

**OPINION No 05/2023
OF THE EUROPEAN UNION AGENCY
FOR THE COOPERATION OF ENERGY REGULATORS**

of 13 July 2023

on ENTSOG's Summer Supply Outlook 2023

THE EUROPEAN UNION AGENCY FOR THE COOPERATION OF ENERGY REGULATORS,

Having regard to Regulation (EU) 2019/942 of the European Parliament and of the Council of 5 June 2019 establishing a European Union Agency for the Cooperation of Energy Regulators ('ACER'), and, in particular, Article 4(3)(b) thereof,

Having regard to Regulation (EC) No 715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005, and, in particular, Articles 9(2) and 8(3) thereof,

Having regard to the outcome of the consultation with the ACER's Gas Working Group,

Having regard to the favourable opinion of the Board of Regulators of 12 July 2023, delivered pursuant to Article 22(5) of Regulation (EU) 2019/942,

Whereas:

1. INTRODUCTION

- (1) On 6 April 2023, the European Network of Transmission System Operators for Gas ('ENTSOG') published the Summer Supply Outlook 2023¹ pursuant to Article 8(3)(f) of Regulation (EC) No 715/2009.
- (2) Pursuant to Article 4(3)(b) of Regulation (EU) 2019/942, ACER may provide an Opinion to ENTSOG on, inter alia, relevant documents referred to in Article 8(3) of

¹ <https://www.entsog.eu/outlooks-reviews#summer-outlooks-and-reviews>

Regulation (EC) No 715/2009, as submitted to ACER pursuant to Article 9(2), first subparagraph, of Regulation (EC) No 715/2009.

2. SUMMARY OF THE DOCUMENT

- (3) In the Summer Supply Outlook 2023, ENTSOG undertakes an assessment of the European gas network resilience for the upcoming summer (the period from 1 April 2023 to 30 September 2023). The analysis investigates the possible evolution of gas supply and the ability of the gas infrastructure in the European Union to handle gas flows i) to serve demand, ii) to accommodate the exports from outside the Union² and iii) to achieve the storage injection needs during summer in preparation for the next winter. ENTSOG, as in previous Outlooks, uses a reference case of reaching a 90% filling level of storage by 30 September 2023.
- (4) In view of the risks for gas supply connected to the Russian invasion of Ukraine and in view of the REPowerEU plan to phase out the dependency on Russian gas³, ENTSOG has additionally assessed the Union's dependence on Russian gas supply to satisfy demand and storage injection needs during the summer, as well as the impacts of a possible long-term supply disruption of all Russian gas pipeline supply routes⁴.
- (5) Following the interest expressed by ACER and stakeholders, ENTSOG has for the first time run an extended analysis of the possible evolution of gas supply covering the winter 2023/24 season, starting from the simulation results obtained for the 2023 injection period. This extended scenario uses a reference case reaching a 30% filling level of storage by 31 March 2024 in a "reference" and in a "cold" winter scenario.

3. ASSESSMENT

- (6) ACER welcomes ENTSOG's timely publication of the Summer Supply Outlook 2023 well ahead of the summer season. In particular, ACER appreciates that the Outlook considers as main risk the Russian invasion of Ukraine and the possible repercussions for risk preparedness, and that its scope has been extended to provide an overview of the preparedness for the winter 2023/2024.

3.1. ENTSOG main findings and analytical framework

- (7) ACER takes notes and underlines the importance of the following conclusions contained in the Summer Supply Outlook 2023 in the cases of minimised Russian gas imports and of a full Russian pipeline supply disruption.

² E.g. to Ukraine

³ REPowerEU Action plan, p.1. *"In March 2022, EU leaders agreed in the European Council to phase out Europe's dependency on Russian energy imports as soon as possible."*

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2022%3A230%3AFIN&qid=1653033742483>

⁴ It does not consider gas in form of LNG supplied by Russia.

- a. Reaching a 90% storage filling level by the end of summer is possible in both cases, enabled by efficient cooperation between countries.
- b. A Russian pipeline supply disruption would require additional measures to safeguard a 30% target storage level at the end of March 2024.
- c. Under a “cold winter” (once in 20 years) scenario with a full Russian pipeline supply disruption, which represents the most stressful simulated scenario, additional gas supplies and demand reduction would be required. European countries would be exposed to a risk of demand curtailment between 6 and 13% during the whole winter.
- d. The existing gas infrastructure, including new projects commissioned last year, can efficiently reduce the dependency on Russian supply.
- e. Additional measures to improve the security of gas supply situation include:
 - i. **Additional LNG imports**, above historically observed import levels, could allow higher targets to be reached for all storage facilities before the end of September 2023.
 - ii. **Enhanced capacities** provided by TSOs would contribute to the increase of import route capacities from the Caspian Area and from Norway, as well as boost the possibility for better cooperation between Germany and Austria, Belgium, France, Czech Republic, and the Netherlands, resulting in an increase of gas supply flow from West to East.
 - iii. Implementation of a 15% gas **demand reduction target**.

