supply is limiting the storage filling level at the end of September 2026 to 70% (and 71% at the end of October 2026) as shown in **Figure 22.**

[17] The import levels shown represent one possible supply option

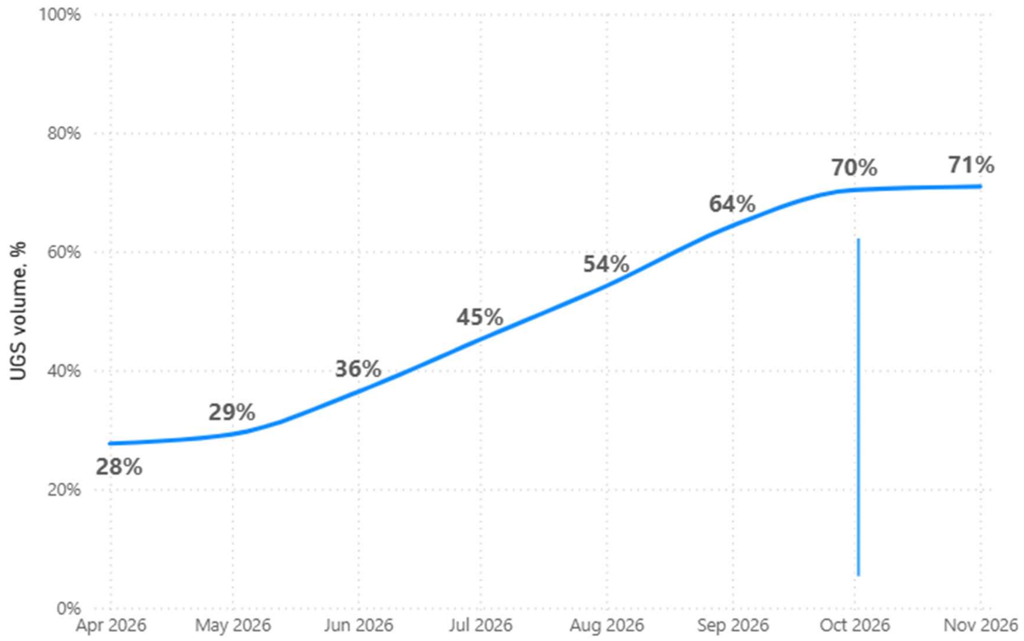

Figure 22 – Reference demand with LNG Tight and Russian pipeline disruption. Evolution of the aggregated European UGS stock level, %

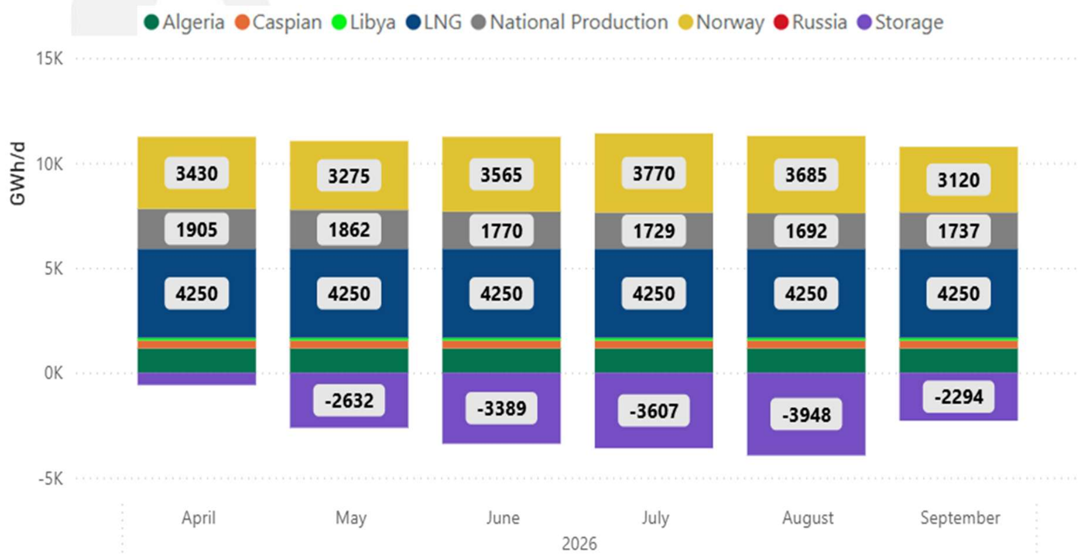

Figure 23 – Reference demand with LNG Tight and Russian pipeline disruption. Monthly supply mix, GWh/d[18]

[18] The import levels shown represent one possible supply option

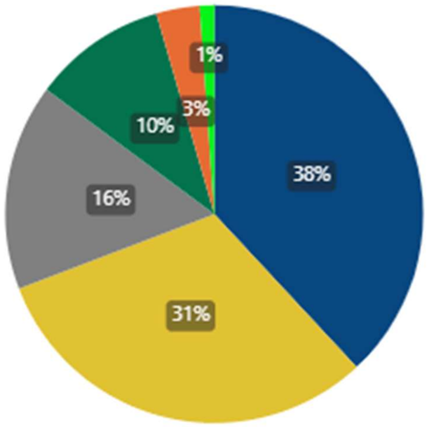

Figure 24 - Reference demand with LNG Tight and Russian pipeline disruption. Supply mix, %

The monthly supply mix is stable over the summer season 2026 period. Without Russian pipeline gas, LNG and Norway increase their supply share to 38 % and 31% respectively.

4. MODELLING RESULTS FOR THE WINTER 2026/27 OVERVIEW

The following table shows the most relevant information concerning the Winter 2026/27 overview results, out of the yearly (12 months) simulations, in the different demand scenarios in combination with the main assumptions possible configurations. The simulation results are explained onwards in this chapter.

Winter Overview Demand	LNG Scenario	Russian supply	Storage Target	Demand curtailment	UGS levels on Nov 1	Final UGS filling level *
Reference Demand	Optimal	Yes	Max	No	95%	47%
		No	Max	No	89%	36%
		Yes	30%	No	85%	32%
		No	30%	No	86%	32%
	Tight	Yes	Max	No	76%	14%
		No	Max	3%	72%	11%
5YA -15% Demand	Optimal	Yes	Max	No	97%	63%
		No	Max	No	90%	52%
	Tight	Yes	Max	No	77%	30%
		No	Max	No	70%	19%

* Storage filling level on 2027 March 31

Table 7 – Winter Overview Results Summary

For the reference Winter 2026/27 scenario, the overall winter season withdrawal is defined as the amount of gas necessary to meet demand and reach the 30% and maximum stock level in each European storage facility on 31 March 2027, starting with an average total European stock level of 28% on 1 April 2026. In this scenario the reference demand and the 5-year average (2017–2021/22) demand values with 15% reduction[19] for each country during the winter period were assumed.

