

Special report

## Security of the supply of gas in the EU

EU's framework helped member states respond to the crisis but impact of some crisis-response measures cannot be demonstrated



EUROPEAN  
COURT  
OF AUDITORS

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# Executive summary

**I** The International Energy Agency defines energy security as “the uninterrupted availability of energy sources at an affordable price”. Gas security of supply in the EU is a shared undertaking between gas companies, member states and the Commission. Given that the EU imports over 80 % of its natural gas, gas security of supply is crucial to its wellbeing and prosperity. The rapid phase-out of gas imports from Russia, which represented 45 % of all EU gas imports in the last year before Russia’s invasion of Ukraine (2021), created a supply crisis that triggered an affordability crisis.

**II** This report examines whether the EU’s policy framework and action in support of gas security of supply have been effective. In it we look at the EU’s pre-crisis framework as well as at the EU’s responses to the crisis. We chose this topic because of the EU’s very high dependence on imported gas and the unprecedented nature of the security of supply challenge it has faced since early 2022. Our findings can contribute both to the further development of the EU’s gas security of supply framework as it pursues its transition away from Russian gas, and to its efforts to achieve climate neutrality by 2050.

**III** Our overall finding is that, while the EU’s framework addressed the secure supply of gas, albeit unequally, the achievement of crisis-response objectives often cannot be demonstrated. We found that some long-standing EU actions played a part in securing the supply of natural gas, notably during the crisis; and encouraged cooperation among member states. However, the EU’s security of supply architecture falls short on some of its key deliverables, and the EU has only recently started to develop an affordability framework for gas security of supply. The impact of the measures taken in response to Russia’s weaponisation of gas is not always apparent, and the EU’s increased reliance on liquefied natural gas and the need to decarbonise some of the EU’s gas consumption present new challenges. By the end of 2023, the EU had successfully diversified away from Russian gas and weathered the affordability crisis. Prices stabilised at an average of approximately €45/MWh in 2023, double pre-crisis levels.

**IV** Regulation 2017/1938 on gas security of supply aims to increase regional cooperation and solidarity among member states. The Regulation requires individual member states to report on risk prevention and response every four years. In the 2019 reporting round, we found that 18 member states did not complete the reporting process for preventive and emergency plans, while two submitted nothing at all. In parallel, groups of member states are required to produce regional risk assessments.

The Commission found all the regional risk assessments done by groups of member states in 2019 to be incomplete. It has acknowledged the need to reform and improve reporting processes, while a large majority of member states would like them to be simplified.

**V** We found the EU's system for selecting the most critical gas infrastructure projects ("projects of common interest") to be complex, involving three separate assessments, many steps and multiple stakeholders. We also found project outcomes to be unclear, making it difficult to assess the implementation rate of PCIs and the added value of a project being a PCI.

**VI** In response to the gas crisis, the EU adopted a number of measures to improve gas storage, reduce and aggregate demand and avoid price spikes. We found that some measures helped security of supply by supporting demand reduction or ensuring sufficiently filled gas storage. The impact of other crisis-response measures (the gas price cap, demand aggregation and coordination of international outreach) cannot be demonstrated.

**VII** Based on our findings, we recommend that the Commission:

- complete the EU's gas affordability framework;
- optimise the process of member state reporting on gas security of supply and revise the structure of regional cooperation;
- improve transparency of the implementation of projects of common interest.

# Introduction

## Long and short-term challenges to security of gas supply in the EU

**01** For this report we have used the International Energy Agency's (IEA) definition of energy security in its approach to gas security of supply (SoS): "the uninterrupted availability of energy sources at an affordable price"<sup>1</sup>. The IEA distinguishes between long and short-term energy security. The former deals with timely investments to ensure energy supply in line with economic development and environmental needs, while the latter focuses on energy systems' ability to react to supply shocks. The climate dimension of natural gas (hereafter referred to as "gas") SoS is becoming more important as the EU aims to phase out fossil fuels or abate their emissions through carbon capture use and storage (CCUS) to achieve climate neutrality by 2050<sup>2</sup>.

**02** In 2021, the last year before Russia's invasion of Ukraine and the resulting gas crisis, the EU consumed 421 billion cubic meters (bcm) of gas, accounting for 24 % of our energy, though there were wide variations across the EU (see *Figure 1*). In the same year, 21 % of the EU's electricity and 38 % of its heat (household and industrial) was produced from gas<sup>3</sup>. Even considering the expected reduction in gas consumption driven by the EU's climate and energy objectives for 2030, the EU will still consume approximately 300 bcm of gas per year<sup>4</sup>. Given that it imported 83 % of its gas in 2021, up from 73 % in 2014, gas security of supply is crucial to the EU's wellbeing and prosperity.

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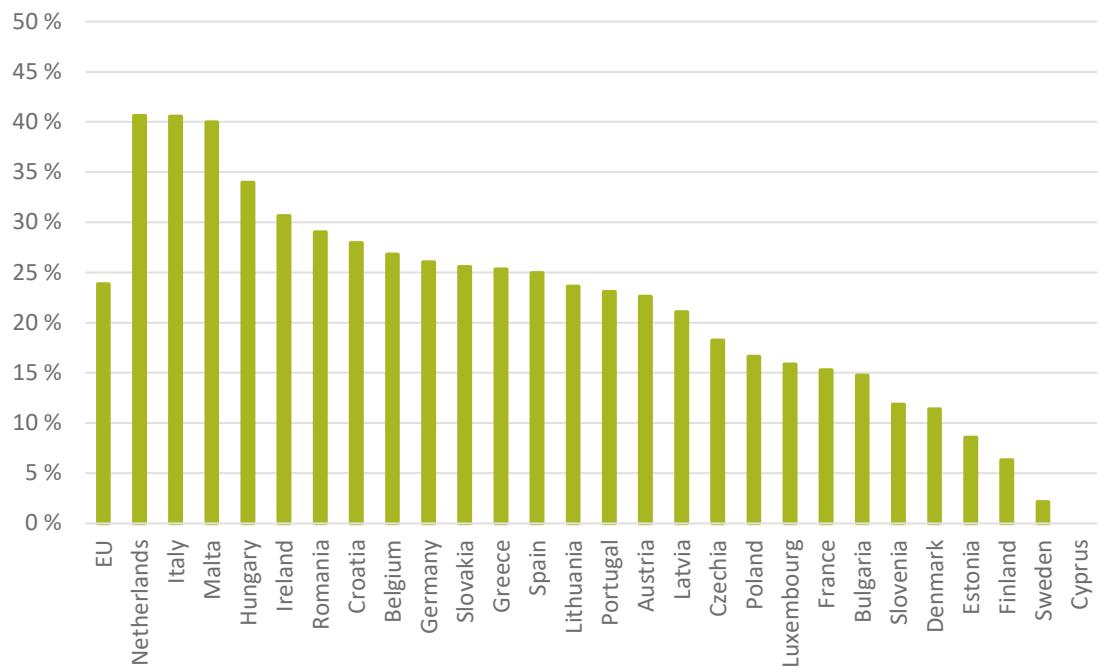
<sup>1</sup> Our work on energy security, IEA.