3.2. Inventories of gas storage to meet storage targets

- (8) ACER concurs with ENTSOG that gas storages play a crucial role to balance the European gas system and to cover peak demand during winter. The summer months⁵ provide shippers the opportunity to refill storages before the start of the next winter, usually based on a positive summer-winter spread⁶. The continuation of the Russian aggression against Ukraine leads to the continuation of gas supply risks, although the EU dependence on Russian gas is currently much lower (approximately 8 %) compared to the start of the invasion of Ukraine (approximately 40% of the EU’s gas demand).
- (9) ACER notes that on 1 April 2023, the starting point of the outlook simulations, the storage filling level was at 625 TWh (55% of the total EU-27 + UK storage capacity),

⁵ From April to October in the Outlook, but the end of the injection season may vary per Member State.

⁶ The difference between prices paid for gas in Summer and prices at which gas can be sold in Winter.

in the high range of the past 5 injection seasons and doubles the filling level of 26% observed last year. However, this average level hides differences across Member States: filling levels above 70% are observed in Bulgaria, Croatia, Denmark, Portugal, Sweden and Spain, while recorded filling levels are below 35% in Belgium, France and Latvia.⁷ No evident regional differences or apparent correlations to the level of dependency on Russian gas are observed as regards storage filling levels across European Member States. On 1 May 2023, the storage filling levels in all Member States with underground gas storage facilities are above the intermediate minimum target for May defined in the Commission's Regulation⁸ setting the storage filling targets for the year 2023. Annexes I and II to this Opinion provide detailed information on the filling levels on 1st May.

- (10) Mild temperatures during the last winter 2022/23, higher-than-normal LNG imports into the Union, and high prices and behavioural changes reducing gas demand have permitted a moderate use of gas storage facilities during last winter and allowed for the winter season to end with adequate filling level of gas storages.
- (11) Strengthened national and EU gas storage regulations⁹ and other regulatory interventions played a role in the successful replenishment of gas storages, acting as an instrument to secure adequate filling levels, despite non-favourable and highly volatile market signals in the wholesale gas markets. The EU storage filling level increased to 95% on 1 November 2022, well beyond the 80% filling target and compliant with the EU storage filling targets in all Member States. Evaluating and revising the incentives of the entities responsible for reaching the filling targets is advisable.

3.3. Supply assumptions

- (12) ACER notes that the Outlook conclusions are only valid to the extent to which gas supply from the various sources is available in the volumes used in the simulations, which are based on historically observed volumes over a period without significant supply disruptions. The modelling does not consider whether other supply constraints (e.g. related to gas supply contracts or legal or regulatory constraints related to the use of storages) exist, nor what the price effects of limited gas supply might be on the wholesale gas market.

⁷ The storages of Member States with high filling levels are relatively small compared to Member States with large volumes storages like Germany, Italy, France and the Netherlands.

⁸ Commission Implementing Regulation (EU) 2022/2301 of 23 November 2022 setting the filling trajectory with intermediary targets for 2023

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32022R2301&qid=1669911511115>

⁹ On 5 August 2022, the Council adopted a Union Regulation aiming to ensure that gas storage capacities in the EU are filled to adequate levels in a spirit of solidarity. The Regulation provides that gas storages must be filled to at least 90% for the following winter periods.

- (13) ACER notes that supply assumptions for the Outlook are based on historic values of different sources providing gas to the Union (LNG, Norway, Caspian, Algeria and Libya). Supply assumptions of Russian pipe gas reflect the currently reduced Russian imports via Ukraine and TurkStream¹⁰. ACER understands that the remaining Russian pipeline flows relate to existing long-term contracts between EU buyers and Gazprom.
- (14) ACER finds ENTSOG's approach to base gas supply assumptions on historical levels reasonable. However, ACER expects ENTSOG to adapt gas supply assumptions, where relevant, to likely events in the future, which possibly have an impact on the gas supply import capabilities and/or strategies of the main gas suppliers to the Union, beyond assumed historical gas supplies¹¹. For example, ACER notes that for Norwegian gas supplies relevant authorities provide prospective information on the gas supply situation¹².