To investigate whether the transmission and import infrastructure enables the demand and to assess if the ability to store gas during the winter period is not limited or deteriorating, the maximum storage target levels were set at the end of winter 2026/27 overview simulations. This should not be interpreted as a recommendation to enforce equally ambitious storage levels at the end of the winter but rather as an evaluation of the situation during the winter season.

The distribution of withdrawal, demand and supply during the winter months results from the modelling and the following assumptions:

[19] 5-year average demand scenario (2017–2021/22) reduced by 15% in the spirit of the coordinated demand reduction measures defined in the Council Recommendation of 25 March 2024 on continuing coordinated demand-reduction measures for gas.
Demand values have been updated for the simulations to reflect evolution of the conversion from L-gas to H-gas market (in Germany, France and Belgium)

- Reference demand and 5-year average (2017–2021/22) demand with 15% reduction
- The monthly national gas production estimated by TSOs
- The monthly capacity provided by TSOs
- The storage withdrawal capacities as defined in **Annex A**
- The flexibility given to the model for the definition of the supply potentials derives from the historical supply mix (see **Annex B**)

4.1. Reference winter scenario – storage target by 31 March 2027

The reference winter 2026/27 scenario simulation results show that withdrawal capacities of the gas storage facilities combined with the supply flexibility of imports (LNG Optimal case) is sufficient to cover the demand and reach comfortable inventory levels at the end of the winter in EU average.

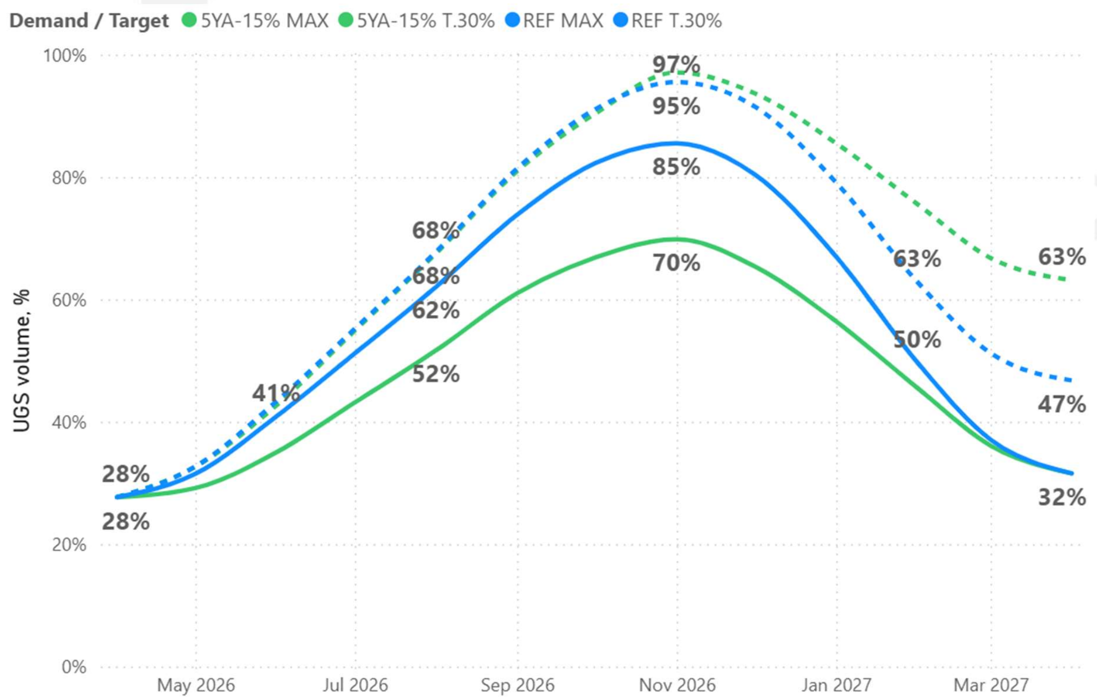

Figure 25 – Reference and 5YA-15% demand with LNG Optimal. Evolution of the aggregated European UGS stock level, %

Starting from a stock level of 28% on 1 April 2026, the injection and withdrawal capacities of the gas storage facilities, combined with the supply flexibility of imports, is sufficient to cover the demand (in reference demand scenario) and reach the maximum inventory target level of 47% at the end of winter across the EU. This demonstrates adequate infrastructure and supply flexibility for the upcoming summer 2026 and winter 2026/27 seasons, assuming that adequate gas supplies are ensured.

As also shown in **Figure 25**, the results in the yearly simulations are very exposed to the demand variations and the final storages level at the end of March can reach 63% in the case of 5-year average (2017–2021/22) demand with 15% reduction.

Figure 26 and **Figure 27** show the level and composition of the supply mix in the reference winter scenario when the storage filling level at the end of March 2027 is 32%. According to the results of the simulation, the storages continue to inject more gas during October. LNG (43%) and Norwegian supply (29%) constitute the largest sources of supply, with Russian pipeline imports being replaced by LNG.

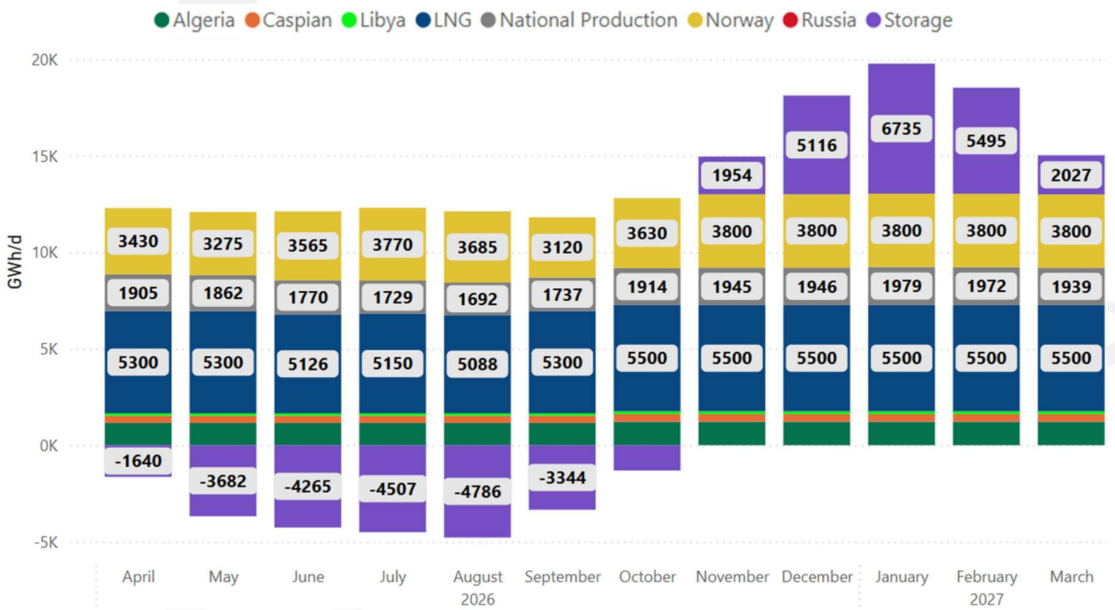

Figure 26 – Reference demand with LNG Optimal. Monthly supply mix, GWh/d [20]