<sup>2</sup> Commission Communication 'Towards an ambitious Industrial Carbon Management for the EU', COM(2024) 62.

<sup>3</sup> Electricity and heat statistics, Eurostat.

<sup>4</sup> Commission Staff Working Document 'Implementing the RePower EU action plan: investment needs, hydrogen accelerator and achieving the bio-methane targets', SWD(2022) 230.

**Figure 1 – Share of natural gas in primary energy demand, 2021 (in %)**



Note: Cyprus does not use gas.

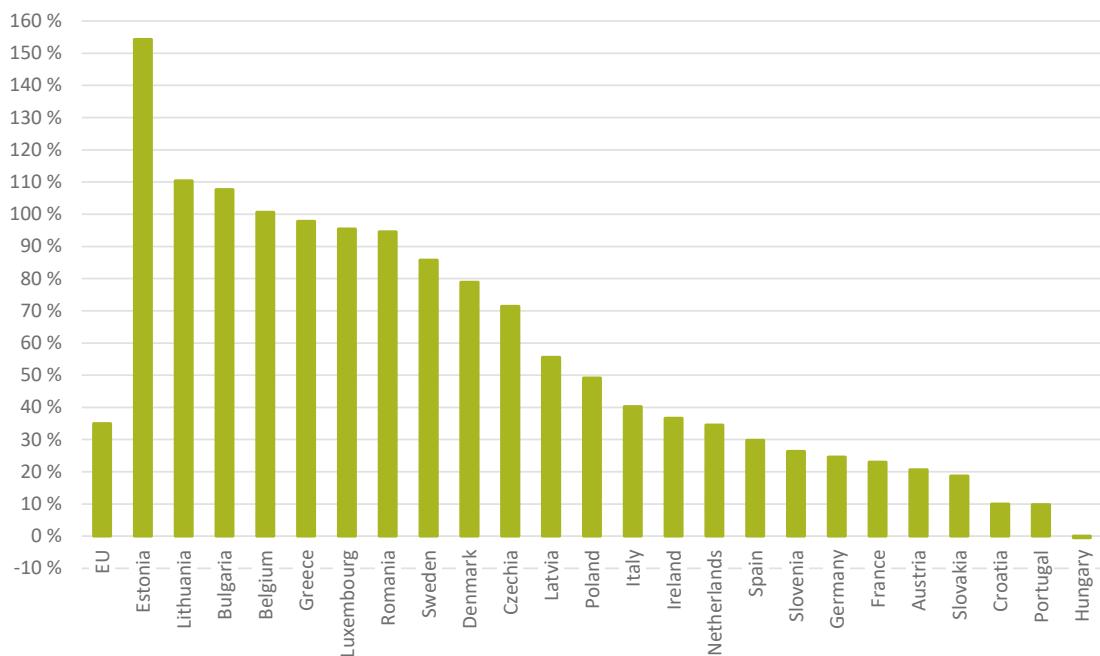
Source: ECA, based on [Eurostat](#).

**03** The rapid phase-out of gas imports from Russia, which represented 45 % of all EU gas imports in 2021, created a supply crisis that triggered an affordability crisis (see [Figure 2](#)). In August 2022, wholesale gas prices reached a peak of €339 per megawatt-hour (MWh), compared to €51 per MWh in August 2021. As electricity prices move in tandem with gas prices in Europe, this affected the cost of electricity as well. For example, the wholesale price of 1 MWh of electricity reached €543 in Italy in August 2022 (compared to €112 per MWh in August 2021)<sup>5</sup>. Member states started subsidising gas and electricity prices in response to the crisis in 2022 to reduce the impact on households and businesses. The Commission estimates that the total cost of energy subsidies in the EU in 2022 alone was [€390 billion](#).

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<sup>5</sup> Average monthly electricity wholesale prices in selected countries in the EU, Statista.

**Figure 2 – Changes in average natural gas prices for households, January-June 2022 compared with same period in 2021**



Source: ECA, based on Eurostat.

## The EU's legal and financial framework for gas security of supply

**04** Ensuring energy security of supply is one of the objectives of the Treaty on the Functioning of the European Union (TFEU). However, it does not impinge on member states' right to choose their energy mix and supply sources<sup>6</sup>. The EU's legal framework on gas security of supply, first adopted in 2010 after disruptions to gas supplies from Russia in 2006 and 2009, was revised in 2017 following Russia's illegal annexation of Crimea in 2014. It specifies that gas security of supply is a shared undertaking between gas companies, member states and the Commission.