LNG imports

- (15) The Outlook notes that the Union has to rely on continued high LNG imports over the summer season and beyond to compensate for reduced supplies of Russian gas and to replenish storages. ACER finds no quantification in the Outlook of the additional LNG imports that would be needed, and notes that apparently ENTSOG's supply assumptions for LNG for 2023 are the same as for 2022, despite the increase of LNG regasification capacities in the Union during last year due the commissioning of new LNG regasification projects.¹³
- (16) This summer Europe would have to import incremental LNG volumes, which may be challenging and costly in view of limited additional liquefaction projects to become operational¹⁴ and a possible rebound of LNG demand in Asia. China's LNG rebound in 2023 is uncertain and will depend on its economy recovery, government policies and coal consumption¹⁵. Some studies¹⁶ suggest that China's potential gas demand growth will be mostly filled by domestic and already contracted LNG supplies, suggesting benign levels of LNG spot prices during 2023.

¹⁰ However, the supply assumptions for Russian gas in Annex B, Table 9 of ENTSOG's Summer Outlook are ~5900 GWh/d and do not seem to consider the reduced gas flows.

¹¹ E.g. OIES, Quarterly Gas Review: Gas Markets in 2023, p.19. as regards the supply outlook for Europe states that "*there is little to suggest that European gas production or non-Russian pipeline supply will be higher year-on-year. Indeed, a slight decline is to be expected*", based on forecasts of relevant authorities for upstream production.

¹² Norwegian Petroleum Directorate, 2023. Gas Production 2023. <https://www.npd.no/en/>

¹³ Annex B, Table 9 of the ENTSOG's Summer Outlook 2023 the max summer and winter LNG supply imports are 4201 and 4745 GWh/d, while ENTSOG's Summer Outlook 2022 (Annex B, p.34) used 4745 GWh/d.

¹⁴ Source: GIIGNL Annual Report, year 2022, p.3.

https://giignl.org/wp-content/uploads/2022/05/GIIGNL2022_Annual_Report_May24.pdf

¹⁵ OIES, Quarterly Gas Review: Gas Markets in 2023, p.24-25.

¹⁶ Idem.

- (17) For European countries already receiving significant LNG supplies, most LNG is supplied based on existing long-term contracts which would not be strongly affected by higher LNG demand and a tight LNG market. Only a few new LNG long-term contracts (LTC) have been signed in Europe, despite new LNG terminals coming online in record time, adding additional LNG regasification capacity. Political outreach to the main LNG producers should continue to facilitate attracting additional LNG supplies, which may take place in the form of longer-term contractual arrangements in order to reduce price exposure to LNG spot, which price may remain highly volatile. In doing so, the long-term goal of decarbonising the EU's energy system needs to be taken into account.
- (18) ACER highlights that ENTSOG's Summer Supply Outlook 2023 does not consider the role of Russian LNG to the Union. ACER believes that ENTSOG should consider constraints on the availability of Russian LNG as a risk factor, also in view of the objective to reduce Russian gas imports.

3.4. Infrastructure to reduce dependence and reallocation of capacities

- (19) ACER welcomes that ENTSOG periodically upgrades the topology of its network model based on capacities provided by TSOs, in order to reflect the firm technical capacities that are offered for the upcoming summer, including planned maintenance¹⁷. ENTSOG may consider as a complementary scenario including a situation with enhanced conditional capacities on top of the firm technical capacities in order to test the resilience of the gas system with enhanced capacities. ACER notes¹⁸ that significant amounts of recently commissioned infrastructure namely the Gas Interconnection Poland-Lithuania - GIPL, Poland-Slovakia Gas Interconnection, the Greece-Bulgaria Gas Interconnector – IGB, as well as the Baltic Pipe connecting Norway-Denmark and -Poland have added significant new import and cross-border capacities. Actions have also been taken to improve available capacities between Lithuania and Latvia, France to Germany and Spain to France (under certain conditions), and Romania to Hungary, thus increasing the EU's energy system's resilience and security of supply.
- (20) New LNG and FSRU terminals in Germany (Brunsbüttel, Lubmin and Wilhelmshaven FSRUs), Estonia-Finland (Paldiski FSRU) and the Netherlands (EemsEnergyTerminal) were also recently commissioned adding close to 30 bcm of LNG import capacity to the EU.
- (21) ACER welcomes that the Outlook lists the projects commissioned during the last year. However, it encourages ENTSOG to provide more clarity on the timestamp of the network topology, and to mention the significant capacities added by commissioned

¹⁷ ENTSOG Summer Outlook, Annex C, p.37.

¹⁸ ENTSOG Summer Outlook, p.8.

projects during the season or by the “enhanced capacities” provided by the TSOs and considered in certain Outlook simulations.

- (22) The war in Ukraine is leading to a significant rerouting of gas across Europe, basically increasing supplies from West to East at the expense of traditional East-West flows. However, there are certain transmission capacity limitations on moving gas from West to East, especially in North-West Europe¹⁹. ACER encourages TSOs to provide ENTSOG updates of such re-allocated capacities.
- (23) ENTSOG’s simulations are under the assumption of efficient cooperation between the countries. ACER asks ENTSOG to better explain the impact of this assumption, for example by explaining how the simulations would work out without this assumption. This could be a useful way of making the value of such cooperation more explicit.