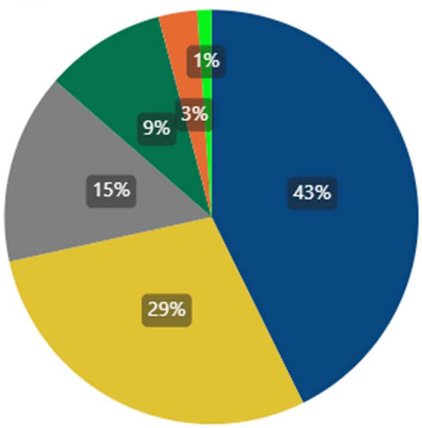

Figure 27 - Reference demand with LNG Optimal. Supply mix, %

[20] The import levels shown represent one possible supply option

Achieving this scenario (beginning from a 28% stock level, with storage at 85% at the start of the withdrawal period and 32% at the end) would require approximately 904 TWh/~82 bcm of LNG throughout the winter season, corresponding to ~56% LNG terminal utilisation. Additional LNG volumes 66 TWh/~6 bcm to replace pipeline gas from Russia over the winter season.

4.2. Winter supply dependence assessment – supply disruption from Russia

This section investigates the potential impact of full disruption along the Russia supply routes to satisfy the demand and reach the maximum stock level in each European storage facility on 31 March 2027, starting with total EU stock level of 28% on 1 April 2026. In this scenario the reference demand and the 5-year average (2017–2021/22) demand values with 15% reduction[21] for each country were assumed.

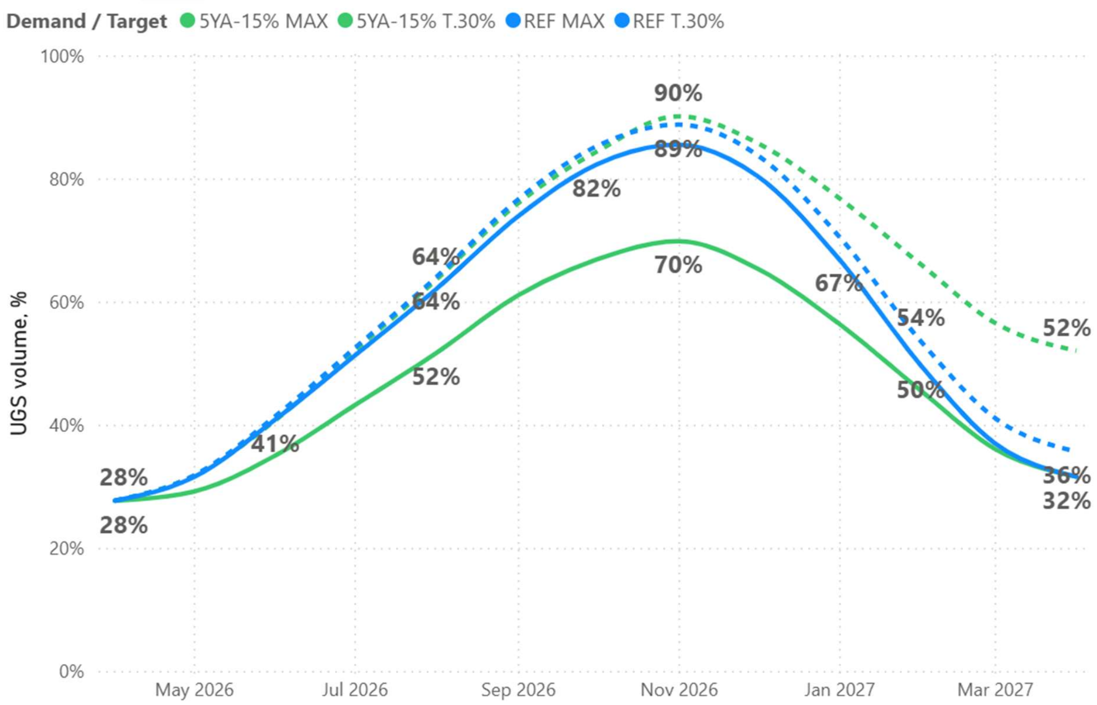

Figure 28 – Reference and 5YA-15% demand with LNG Optimal and Russian pipeline disruption. Evolution of the aggregated European UGS stock level, %

[21] 5-year average demand scenario (2017–2021/22) reduced by 15% in the spirit of the coordinated demand reduction measures defined in the Council Recommendation of 25 March 2024 on continuing coordinated demand-reduction measures for gas.
Demand values have been updated for the simulations to reflect evolution of the conversion from L-gas to H-gas market (in Germany, France and Belgium)

In the yearly simulations with reference demand values, in the case of full pipeline supply disruption from Russia, the storage facilities are used at their maximum to meet demand and can only stay at a maximum level of 36%.

In the case of 5-year average (2017–2021/22) demand with 15% reduction, also shown in **Figure 28**, the results in the yearly simulations show the final storages level at the end of March can reach 52% without Russian pipeline supply.

Figure 29 and **Figure 30** show the level and composition of the supply mix in the Winter supply dependence assessment scenario with the reference demand when the storage filling level at the end of March 2027 is 32%. LNG and Norway represent the largest sources of supply.

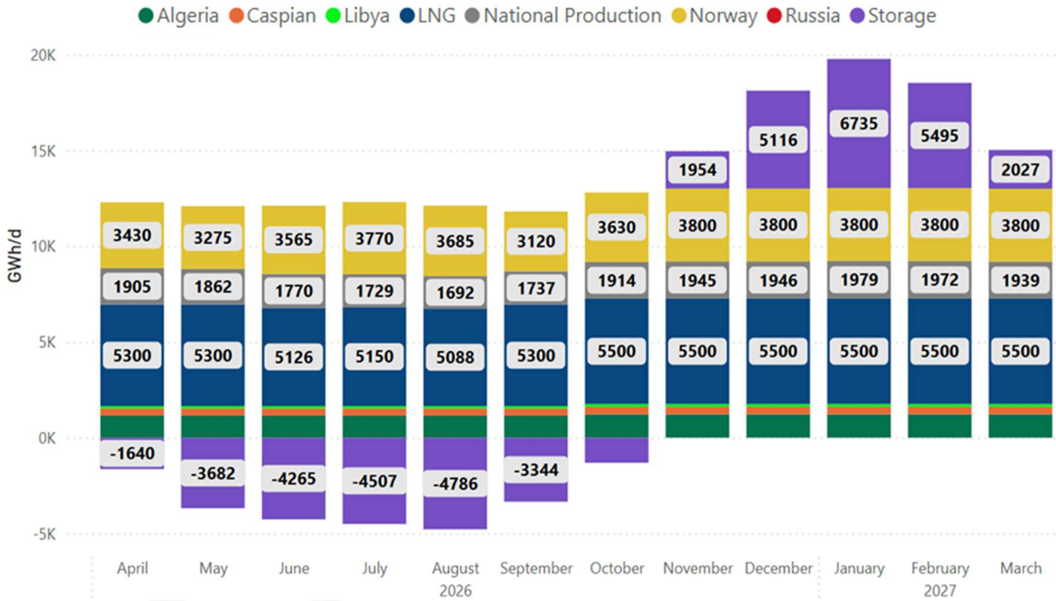

Figure 29 – Reference demand with LNG Optimal and Russian pipeline disruption. Monthly supply mix, GWh/d[22]