**05** Regulation 2017/1938 on gas security of supply (hereafter the “gas SoS Regulation”) aims to improve the EU’s preparedness for and resilience to supply disruptions. Its main objectives are to increase regional cooperation and solidarity among member states, support the improvement of cross-border gas infrastructure, and identify and mitigate risks by means of periodic simulations of gas supply and infrastructure disruption scenarios at EU, regional and member state level. The Regulation sets the basic parameters for regional cooperation by defining “risk groups”

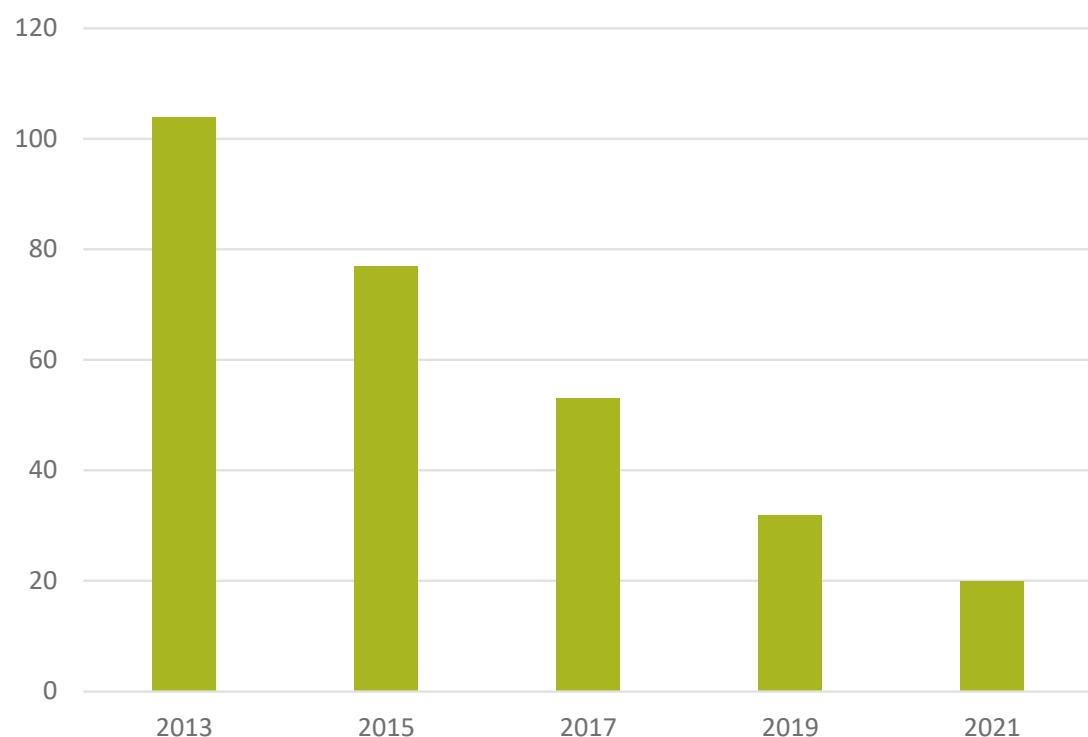
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<sup>6</sup> Article 194 of TFEU.

of member states according to the EU's main gas supply routes. These groups work together to define, assess and, where possible, mitigate SoS gas risks. These efforts are also intended to strengthen the internal market for gas, which the EU considers "the best guarantee of the security of gas supply across the Union"<sup>7</sup>.

**06** The Commission established a procedure for identifying and supporting "projects of common interest" (PCIs) – which includes gas network projects with the greatest potential cross-border benefit to the EU's internal market for gas. Such benefits can include improved security of supply. A new list of PCIs was adopted every two years between 2013 and 2021 (see *Figure 3*). Listed projects were supposed to enjoy benefits such as faster planning and permitting and streamlined environmental assessment processes to speed up their construction. They were also eligible to apply for funding from the Connecting Europe Facility (CEF), either for studies or for construction<sup>8</sup>.

**Figure 3 – Number of gas PCI projects in the five PCI lists**



Source: European Union Agency for the Cooperation of Energy Regulators (ACER).

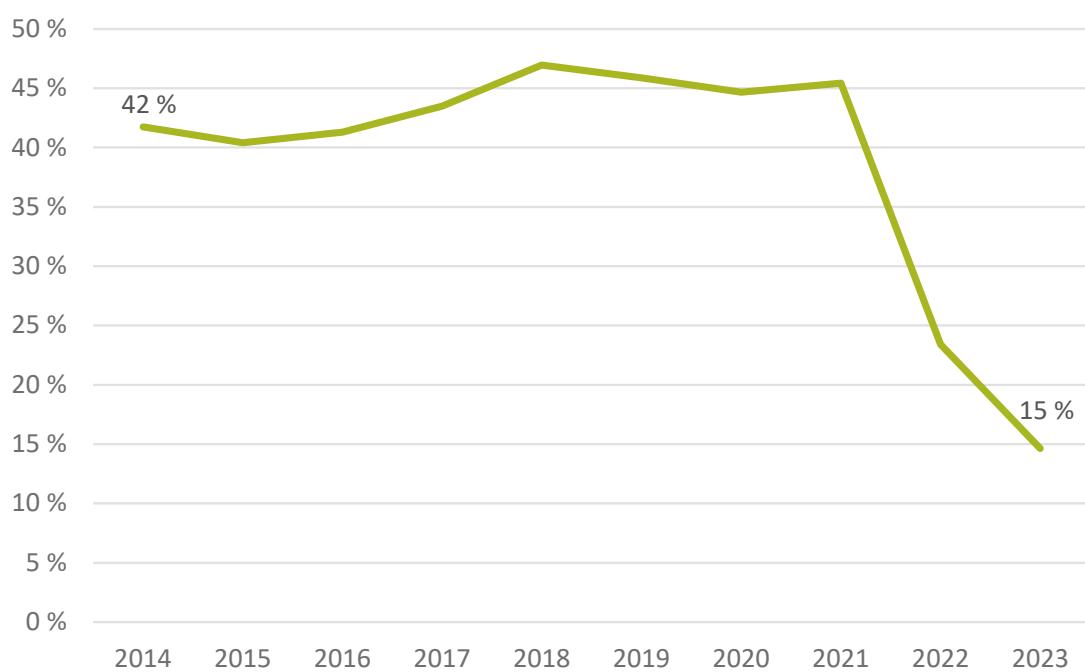
<sup>7</sup> Regulation (EU) 2017/1938.

<sup>8</sup> Regulation (EU) 347/2013 on guidelines for trans-European energy infrastructure.

**07** A total of €1.6 billion in CEF funding was awarded to 40 gas PCIs in the 2014-2020 period, 18 of which received funding for construction (see [Annex I](#)). In keeping with the EU's focus on developing carbon-neutral energy, there will be only two further gas PCIs (connecting Malta and Cyprus to the EU's gas grid) though the PCI process is being used for the selection of hydrogen PCIs.