3.5. Demand assumptions

- (24) ENTSOG forecasts that daily demand for summer 2023 is expected to be in the same range as the last three years, close to 10,000 GWh/d and in line with the average of the summer period in the last 5-years summers.²⁰ The International Energy Agency (IEA) estimates that OECD European gas demand will fall by 3% in 2023 from 2022 values, noting that European gas demand dropped by close to 20% in 2022. According to the IEA, further reduction of gas consumption will be largely driven by lower gas for power generation and a modest recovery of 10% of industrial demand from very depressed gas values in 2022²¹.
- (25) On 30 March 2023, the European Council²² prolonged the emergency legislation on measures to reduce gas demand by 15% for another 12 months, starting from April 2023²³. The Commission has estimated that the gas demand reduction regulation has generated savings of gas demand close to 20%, equivalent to more than 40 bcm, between August 2022 and January 2023.
- (26) ACER finds that the continuation of voluntary demand reduction is crucial to improve the preparedness for next winter 2023/2024, to fully compensate for the decrease in Russian gas supply and achieve the 90% gas storage filling target at least possible cost.

¹⁹ ACER will issue a special report about congestion in North-West Europe and how it has been handled by TSOs and NRAs.

²⁰ ENTSOG Summer Outlook, p.9.

²¹ IEA Gas Market Report, Q1-2023, p. 34.

²² Council Regulation (EU) 2023/706 of 30 March 2023 amending Regulation (EU) 2022/1369 as regards prolonging the demand-reduction period for demand-reduction measures for gas and reinforcing the reporting and monitoring of their implementation.

<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023R0706&from=EN>

²³ Countries must reduce their consumption compared with the average demand between 1 April 2017 and 31 March 2022. This reference period does not include cut demand reductions since the start of the war.

- (27) ACER notes that the ENTSOG Outlook gas demand projections have been provided by TSOs based on a “business-as-usual” projection, and that demand reduction is considered only as an additional measure to cover stressful gas supply scenarios. ACER reiterates its recommendation to ENTSOG to assess whether the consistency of gas demand figures provided by the gas TSOs are consistent with gas demand estimates from other entities and with the targets on gas demand reduction. TSOs should incorporate in their demand projections measures and policy objectives of gas demand reduction. In case of significant differences between the TSOs’ estimates and other estimates of public authorities or reputable entities, ACER recommends ENTSOG to study the reasons and re-adjust the provided gas demand projections if needed.

3.6. Treatment of odourised gas

- (28) ACER has repeatedly called on ENTSOG and TSOs to prioritise²⁴ conducting a detailed analysis of the feasibility of implementing reverse flows and needed investments (e.g. such as additional compression power) and adaptations in coordination with national authorities and end-users. The analysis should consider ways to overcome legal and technical provisions such as different odourisation practices.
- (29) ACER welcomes the adjacent French and German TSO, GRTgaz and OGE and GRTgaz Deutschland, having developed physical flows and offered commercial capacities from France to Germany at the Obergailbach interconnection point, despite different odourisation practices in France and Germany. This daily capacity 100 GWh/d, conditional on certain network and demand parameters, has enabled physical gas flows from France to Germany since 13 October 2022 and has been available for most days²⁵ during the winter 2022/23. ACER recommends ENTSOG and TSOs to continue working into expanding reverse flow capabilities, especially at interconnection points that are in high demand, and to report on such developments in future outlooks.

3.7. Disruptions scenarios and risk factors

- (30) ACER finds adequate that the Outlook’s “reference case” reflects the currently reduced Russian pipeline gas supplies limited to the Ukraine and Turkstream routes. ACER welcomes that ENTSOG includes in its risk assessment a disruption of the pipeline gas supply from Russia during the next summer period (Section 3.1.1) and

²⁴ ACER Opinion No 05/2022 on ENTSOG Summer Supply Outlook 2022/23, para 26. https://www.acer.europa.eu/sites/default/files/documents/Official_documents/Acts_of_the_Agency/Opinions/Opinions/ACER%20Opinion%2005-2022%20on%20ENTSOG's%20Summer%20Supply%20Outlook%202022.pdf

²⁵ From 30/11/2022 until 24/12/2022 the FR>DE capacity was not available. Capacity was available back on 25/12 until 18/1 after which there was another period of unavailability.

the next winter period, under a “reference winter” (Section 4.1.1) and a “cold winter” (Section 4.2.1) scenario.