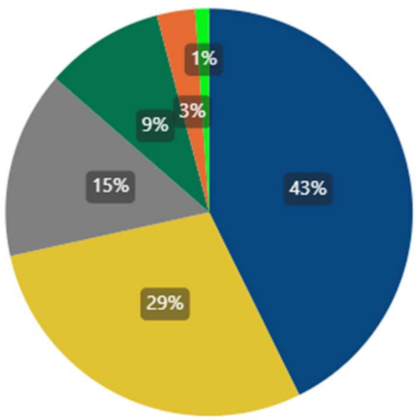

Figure 30 - Reference demand with LNG Optimal and Russian pipeline disruption. Supply mix, %

[22] The import levels shown represent one possible supply option

4.3. Winter supply dependence assessment - LNG Tight supply

For the reference demand scenario, the impact of introducing the LNG Tight sensitivity during winter is that the maximum storage filling level results at the end of March 2027 fall from 47% (LNG Optimal scenario) to the storage level of 14% (LNG Tight scenario).

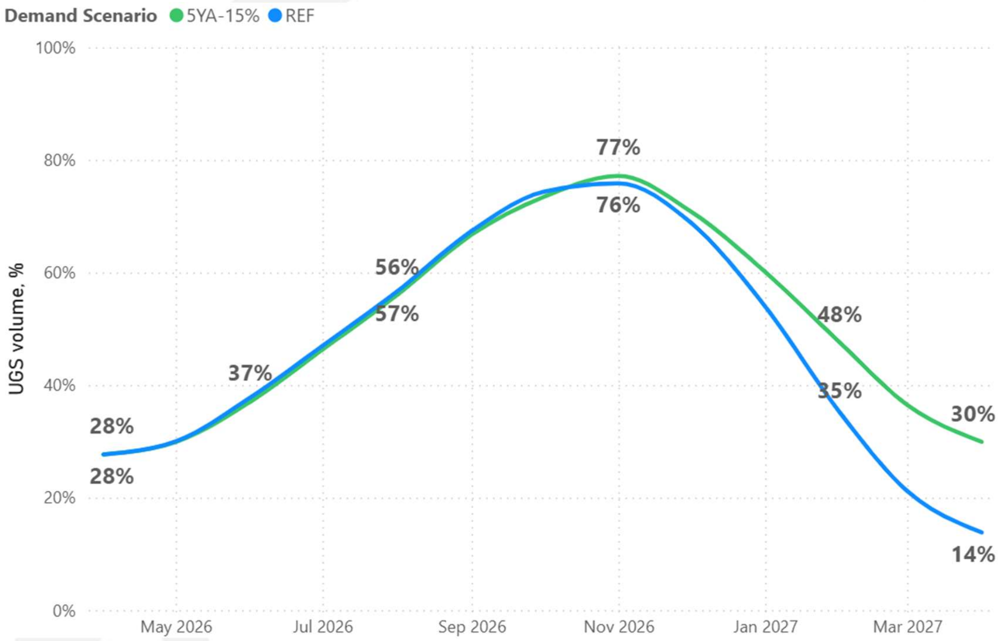

Figure 31 – Reference and 5YA-15% demand with LNG Tight. Evolution of the aggregated European UGS stock level, %

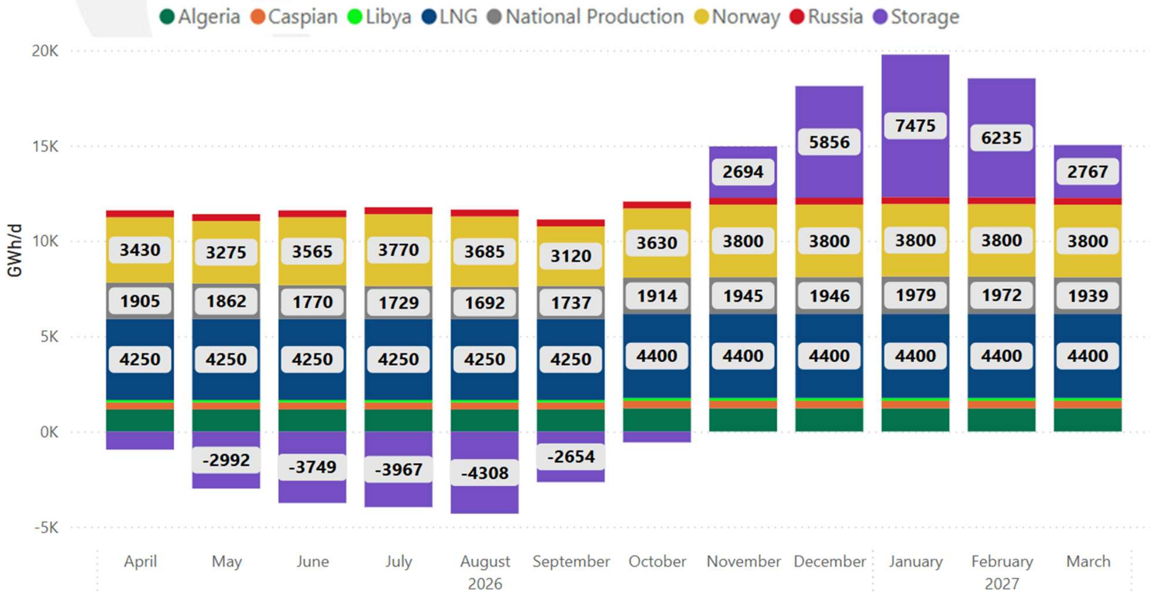

Figure 32 - Reference demand with LNG Tight. Monthly supply mix, GWh/d[23]