**08** The gas SoS Regulation seeks to reduce the risks linked to supply disruption by requiring each member state to have plans in place to supply protected customers (households and essential social services) for 30 days during average winter conditions in case supply from the single largest supplier is cut off. Nonetheless, the Council recognised that the risk framework the Regulation created could not foresee or account for an event of the scale and magnitude of the crisis triggered by Russia's invasion of Ukraine<sup>9</sup>. Even member states that chose to include the possibility of a total cut-off of Russian gas in their 2018 national risk assessments (NRA) considered it highly improbable. Moreover, the plentiful and competitive supply of gas from one source weakens the economic rationale for investing in diversifying supply. The enduring importance of Russian gas to the EU is illustrated in [Figure 4](#).

**Figure 4 – Share of Russian natural gas in EU gas imports 2014-2022**



Source: ECA, based on [Eurostat](#).

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<sup>9</sup> Regulation (EU) 2022/1032 on gas storage.

## EU gas crisis response

**09** The gas SoS Regulation allows member states to activate three different crisis levels: “early warning” (an event is likely to happen), “alert” (disruption has occurred but the market can cope) and “emergency” (gas supply is insufficient and non-market-based measures are needed). The Regulation requires each member state to produce an emergency plan setting out the measures to be taken at each crisis level. Eleven member states declared an “early warning” crisis level between February and July 2022, triggering increased monitoring, and one of them declared an “alert”.

**10** These declarations and the attendant measures taken fall within the scope of the IEA’s definition of short-term energy security, which focuses on resilience in the face of crisis. They were accompanied by intensified cooperation between gas transmission system operators, national authorities and the Commission through dedicated fora set up by the gas SoS Regulation before the crisis. That cooperation eased the transition, in difficult circumstances, to new patterns of cross-border gas flows created by the crisis (notably west to east instead of east to west).

**11** The TFEU allows the Council to adopt regulations, without consulting the European Parliament, in response to difficulties in the supply of certain products, notably energy products<sup>10</sup>. The EU amended the gas SoS Regulation and used Article 122 TFEU to rapidly adopt a number of temporary measures to respond to the challenge that the phase out of Russian gas represents for the whole of the Union (see *Figure 5*).

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<sup>10</sup> Article 122 of TFEU.

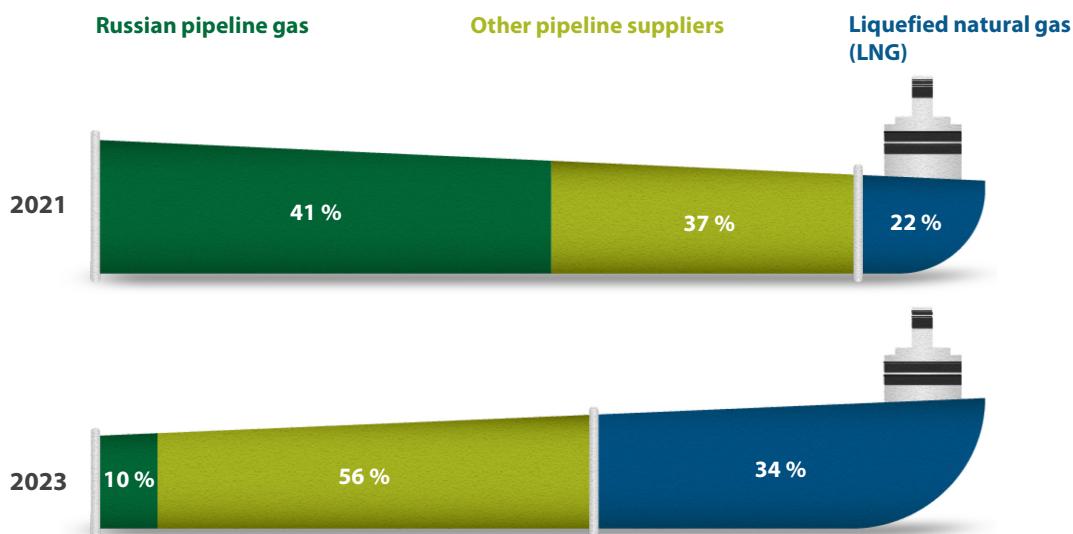
**Figure 5 – Main temporary EU security-of-supply measures in response to the gas crisis**



Source: ECA.

**12** By the end of 2023, the EU had successfully diversified away from Russian gas (see *Figure 6*) while prices stabilised, averaging approximately €45/MWh in 2023 (double pre-crisis levels) and reached pre-crisis levels in the first quarter of 2024. As the EU adjusts to the new SoS landscape created by the crisis, it must face new challenges linked to increased dependence on liquefied natural gas (LNG) and the need for CCUS decarbonisation measures.

**Figure 6 – EU dependence on Russian pipeline gas: 2021 vs 2023**



Source: ECA, based on Eurostat data, image based on European Commission visual.

# Audit scope and approach

**13** This report examines the EU's policy framework and measures in support of gas security of supply in the EU. We chose this topic because of the importance of gas in the EU's energy mix and the EU's very high dependence on imported gas. The gas crisis triggered by Russia's invasion of Ukraine demonstrated the importance of ensuring security of supply. In this context, we examined whether the EU:

- (a) had set up an effective gas security of supply framework, and
- (b) achieved the stated objectives of its crisis-response measures.

**14** We examined EU measures since 2014, the year of Russia's illegal annexation of Crimea that triggered the revision of the gas SoS Regulation, to November 2023. Our last audit report on security of supply was published in [2015](#).

**15** We reviewed the work of the Commission (DG ENER) and interviewed relevant authorities in Germany, Italy and Poland. These three member states together account for approximately [48 %](#) of the EU's gas consumption and face a range of SoS challenges due to their geographic situation and sourcing of gas supplies.