- (31) ENTSOG’s analysis of the dependence and impacts on Russian gas for better winter preparedness has been detailed in the Outlook²⁶ and is summarised in paragraph (7) of this Opinion. Notwithstanding this, ACER remarks that the simulation results (storage filling levels, rate of demand curtailment) are only provided at aggregated EU level. ACER calls on ENTSOG to provide details of the simulation results and dependency on Russian gas at country level, as the risk patterns may differ across Member States. ACER notes that this information at country level was available and displayed in maps in the last ENTSOG supply outlook²⁷ and calls on ENTSOG to include this relevant information in future Outlooks.
- (32) ACER agrees with ENTSOG that the simulated prolonged disruption of Russian gas is undoubtedly the main risk for the upcoming summer and winter. However, this scenario could be heightened by pipeline disruption scenarios for sources other than Russia, which are less likely to occur (e.g. gas supplies from Algeria, prolonged disruption of Norwegian gas supplies via offshore pipeline such as Europipe, Norpipe, Zeepipe, Franpipe). Such additional extreme combined scenarios would provide useful insights regarding the readiness of the European gas infrastructure to deal with less likely but high impact disruption scenarios.

Main risk factors for upcoming summer and winter seasons

- (33) Despite a higher level of gas storage filling on 1st April in comparison to last year and the expansion of LNG import capacities in Europe, ACER notes the continuation of the following risk factors present since the start of the Russian aggression against Ukraine for the upcoming summer and winter season:
- a. High uncertainty about the availability of already drastically reduced Russian pipeline gas supply;
 - b. Limited additional gas volumes from other major sources of gas pipeline imports to go much beyond the contracted/booked volumes;
 - c. Existence of some internal infrastructure bottlenecks in the EU to accommodate new gas flows from the West, despite new infrastructure commissioned this year;

²⁶ ENTSOG Summer Supply Outlook 2023, Executive summary and Sections 3 and 4.

²⁷ ENTSOG Summer Outlook 2022, Annex G – Storage levels on 1 October, p.41
https://www.entsog.eu/sites/default/files/2022-04/SO0035-22_Summer_Supply_Outlook_2022_BOA_Rev8.1_220427%20for%20publication.pdf

- d. Possible recovery of the Chinese economy driving upwards global LNG demand and prices, and impacting the price of LNG imports to the EU;
 - e. Operational incidents or accidents in major supply routes, upstream production sites or major LNG liquefaction terminals limiting availability of gas supply to the EU market;
 - f. Draughts and heat waves during summer driving up gas demand for power generation;
 - g. A colder than usual winter, driving up gas demand; and
 - h. Lack of implementation of gas demand reduction targets
- (34) The materialisation of these risk factors may lead to supply scarcity which would firstly impact gas wholesale prices. Industrial consumers would have to reduce gas demand.
- (35) In addition, Member States may decide to prioritise²⁸ the gas supply to certain critical gas-fired power plants over the gas supply to certain categories of protected customers, if the lack of gas supply to such critical gas-fired power plants either could result in severe damage to the functioning of the electricity system or would hamper the production and/or transportation of gas.
- (36) This situation calls for continued vigilance with respect to gas supply situation beyond the assumed availability of maximum import flows in the past and for monitoring the implementation of the EU gas demand reduction regulation.
- (37) The analysis of ENTSOG's Outlook simulations should be complemented with other analyses performed at EU, regional and national level (e.g. updated risks assessments) to have the best possible up-to-date information on the gas supply risks.
- (38) In particular, ACER finds it important that the ENTSOs coordinate the set of input assumptions and output results used for the seasonal outlooks in order to provide consistent results (e.g. assumptions towards the gas demand from the electricity sector and, on the other hand, the gas supply made available to electricity power plants). It is important that the ENTSOs continue working together closely in the determination of the gas volumes needed for operating critical gas-fired power plants as well as critical electricity facilities for the gas system (e.g. electricity driven compressors).

3.8. Visualisation of results

²⁸ According to Article 11(7) of Regulation (EU) 2017/1938.

- (39) ACER notices that, compared to the previous Summer Supply Outlook, no maps highlighting bottlenecks²⁹ were included in the report and no Annex in excel file was published on ENTSOG's website, although this data is included as an annex to the summer outlook.
- (40) ACER calls on ENTSOG to publish all relevant input and output of the Summer Supply Outlook simulations. In this respect, ACER also recommends the creation of a visualisation tool/platform where to make available to stakeholders the results of each Summer Supply Outlook and Winter Supply Outlook edition.

3.9. Monitoring tools of gas supply situation

- (41) ACER praises ENTSOG for providing monitoring tools and initiatives beyond its legal tasks, which provide real value for monitoring the gas security of supply situation, such as the European gas flow dashboard³⁰, the Seasonal Supply Outlook Monitoring³¹, and the support to Gas Coordination Group assessments. ACER notes that associations of storage and LNG facilities have implemented updated transparency platforms for LNG facilities and gas storage facilities as required by Regulation (EU) 2022/2576³² which include links to tariffs information for LNG facilities. ACER encourages ENTSOG and Gas Infrastructure Europe (GIE) to continue making these useful monitoring tools operational and developing new functionalities at its own initiative or when requested by stakeholders or authorities.