[23] The import levels shown represent one possible supply option

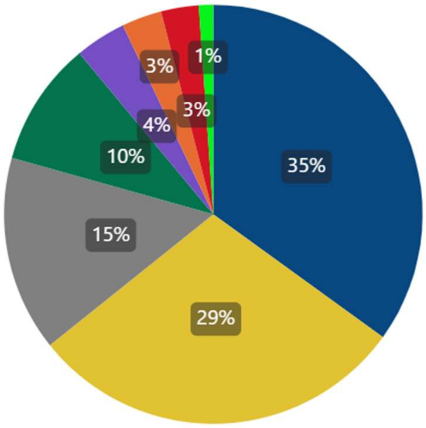

Figure 33 - Reference demand with LNG Tight. Supply mix, %

Country	Value
Austria	21%
Belgium	5%
Bulgaria	5%
Croatia	5%
Czechia	7%
Denmark	20%
France	5%
Germany	5%
Hungary	21%
Italy	25%
Latvia	7%
Poland	37%
Portugal	77%
Romania	5%
Serbia	5%
Slovakia	5%
Spain	51%
Sweden	5%
The Netherlands	5%
United Kingdom	5%

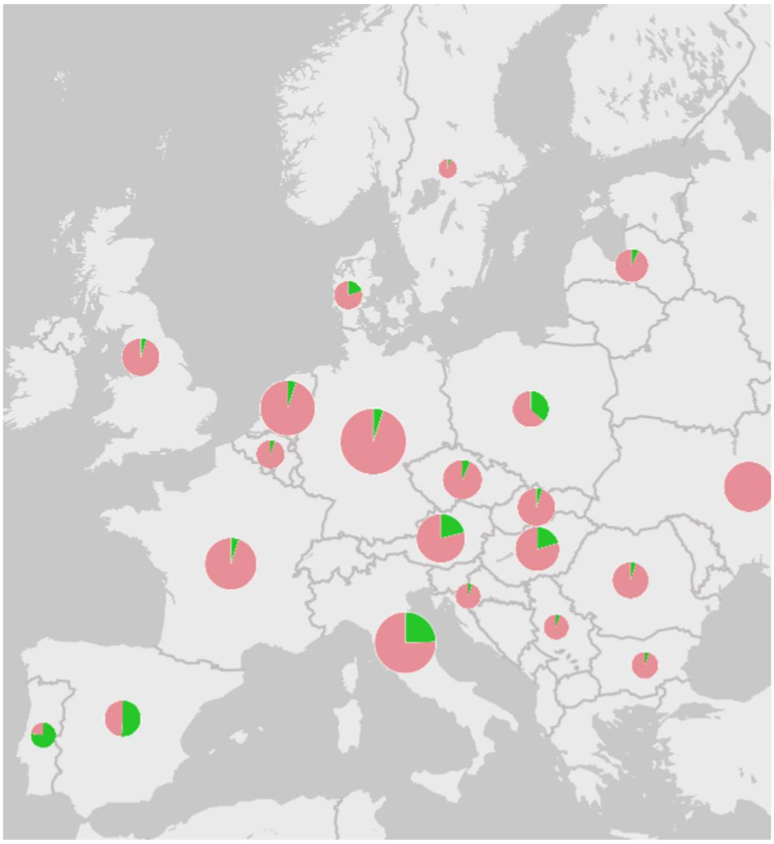

Figure 34 – Reference demand with LNG Tight. Storage % levels per country[24]

[24] The model assumes actual strategic storage facilities constraints, but simulation results do not consider the utilization of strategic storage reserves. Availability of strategic storage reserves is depending on the country's specific regulation and more information about it for selected countries is gathered in Annex A.

The LNG Tight supply sensitivity analysis indicates the importance of ensuring sufficient LNG supplies to Europe during both the summer and winter seasons. Starting the withdrawal season with storage levels at 76%, a demand side response during winter (either price-based or policy-based) would be required to prevent storage depletion by the end of the 2026/27 winter season. Achieving this scenario would require approximately 801 TWh/~73 bcm of LNG throughout during winter season.

Moreover, in the reference demand scenario without Russian pipeline supply, the impact of introducing the LNG Tight sensitivity is that the storage filling level results at the end of March 2027 fall from 36% (LNG Optimal scenario) to the minimum storage level of 11% (LNG Tight scenario).

The model assumes actual strategic storage facilities constraints, but simulation results do not consider the utilization of strategic storage reserves (11% average of the European working gas volumes). This means that strategic reserves remain available to reduce or even avoid demand curtailment in some countries. Availability of strategic storage reserves is depending on the country's specific regulation and more information about it for selected countries is gathered in **Annex A**.

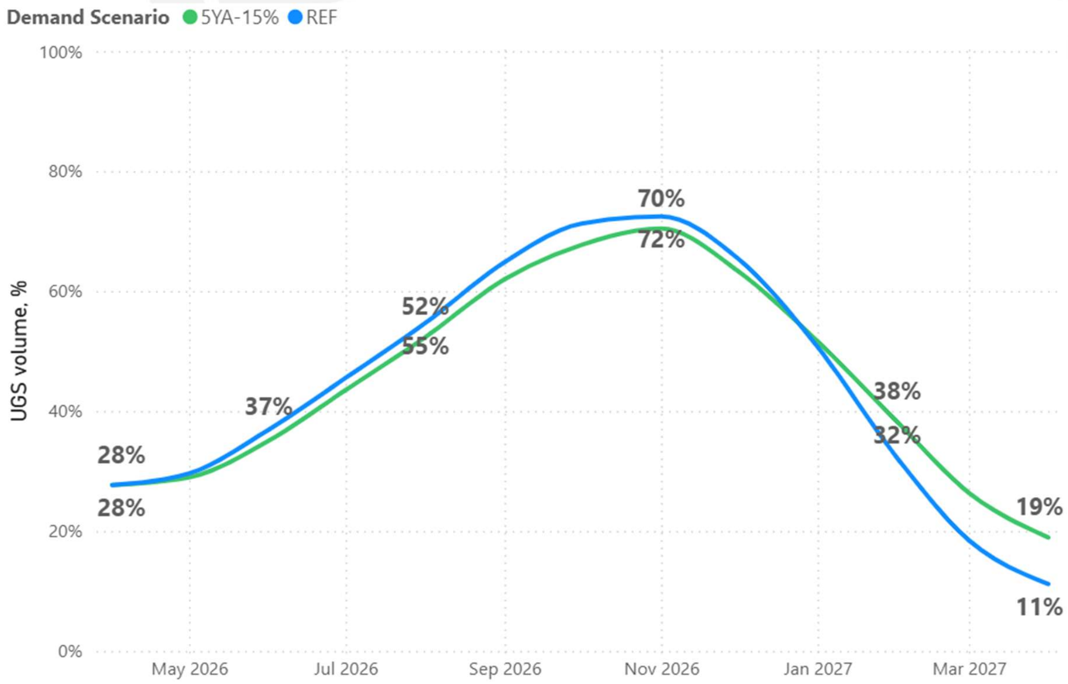

Figure 35 – Reference and 5YA-15% demand with LNG Tight and Russian pipeline disruption. Evolution of the aggregated European UGS stock level, %

Figure 35 shows that, in the case of LNG Tight supply scenario with no Russian pipeline supply and Reference demand, the storage facilities are depleted to 11% by the end of winter (only strategic volumes are not used), thereby increasing the risk of demand curtailments.