**16** We obtained evidence from the following sources:

- documentary review of EU regulations, Commission guidelines and reporting activities, statistics and evaluations;
- documentary review and analysis of all 27 member states' reporting under Regulation 2017/1938, including the common risk assessments (CRAs) produced by regional risk groups as well as national energy and climate plans (NECPs);
- interviews with Commission and member state authorities;
- a systems analysis of the procedure for selecting projects of common interest (individual projects were not audited);
- a survey of the member states' representatives in the Gas Coordination Group, an advisory group coordinating security of supply measures.

**17** The results of this audit are relevant to the ongoing development of the EU's gas security of supply policy, notably in the context of a potential review of Regulation 2017/1938.

# Observations

## The EU's framework addressed all aspects of gas security of supply, albeit unequally

**18** The Commission has no official definition of security of supply. The IEA definition of SoS is based on ensuring availability and affordability. Long-term security of supply, according to the IEA, is focused on timely investment to ensure energy supply in line with economic development and environmental needs. We assessed whether the EU's framework for gas SoS achieves this objective while also enabling the cooperation and solidarity that are guiding principles of its gas SoS policy. We would expect to find that:

- the EU's gas SoS framework explicitly addresses availability and affordability;
- the deliverables required by the gas SoS Regulation add value to national and EU gas SoS;
- the gas PCI selection process gave due consideration, and was beneficial to, SoS;
- there had been progress on CCUS in the EU.

## The EU is still developing an affordability framework to complement its availability framework

**19** The Commission has included affordability as a key objective of its approach to security of supply [for more than 20 years](#), and has frequently stressed the importance of affordable energy in its [state of the energy union reports](#) since 2015. Availability and affordability of gas are linked in that measures to improve availability (diversification, market integration) can have a positive effect on affordability. This has been the driving logic of the EU's approach to SoS – and it has had positive effects, including during the crisis caused by the rapid phase-out of Russian gas.

**20** Gas was able to flow from west to east (instead of east to west as was usual) thanks to mandatory adaptations to most cross-border pipelines in the EU to allow bi-directional flow<sup>11</sup>. EU-funded pipelines also connected member states that were previously cut off from the EU gas market or reduced their dependence on a single supplier (see [Annex I](#)). These measures were taken because the Commission and

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<sup>11</sup> Article 5 Regulation (EU) 2017/1938.

member states understood the risks, including to affordability, posed by dependence on a single supplier. Two of the Commission's three SoS indicators focus on this aspect: one measures supplier concentration and the other overall gas import dependency<sup>12</sup>.

**21** The Commission modelled the effects of a cut-off of Russian gas in 2014 and correctly predicted that “the need to replace volumes will be accompanied by price increases triggering the import of significant additional volumes of LNG”. The Commission never modelled or estimated the extent of such price increases or their impact on consumers and competitiveness. The gas SoS Regulation requires member states to consider price volatility as a risk factor where applicable. This was done in 11 of the 2018 NRAs. No consideration was given to the resulting affordability challenges, nor was this required by the gas SoS Regulation. Similarly, only one out of 12 CRAs in 2018 looked at the socio-economic impact of the risk scenarios member states had identified, despite this being required in the gas SoS Regulation. In 2021, the Commission noted the link between shortage of gas supplies from Russia and increased prices, pointing to the effect this was having on “the energy poor and the low and lower middle-income households”. This statement points to an understanding by the Commission of the difference between those in energy poverty and those for whom affordability is challenging.

**22** Prior to the crisis, affordability was conceived of and approached mainly in terms of energy poverty at both EU and member state level. The 2018 regulation mandating NECPs requires member states to assess the number of households in energy poverty and if necessary draw up a plan to reduce it<sup>13</sup>. 21 out of 27 of the 2019 NECPs did not include a definition of energy poverty. The Commission's most frequent criticism of member states' approach to energy poverty was that they lacked objectives or targets to assess progress in tackling it. Our analysis of the 17 updated NECPs submitted to the Commission in 2023 showed that 11 member states now have their own definition of energy poverty and/or indicators with which to measure it. Affordability is frequently mentioned as an objective in both the initial 2019 NECPs and the 2023 updates, but it is never defined or measured. The approach to energy affordability and poverty in response to the crisis varies across the EU<sup>14</sup>. We found examples of such differences in the three member states where we held interviews (see *Figure 7*).

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<sup>12</sup> Energy Union indicators webtool scoreboard, European Commission (6 November 2023).

<sup>13</sup> Article 3 of Regulation (EU) 2018/1999.

<sup>14</sup> National fiscal policy responses to the energy crisis, Bruegel (22 February 2024).

**Figure 7 – Examples of different responses to the challenge of household gas affordability and energy poverty in Germany, Italy and Poland**

	Germany	Poland	Italy
Universal price cap for households	<b>Yes</b> €0.12/KWh (for 80 % of households' 2022 consumption) in 2023	<b>Yes</b> PLN 200.17 (€46.30)/MWh in 2022 and 2023	<b>No</b>
Cost of price cap for governments	€9.7 billion (relief on gas prices for households and SMEs) for 2023	PLN 30 billion/ €6.87 billion across 2022 and 2023.	N/A
Targeted household support	<b>Yes</b> In 2022 one-off €230-270 heating cash support for low-income groups (2.1m citizens and costing ~€380 million), repeated in 2023	<b>Yes</b> Low-income households received VAT refunds on supplies of fuel gas in 2023. The support cost around PLN 24 million (€5.5 million).	<b>Yes</b> Households with an income below €15 000 receive an automatic discount on their bill equivalent to 15 % of yearly spending on gas for a typical family.  In 2023, 14 % of household consumers benefitted from this discount.
Official member state definition of energy poverty	<b>No</b>	<b>Yes</b>	<b>No</b>
Official information on number of households in energy poverty	No official government figure	10.5 % (2021)	No official government figure

Source: ECA.

**23** While the Commission has repeatedly underlined the importance of energy affordability, it had not defined or measured it, or created a framework to explicitly address it, until the crisis. The 2020 Commission communication on energy prices and costs in the EU states that wholesale gas prices fluctuated between €10 and €40/MWh in 2015-2019, but does not comment on the affordability of this price range<sup>15</sup>. In March 2023 the Commission followed market expectations of gas prices at or below €50/MWh for the year ahead and warned that this price level would make demand reduction difficult to achieve<sup>16</sup>. This suggests €50/MWh could be a threshold at which household and industry behavior changes. The Commission did not indicate this to be an affordability threshold.