3.10. Implementation of previous ACER recommendations

- (42) ACER welcomes that ENTSOG implemented its recommendation to extend the time horizon of this summer outlook from 6 months to one year, in order to have a better understanding of gas preparedness beyond the end of the injection season (summer outlook). ACER calls on ENTSOG to continue this practice for future seasonal supply outlooks.
- (43) ACER finds no reference in the Outlook as regards the possible implementation of other previous recommendations on seasonal outlooks, namely: consider using a scenario based on expected gas supply and booked capacities; studying the gas

²⁹ See for example page 19 of Summer Supply Outlook 2022 ([SO0035-22 Summer Supply Outlook 2022 BOA Rev8.1 220427 for publication.pdf \(entsog.eu\)](#))

³⁰ <https://gasdashboard.entsog.eu/>

³¹ <https://app.powerbi.com/view?r=eyJrIjoiYTk3YjJhZmQyYTRjZS00NmNkLWlxZDUtYmU2MGE5NWE3ZGU1IiwidCI6IjgxMDU4NGZkLTY5ZjktNDEzNy1hNmExLWMwZTMzMjgwYjE1YyIsImMiOiJh9&pageName=ReportSection>

³² Article 13. For storages, AGSI platform <https://agsi.gie.eu/> ; For LNG terminals, ALSI platform <https://alsi.gie.eu/>

demand responsiveness to prices in view of recent event of high prices and price spikes in 2022³³.

- (44) ACER calls on ENTSOG to devote the necessary resources to further improve the methodology for the security of gas supply and preparedness assessments, in view of the high relevance of its assessments and information,

HAS ADOPTED THIS OPINION:

1. ACER finds that ENTSOG' Summer Supply Outlook 2023 meets the objectives of Regulation (EU) 2019/942 and Regulation (EC) No 715/2009 in terms of contributing to non-discrimination, effective competition and the efficient and secure functioning of the internal natural gas market. ACER's main conclusions are the following:

Scope of analysis and timely publication

2. ACER welcomes ENTSOG's timely publication of the Summer Supply Outlook 2023 well ahead of the summer season. In particular, ACER appreciates that the Outlook scope has been extended to provide an overview of the preparedness for the winter 2023/2024 and that it considers as the main gas supply risk the effect of the Russian invasion of Ukraine.
3. ACER agrees with ENTSOG that additional LNG imports, enhanced transmission capacities and implementation of a 15% voluntary gas demand reduction target are needed to reach adequate levels of gas in storages at the beginning and end of the 2023/24 winter season in case of a total disruption of Russian piped gas supply.

Vigilance for storage fillings during summer

4. Gas in storage on 1st April is in the high range of the past 5 injection seasons and double the filling level of 26% observed last year. Strengthened national and EU gas storage regulations and other regulatory interventions have played and will continue to play a role in the successful replenishment of gas storages, despite potential non-favourable and highly volatile market signals in the wholesale gas markets. On 1st May, the filling level reached 60% allowing a cautious optimism as regards the filling of gas storages during the summer. However, the supply risk linked to a drastic reduction of remaining Russian pipe supply persists and Europe should be prepared also for a potential full disruption of Russian supplies. In this context, continued vigilance of gas supplies and monitoring of storage filling trajectories by all actors responsible for security of gas supply remains particularly important. ENTSOG and GIE have provided and improved their tools for monitoring the gas security of supply situation.

Supply and demand assumptions

5. The Outlook's supply assumptions are based on historical volumes and, with the exception of Russian pipeline gas, do not consider other supply constraints (e.g. related to gas

³³ ACER Opinion No 11/2021 on ENTSOG Winter Supply Outlook 2021/2022, p.8.

contracts or regulatory constraints on the use of storages). ACER expects ENTSOG to base the gas supply assumptions not only on historical levels but to adapt them, where relevant, to potential events likely to happen in the future and having an impact on the gas supply import capabilities and/or strategies of the main gas suppliers to the Union. ACER notes that for Norwegian gas supplies relevant authorities provide prospective information on the gas supply situation.

6. ACER finds that ENTSOG uses high gas demand projections for this outlook. ACER reiterates its recommendation to ENTSOG to assess if the TSOs' gas demand projections are consistent with the gas demand estimates from other entities and with the European targets on gas demand reduction and on the phase-out of the dependency on Russian gas.