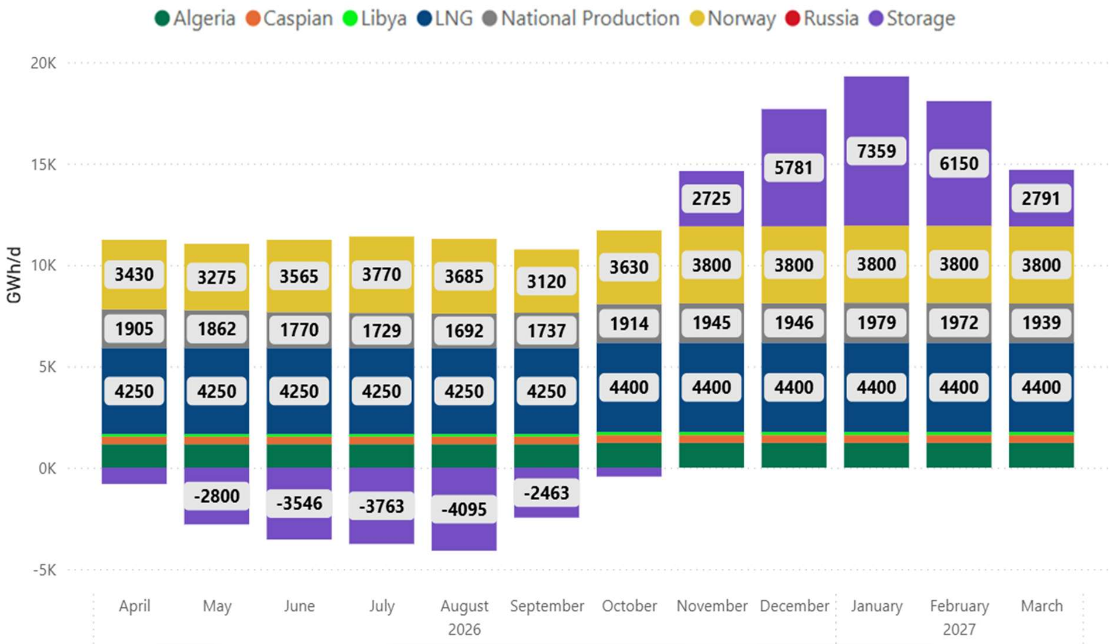

Figure 36 - Reference demand with LNG Tight and Russian pipeline disruption. Monthly supply mix, GWh/d

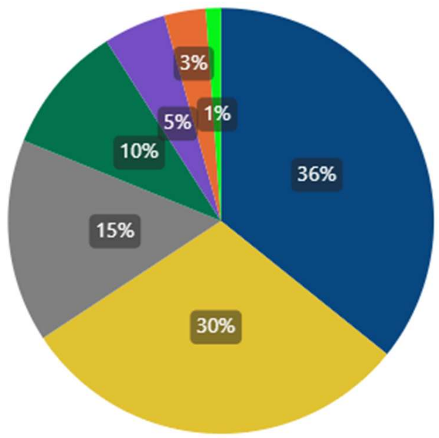

Figure 37 - Reference demand with LNG Tight and Russian pipeline disruption. Supply mix, %

Figure 38 shows how some European countries are reserving part of their own gas stocks, which are constituted as strategic reserves, to be used only for the purpose of mitigating their national demand curtailment.

Country	Value
Austria	21%
Belgium	0%
Bulgaria	0%
Croatia	0%
Czechia	2%
Denmark	20%
France	0%
Germany	0%
Hungary	17%
Italy	25%
Latvia	7%
Poland	37%
Portugal	77%
Romania	0%
Serbia	0%
Slovakia	0%
Spain	51%
Sweden	0%
The Netherlands	4%
United Kingdom	0%

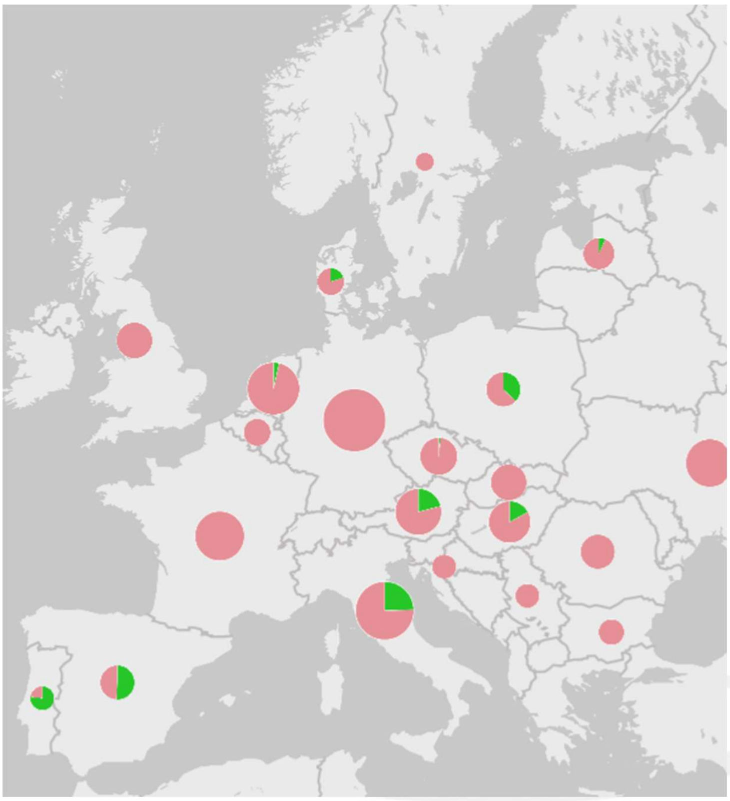

Figure 38 – Reference demand with LNG Tight and Russian pipeline disruption. Storage % levels per country

Under the LNG Tight supply sensitivity, in combination with the no Russian pipeline supply, Europe would face demand curtailments of approximately 2 - 3% of total demand under reference demand and a cooperative approach.

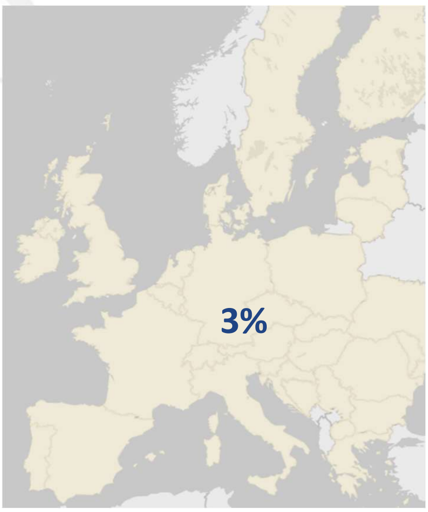

Figure 39 – Reference demand with LNG Tight and Russian pipeline disruption. Curtailment rate, %

LNG Tight supply potential results show the importance of securing an adequate level of LNG supplies to Europe. Otherwise, demand response (either policy-based or price-based) would be necessary to prevent from fully depleting storages by the end of the 2026/27 winter season, or even to mitigate the risk of demand curtailment in the event of a full disruption of Russian pipeline supplies.