**24** In 2020, the Commission stressed the EU's reduced exposure “[to the volatile international energy commodity markets](#)”, pointing out that gas prices were lower in Europe than in G20 countries that rely on LNG imports (China, South Korea and Japan). The situation has now changed with increased EU dependence on LNG, a globally traded product. This increases the risk of structurally higher prices and increased volatility in a tight market. This new SoS landscape requires that the EU give greater weight to the issue of affordability, in tandem with its detailed work on availability, when analysing gas SoS and structuring its response.

**25** The crisis has precipitated the development of a range of policies that together provide a framework for a more explicit approach to energy (and by extension gas) affordability. These are:

- the definition of energy poverty in the Energy Efficiency Directive (2023/1791) (see [Box 1](#));
- the definition of a threshold for member states to subsidise household and SME energy bills in the proposal for [regulations reforming the EU's electricity market design](#);
- the €180/MWh gas price cap (for month-ahead prices on the Dutch Title Transfer Facility (TTF)).

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<sup>15</sup> COM(2020) 951.

<sup>16</sup> Commission analysis of coordinated demand reduction measures for gas, [SWD\(2023\) 63](#).

### **Box 1 – EU definition of energy poverty**

'Energy poverty' means a household's lack of access to essential energy services, where such services provide basic levels and decent standards of living and health, including adequate heating, hot water, cooling, lighting, and energy to power appliances, in the relevant national context, existing national social policy and other relevant national policies, caused by a combination of factors, including at least non-affordability, insufficient disposable income, high energy expenditure and poor energy efficiency of homes.

Source: [Energy Efficiency Directive \(2023/1791\)](#).

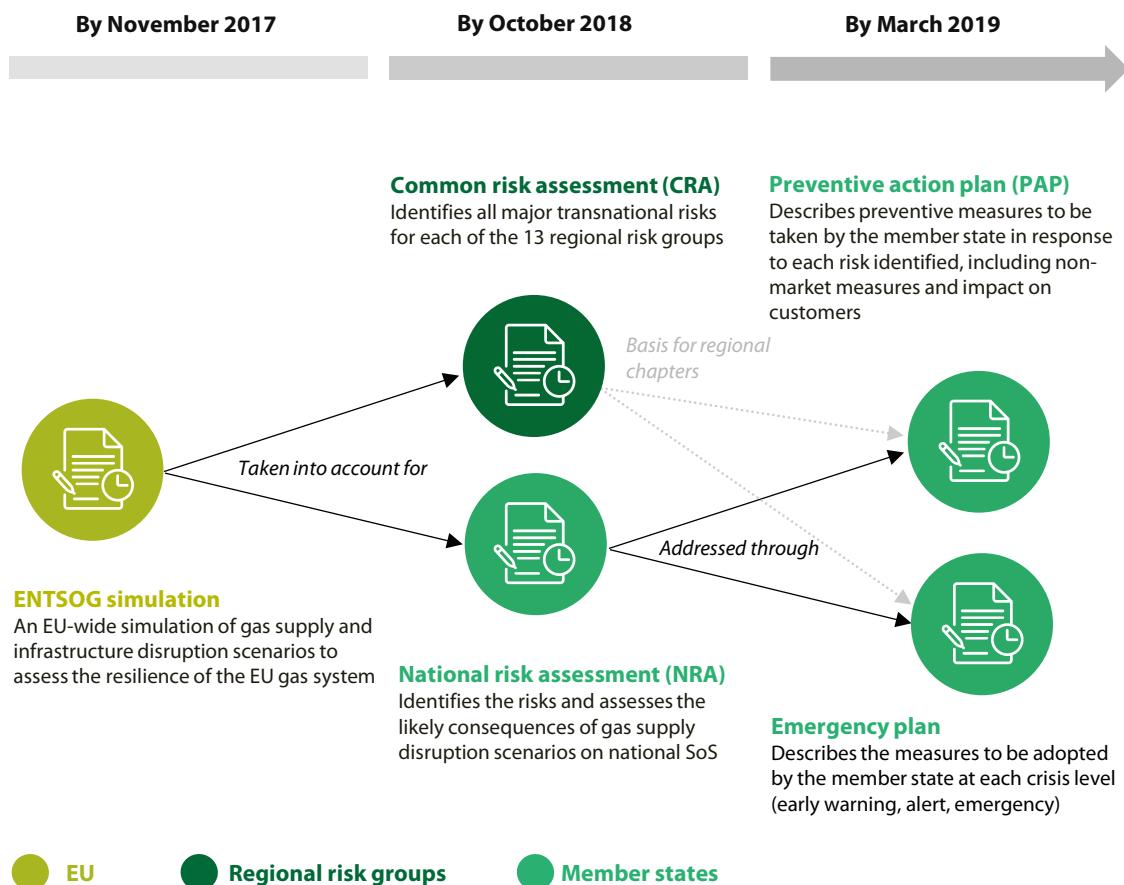
**26** These elements create a three-tiered affordability framework, each with varying levels of intervention. Energy poverty is the most acute affordability challenge, affecting 9,3 % of the EU's population in 2022, and has therefore been the focus of most EU and member state actions linked to affordability – including, in 2023, the first ever EU definition of the term. By also setting a threshold for member states to subsidise household electricity bills, the EU is in effect establishing a de facto affordability threshold. Finally, the price cap identifies the wholesale price of gas beyond which the EU considers the market to be setting unaffordable or unsustainable prices. This policy framework still lacks explicit consideration and analysis of affordability drivers and challenges in certain key EU deliverables (EU-level SoS analysis, NECPs and member state risk assessments).

**The SoS architecture set up by Regulation 2017/1938 encouraged cooperation among member states, but fell short on some of its key deliverables**

**Member state reporting process for preventive and emergency plans is inefficient and of questionable added value**

**27** The gas SoS Regulation mandates the European Network of Transmission System Operators for Gas (ENTSOG) to carry out an EU-wide simulation of gas supply and infrastructure disruption scenarios every four years. Member states take the results of this simulation into account when drafting the main deliverables of the EU's gas SoS architecture (see [Figure 8](#)): national and common risk assessments, which feed into preventive action plans (PAPs) and emergency plans. Taken together, these deliverables are intended to both guide and structure each member state's actions ahead of, and in response to, an SoS crisis.