Disruption scenarios

7. ACER agrees with ENTSOG that the simulated prolonged disruption of Russian gas is undoubtedly the main risk for the upcoming summer and winter. However, this scenario could be heightened by combined disruption scenarios for gas sources other than Russia, which are however less likely to occur (e.g. a disruption of a major offshore pipeline bringing Norwegian gas).

Infrastructure to reduce dependence on Russian gas and reallocation of capacities

8. Since the Russian's invasion of Ukraine, recently commissioned infrastructure has added significant cross-border capacities and more than 30 bcm of the LNG import capacities to the EU's gas system. ACER welcomes that the Outlook lists the major projects commissioned during the period. It encourages ENTSOG to provide more clarity on the timestamp of the network topology, and to mention the significant capacities added by commissioned projects during the season or by the "enhanced capacities" provided by the TSOs.
9. The war in Ukraine is leading to a significant rerouting of gas across Europe, basically increasing supplies from West to East at the expense of traditional East-West flows. However, there are certain transmission capacity limitations on moving gas from West to East, especially in North-West Europe³⁴. Part of such flow changes could be accommodated by TSOs re-allocating existing transmission capacities, which are no longer needed, to new expected flow patterns.

Improvements to the simulations' methodology

10. ACER reiterates its previous recommendations on the seasonal outlooks aimed at improving the simulations: consider using a scenario based on expected gas supply and booked capacities; and study the gas demand responsiveness to prices in view of recent event of high prices and price spikes in 2022. ENTSOG has a mandate under EU regulations to perform several gas security of supply tasks, and should count with

³⁴ See footnote 19 on future ACER special report about congestion in North-West Europe.

sufficient resources and the best available modelling capabilities given the high relevance of its analysis.

Level of granularity of the simulation results and visualisation

11. ACER finds that for this outlook the simulation results (storage filling levels, rate of demand curtailment) are only provided at aggregated EU level. ACER calls on ENTSOG to provide details of the simulation results and dependency on Russian at country level, as the risk patterns may differ across EU Member States. ACER also recommends the creation of a visualisation tool/platform to make available to stakeholders the results of each summer and winter supply outlook.

Interpretation of the simulation results

12. ACER notes the continuation of several risk factors, as detailed in paragraph (33), present since the start of the Russian aggression against Ukraine for the upcoming summer and winter season. ACER stresses that ENTSOG's simulations are based on a set of assumptions and cannot be considered as a forecast, as also pointed out by ENTSOG, and that the primary aim of the outlook is an assessment of the readiness of the gas infrastructure. Therefore, the results of ENTSOG's summer outlook simulations should be considered with caution and dynamically in view of more recent events impacting the summer season, and complemented by other analyses performed at EU, regional and national level. In this respect, ACER also highlights the importance of close cooperation between ENTSOG and ENTSO-E to ensure, where relevant, consistent assumptions and results in their respective seasonal assessments.

This Opinion is addressed to ENTSOG.

Done at Ljubljana, on 13 July 2023.

- SIGNED -

For the Agency
The Director
C. ZINGLERSEN

Annexes:

- I: Storage filling levels per Member States on 1st May 2023*
- II: EU storage filling levels on 1st May 2023 vs EU Regulation filling targets*
- III: Major LNG regasification and cross-border projects (recently commissioned or to be commissioned soon)*