Securing LNG supplies, coordinating maintenance schedules, and maintaining operational flexibility in storage and import capacity are essential to avoid risk of insufficient storage levels and support system flexibility.

Additionally, the 10 bcm of storage in Ukraine available to the European market could also contribute to demand satisfaction and optimise usage of the other European storages. Ukraine storages correspond to an additional approximate 10% of total working gas volumes located in the EU.

Legal Notice

The current analysis is developed specifically for this Summer Supply Outlook 2026 with Winter 2026/27 overview. It results from TSOs experience, ENTSOG modelling and supply assumptions and should not be considered as a forecast. The actual supply mix and storage level on 30 September 2026 and 31 March 2027 will depend on market behaviour and global factors.

ENTSOG has prepared this Summer Supply Outlook 2026 with Winter 2026/27 overview in good faith and has endeavoured to prepare this document in a manner which is, as far as reasonably possible, objective, using information collected and compiled by ENTSOG from its members and from stakeholders together with its own assumptions on the usage of the gas transmission system. While ENTSOG has not sought to mislead any person as to the contents of this document, readers should rely on their own information (and not on the information contained in this document) when determining their respective commercial positions. ENTSOG accepts no liability for any loss or damage incurred as a result of relying upon or using the information contained in this document.

ANNEXES

Annex A: UGS

The data for this Summer Supply Outlook 2026 with Winter 2026/27 overview is available online as an annex of this report. The data available is specifically:

- **Working Gas Volume and Gas in storage on 1 April 2026**

For the modelling of the different scenarios, the Summer Supply Outlook 2026 considers the storage inventory level per country on 1 April 2026 as the initial situation. The gas in storage for each country is based on the AGSI+ platform. The relative filling level has been calculated using the Working Gas Volume and gas in the storage from the AGSI+ platform.

For Serbia and Ukraine, data on storage are provided by the Serbian and Ukrainian TSOs. For the United Kingdom, the data are taken from the National Gas Transmission data portal[25].

- **Strategic storage facilities and strategic reserves**

European countries that are reserving a part of their own gas stock as strategic in a specific gas storage or generally in form of strategic reserves. The availability of these strategic storages or reserves is depending on the country's specific regulation.

- **Injection and withdrawal curves**

In order to capture the influence of UGS inventory level on the withdrawal capacity, ENTSOG has used the deliverability curves made available by GSE. These curves represent a weighted average of the facilities (salt caverns, aquifers or depleted fields) of each area.

[25] https://data.nationalgas.com/gas-system-status

Annex B: Demand, National Production, Supply Potential and Export

The data for this Summer Supply Outlook is available online as an annex of this report. The data for this Summer Supply Outlook 2026 with Winter 2026/27 overview is available online as an annex of this report. The data available is specifically:

- **Average daily Reference Winter and Reference Summer demand forecast, GWh/d**

The Reference demand (from 1 April 2026 to 31 March 2027) is based on TSOs' estimates. Export to Ukraine is based on the expected forecast provided by the Ukrainian TSO.

- **Average daily 5YA demand and 5YA with -15% demand response forecast, GWh/d**

The 5YA demand (from 1 April 2026 to 31 March 2027) is based on 5-year average demand from 2017-2021/22 and 5YA -15% is considering a 15% demand response.

- **Average daily National production forecast, GWh/d**

The national gas production estimated by TSOs.

- **Average daily Supply potential, GWh/d**

For each of the winter and summer demand profiles specific maximum gas supply availabilities are used in the report. Supply limitations are defined on a monthly basis for both winter and summer seasons, ensuring that flows from each source do not exceed reasonable levels derived from historical observations.

The maximum supply potential of the different sources providing gas to Europe (Algeria, Caspian Sea, Libya, Norway, and LNG Optimal) is based on historical availability over the past five years and on TSOs information. The maximum supply potential of Russian pipeline supply assumes the continuation of long-term contracts and is set at 12 bcm/year, with flows limited to the TurkStream route.

The maximum supply potential for seasonal assessments is, by default (unless otherwise specified by TSOs or in the case of Russian pipeline supply or LNG sensitivities), calculated as the maximum 30-day rolling average supply from each source over the past five years for the relevant season.

Annex C: Modelling approach

The Outlook model represents the natural gas infrastructure within the geographical scope of the assessment. ENTSOG uses PLEXOS as the modelling tool.

The model follows a capacity-based approach, whereby gas flows are determined according to the available infrastructure capacities. The optimisation allocates flows across the network while respecting capacity constraints, with the objective of meeting demand and achieving the storage targets at minimum total system cost.

The modelling framework assumes cooperative crisis management across the system. In the event of demand curtailment in one country, the model distributes curtailment proportionally across all countries, reflecting a cooperative response within the network. It further presumes cooperative behaviour among Member States, including LNG distribution to terminals and storage utilisation according to security of supply needs. However, the model does not factorize commercial supply agreements.

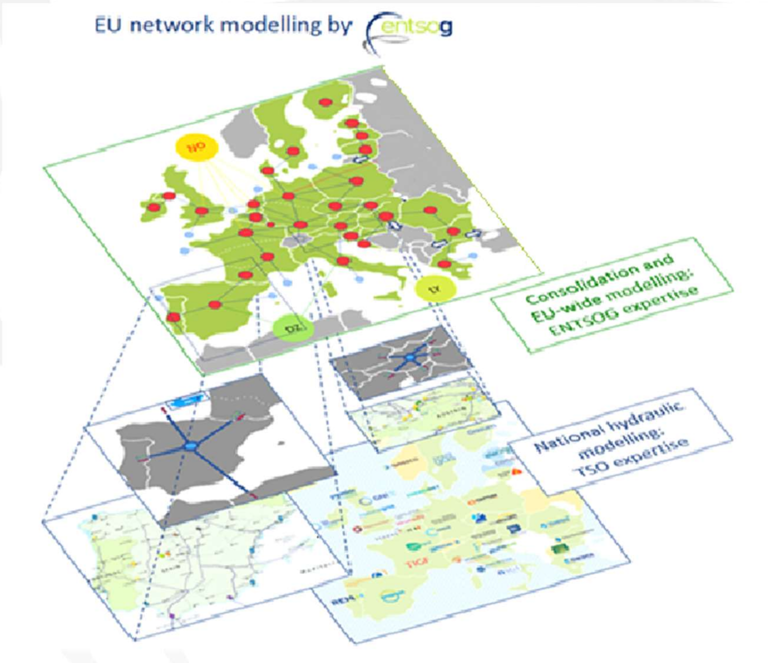

Illustration 1: Outlook model overview

- **Natural gas network topology**

The network topology represents the existing European gas infrastructure as well as planned infrastructure projects expected to become operational within the modelling horizon. It incorporates the firm technical capacities provided by TSOs, including the impact of scheduled maintenance.