**Figure 8 – First cycle of deliverables under the 2017 gas security of supply Regulation**



Source: ECA, based on Regulation 2017/1938.

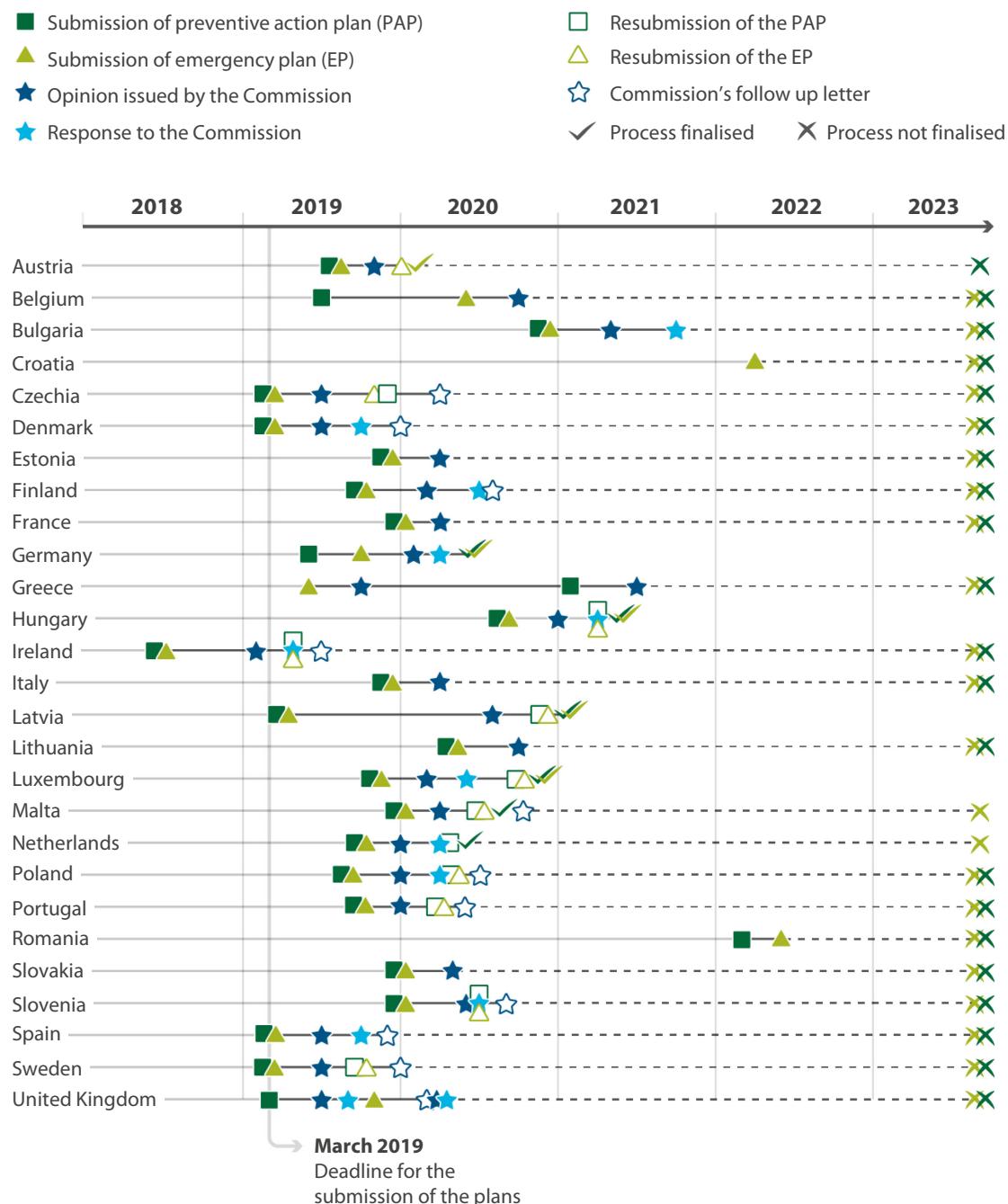
**28** The Commission assesses member states' PAPs and emergency plans against the requirements set in the gas SoS Regulation and issues an opinion to each member state with specific points and recommendations in relation to those requirements. Member states must take these points and recommendations into account in their final plans.

**29** Member states had to submit their plans to the Commission in 2019, and 25 out of 28 (including the UK) complied. Croatia and Romania did not submit any plan at that time, leading to infringement proceedings against them, while Cyprus is exempt because it does not use gas. The Commission requested amendments from each of the 25 member states that submitted plans, as these did not fully comply with the requirements in the gas SoS Regulation (see *Figure 9*). Six member states did not respond to the Commission's opinion, and the Commission did not initiate further communication in these cases. The remaining 19 member states either responded to the Commission's opinion in a letter explaining the reasons for not updating their

plans, or resubmitted an update of at least one of the plans. Eleven member states were then asked to make further updates, but none did so.

**30** In total, we found that 18 member states had finalised neither their PAPs nor their emergency plan update processes, while two had failed to submit anything within this exercise (see *Figure 9*). In addition, we found that the Commission published previous versions of the plans of three member states which had since submitted updates. The fact that the process was often not completed despite numerous exchanges between the member states and the Commission suggests that the process itself was cumbersome and inefficient. It also raises questions as to the added value of these deliverables and their usefulness in advancing gas SoS for member states and the EU as a whole.

**Figure 9 – Timeline of the submission and Commission review of the first cycle of Preventive and Emergency Plans (2019)**



Source: ECA, based on documents provided by the Commission.

**31** The gas SoS Regulation requires the cycle of plan submission and Commission assessment to be repeated every four years. New versions were due in March 2023. The majority of member states were late in submitting their PAPs and emergency plans. The Commission launched 26 [EU pilots](#) (pre-infringement procedures) in June 2023 with a view to receiving the missing plans. By 15 January 2024, it had received 23 PAPs and 25 emergency plans.