Annex I: Storage filling levels per Member States on 1st May 2023³⁵

WGV: Working Gas Volume of Storages

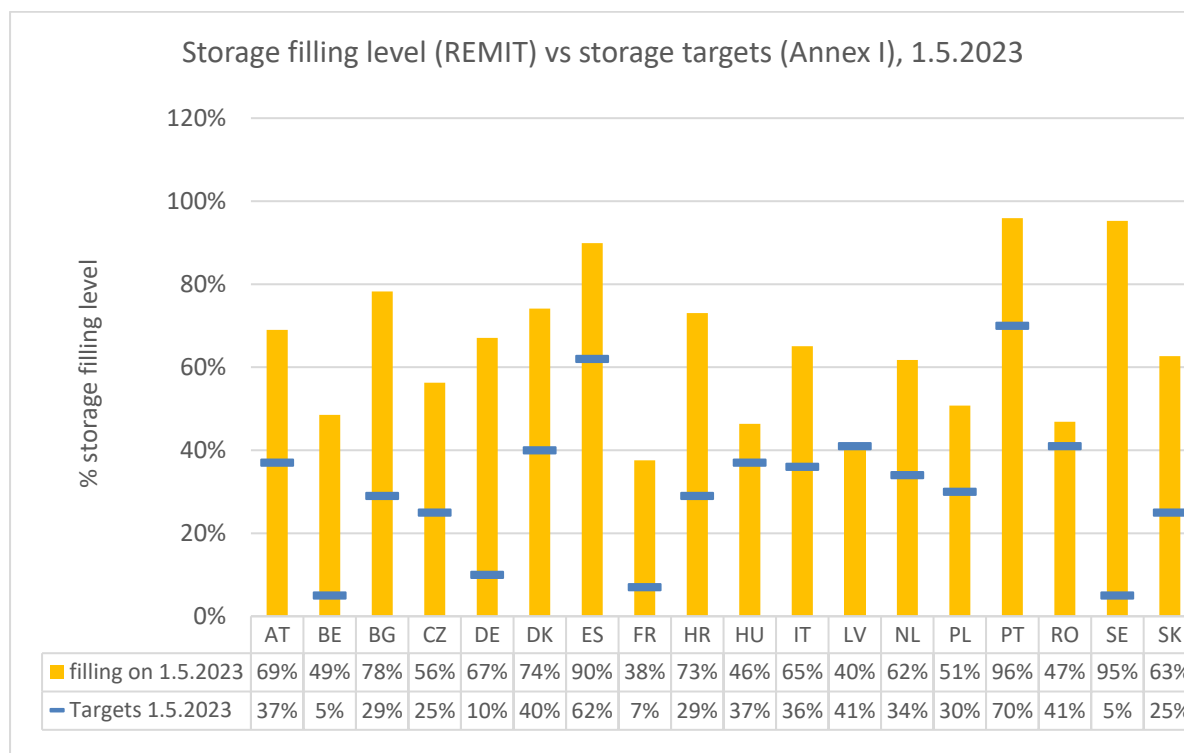
GIS: Gas in Storage

Country	Working (gas) volume (TWh)	Gas in storage (TWh)	Filling level of storage (%)
Austria	96.9	66.9	69
Belgium	7.6	3.7	49
Bulgaria	5.8	4.5	78
Croatia	4.8	3.5	73
Czech Republic (*)	44.2	24.9	56
Denmark	9.8	7.3	74
France	133.6	50.2	38
Germany	250.2	168.0	67
Hungary	69.7	32.3	46
Italy	193.4	127.3	66
Latvia	22.6	9.1	40
Netherlands	142.4	87.3	61
Poland	37.5	19.1	51
Portugal	4.0	3.8	96
Romania	33.9	15.9	47
Slovakia	37.1	23.3	63
Spain	34.1	30.7	90
Sweden	0.1	0.1	95
EU	1127.9	677.8	60

(*) The filling data for Czechia again do not take into consideration that the Dolní Bojanovice UGS is connected only to Slovak gas grid. Pursuant to Article 6(a) of Regulation (EU) 2017/1938, the filling targets and filling trajectories only apply to storages directly interconnected to a market area in their territory.

³⁵ Source: AGSI+ platform, 1.5.2023 data, platform accessed on 3.5.2023.
<https://agsi.gie.eu/>

Annex II: EU Storage filling levels on 1st May 2023 vs EU Regulation filling targets for 1st May 2023



Storage filling data on 1 May 2023 based on REMIT data; storage targets based on intermediate targets for 1.5.2023, as per Annex to the Commission Implementing Regulation (EU) 2022/2301 of 23 November 2022.

Annex III: Major LNG regasification and cross-border projects (commissioned since March 2022 or to be commissioned by the end of 2023)

-projects recently commissioned from March 2022 to April 2023

Type (LNG,pipe)	Name		Capacity (in bcmy)	Commissioned
LNG	EemsEnergyTerminal	NL	8	12.2022
LNG	Brunsbüttel FSRU	DE	3.5	01. 2023
LNG	Wilhelmshaven FSRU	DE	7.5	12.2022
LNG	Paldiski FSRU	EE,FI	2.5	1.11.2022
Pipeline	Gas interconnection between Poland and Lithuania (GIPL)	PL, LT	2 PL->LT , 1.9 LT-PL (during the ramp-up)	1.5.2022
Pipeline	Poland-Slovakia Gas Pipeline	PL, SK	4.7 PL->SK, 5.7 SK->PL	9.2022
Pipeline	Interconnector between Greece and Bulgaria (IGB)	GR, BG	3 GR->BG	1.10.2022

Pipeline	Baltic Pipe Project	PL, DK, NO	10 NO-> DK, PL, 3 PL- DK	1.10.2022
Pipeline	Romania-Hungary	RO, HU	additional 0.7 RO- >HU	1.10.2022

-projects to be commissioned the latest by end 2023

Type (LNG,pipe)	Name	MS	Capacity (in bcm/y)	Expected date commissioning
LNG	Lubmin	DE	4.5	end 2023
LNG	Cyprus LNG Terminal	CY	2	10.2023
LNG	El Musel	ES	0.94	07.2023
LNG	Alexandroupolis LNG Terminal	GR	5.5	12.2023