The analysis considers non-EU countries, including the Energy Community contracting parties, considering the geography and the actual supply situation. The following modelling assumptions are applied:

> The United Kingdom, Switzerland, Bosnia and Herzegovina, North Macedonia, Serbia and Moldova.
> Exports to Ukraine are based on the expected forecast provided by the Ukrainian TSO. Model and topology assess the potential for additional seasonal flexibility provided by Ukrainian storage facilities. The Ukraine storage node is modelled as a last resort one – this means it is only filled after all the other EU storages are meeting the established target.
> No export towards Turkey is considered. Caspian Sea and Russian gas are transported through Turkey into the EU and additional gas imports from Turkey into the EU are allowed from Turkish LNG terminals.
> Albania, Montenegro and Kosovo are not connected to the gas grid.
> Export to the Kaliningrad region of Russia is not considered.
> Export to Kingdom of Morocco is not considered.

- **Objective Function**

For each simulation, the objective function represents the total system cost (Illustration 2). The mathematical solver determines the optimal solution by minimizing this objective function.

Parameters known prior to the simulation are shown in blue, while variables determined during the simulation are shown in purple. The term "SUM" denotes aggregation across all relevant objects and time periods. Consequently, the model includes a single objective function defined over the entire simulation horizon (e.g. a season or a year), rather than separate objective functions for individual periods (e.g. months).

The objective function is defined as:

OBJECTIVE FUNCTION =
SUM for all countries (unitary curtailment cost × related curtailed quantity)
+ SUM for all storage (unitary target penalty × quantity below target)
+ SUM for all supplies (unitary cost of supply × related supply quantity)
+ SUM for all arcs (unitary residual cost × related flow)

Illustration 2: Objective function of the Outlook model

- **Cost Components**

The Outlook model incorporates several cost categories (shown in blue in Illustration 2), which are prioritised from highest to lowest as follows:

> **Curtailment cost**. Curtailment is assigned the highest cost in the model and is therefore avoided whenever possible. The cost is incremental and assumed to be identical across all countries, reflecting the modelling assumption of cooperation between countries within the system.

> **Target penalty.** A penalty cost is applied when a storage facility does not reach its predefined fill-level target at the end of a given period. This mechanism is used to assess whether the available infrastructure is sufficient to achieve the specified storage targets. Two target configurations are considered in the Outlook model:

  Non-mandatory target: the storage level may fall below the target if demand cannot otherwise be met by available supply sources. In this case, the target penalty is set below the curtailment cost.

  Mandatory target: the model enforces the target, potentially requiring demand curtailment to ensure that the target level is achieved. In this case the target penalty is above the curtailment cost.

> **Cost of supply.** This component represents the costs associated with imports and national production and can be used to prioritise certain supply sources. In the model assumptions, LNG is considered more expensive than all pipeline supplies. As a result, LNG is utilised only after lower-cost pipeline supplies. Russian pipeline gas is assigned the highest supply cost to minimise its use.

> **Residual costs** (infrastructure). Residual costs represent incremental costs associated with the use of infrastructure. The pipeline routes are assigned similar incremental residual costs, with utilisation of each route limited by its available capacity.

Annex D: Curtailment Rate Results

The data for this Summer Supply Outlook is available online as an annex of this report. The data for this Summer Supply Outlook 2026 with Winter 2026/27 overview is available online as an annex of this report. The data available is specifically:

- **Curtailment Rate for monthly simulations, %**

For each demand situation and each zone, modelling results consist in the calculation of Curtailment Rate which is the potential level of demand curtailment representing the share of the gas demand that cannot be satisfied (calculated as a daily volume). The level of demand curtailment is assessed considering a cooperative behaviour between European countries in order to mitigate its relative impact. This means that all countries try to reduce the curtailment rate of other countries by sharing it.

Note: to give a comparable picture of the situation and avoid any distortion in the cooperative behaviour of ENTSOG's model, all indicators consider the demand as it is defined in the assumptions. However, in practice, a reduction of demand is observed in case of risk of inadequacy between supply and demand, generally as a consequence of increasing prices. This demand response to high prices is considered in the results (-15% demand response) and should be given due attention when interpreting the risk exposure to demand curtailment in the different countries. This is why an exposure to a few percentiles of demand curtailment observed in a country is generally considered as a limited risk in this assessment.

Abbreviations

TSO	Transmission System Operator	**WGV**	Working Gas Volume
UGS	Underground Storage	**UAe**	Export to Ukraine
LNG	Liquified Natural Gas		

Supplies

CA	Caspian Area	**NO**	Norway
DZ	Algeria	**NP**	National Production
LY	Libya	**RU**	Russia

Countries

AT	Austria	**LT**	Lithuania
BE	Belgium	**LU**	Luxembourg
BG	Bulgaria	**LV**	Latvia
CY	Cyprus	**MD**	Moldova
CZ	Czechia	**MK**	North Macedonia
DE	Germany	**MT**	Malta
DK	Denmark	**NL**	The Netherlands
EE	Estonia	**PL**	Poland
ES	Spain	**PT**	Portugal
FI	Finland	**RO**	Romania
FR	France	**RS**	Serbia
GR	Greece	**SE**	Sweden
HR	Croatia	**SI**	Slovenia
HU	Hungary	**SK**	Slovakia
IE	Ireland	**UK**	United Kingdom
IT	Italy	**UKn**	Northern Ireland

Other

ATti	Austria Tirol
ATvo	Austria Vorarlberg
BEh	Belgium H-gas
BEl	Belgium L-gas
DEl	Germany L-gas
DEn	Germany THE South
DEg	Germany THE North
FRnL	French Nord L-gas
LNG_FRn	French LNG zone North
LNG_FRs	French LNG zone South
LNG_ITa	Italian LNG zone Adriatic
LNG_ESa	Spain LNG zone Atlantic
STcAT	Austrian storage zone
STcATm	Austrian multi-country storage zone
STcATn	Austrian storage zone connected to THE South
STcCZd	Czech storage zone connected to Slovakia
STcDE	Germany storage zone
STcDEd	Germany Dutch storage zone
STcDEdL	Germany Dutch storage zone L-gas
STcDEg	Germany storage zone connected to THE North
STcDEm	Germany multi-country storage zone
STcDEmL	Germany multi-country storage zone L-gas
STcDEn	Germany storage zone connected to THE South
STcFRa	Storage zone Atlantic
STcFRn	Storage zone North
STcFRnL	Storage zone North L-gas
STcFRs	Storage zone South
STcFRt	TSO Terega storage zone

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