**32** While the 2023 update process coincided with Russia's ongoing war on Ukraine, these delays raise further questions as to how best to achieve the aim of these deliverables without undue administrative burden. The Commission has acknowledged the need to discuss reforming the reporting process with the member states so as to make it less burdensome and ensure higher-quality outputs<sup>17</sup>.

#### **Regional risk groups foster cooperation but are not delivering as expected**

**33** The structure of regional cooperation is set in the gas SoS Regulation, which defines 13 "gas supply risk groups" according to supply corridors into the EU. Member states work together in these configurations to develop CRAs for all relevant risk factors (natural disasters, technological, social, political, etc.). Each risk group is led by one volunteer member state. In 2018 the Commission supported four risk groups (Belarus, Libya, Trans-Balkan and Ukraine) by modelling a range of risk scenarios for them. The existence of risk groups itself fosters regional cooperation, which is the "guiding principle" of the gas SoS Regulation.

**34** We found that both inputs and outputs varied widely across the 13 risk groups. Several member states did not provide the data needed for the risk analysis. The first CRAs were to be produced by 1 October 2018. Just one risk group submitted its CRA on time, while two (Southern Gas Corridor and Eastern Mediterranean) were not set up as the infrastructure did not yet exist. The Commission played a supporting role in the development of CRAs and assessed them against the following criteria: infrastructure standard, supply standard, risk assessment and analysis, regional cooperation. Based on this assessment, it considered all CRAs to be incomplete in many respects. We found no evidence that the Commission's assessment of the CRAs was taken into account by the risk groups.

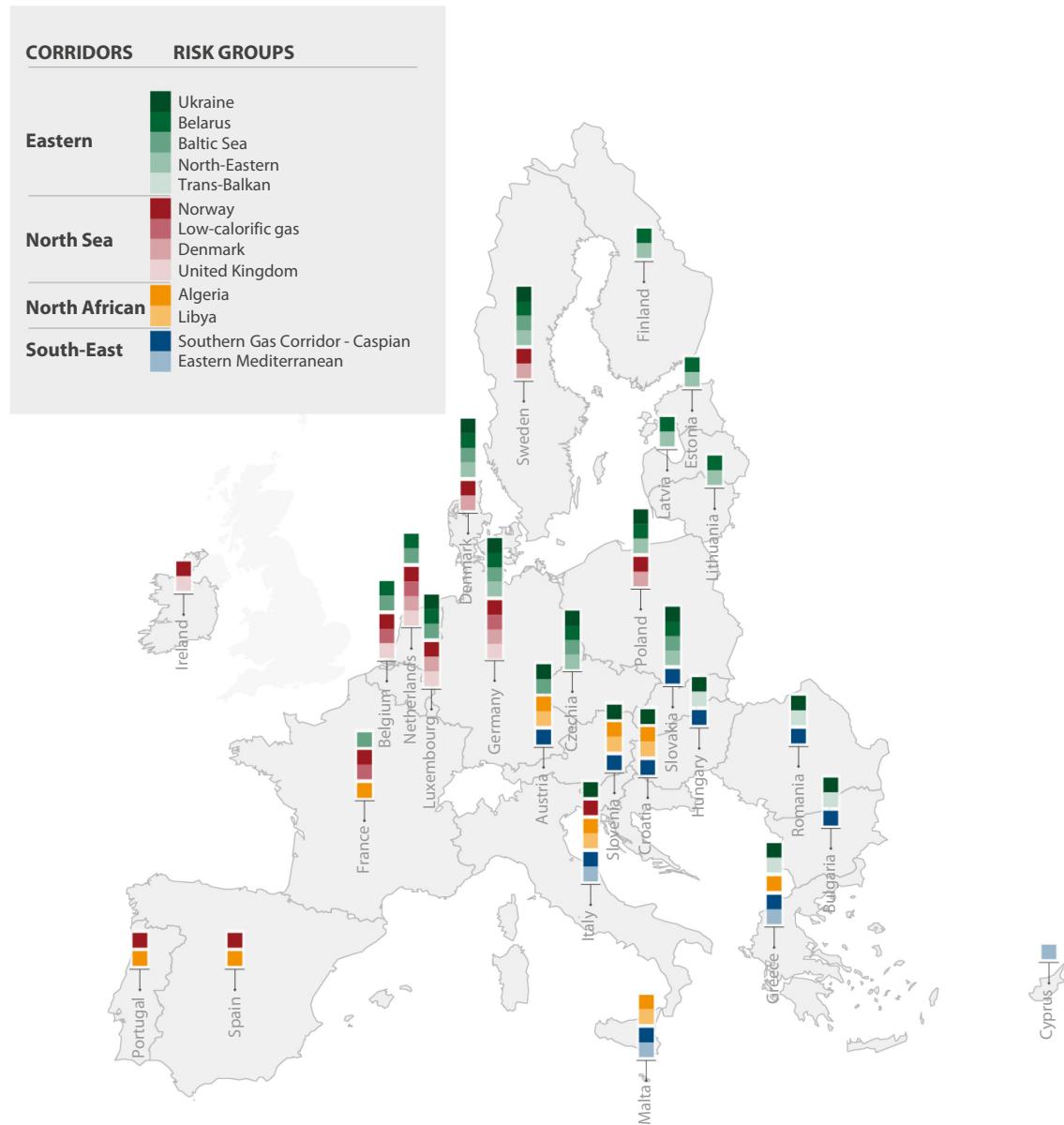
**35** Contributing to developing CRAs and leading risk groups requires a lot of effort on the part of national authorities. A further issue is that most member states are participants in multiple risk groups, sometimes as many as six or eight (see [Figure 10](#)). The administrative capacity this work requires of the member states should also be considered in the context of the other gas SoS Regulation deliverables (see paragraphs [27-32](#)). The Commission has identified the lack of administrative capacity as a challenge to the coordination of risk groups and the delivery of risk assessments<sup>18</sup>.

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<sup>17</sup> Commission assessment of the Gas Security of Supply Regulation, [SWD\(2023\) 323](#).

<sup>18</sup> [Ibid.](#)

**Figure 10 – Composition of regional risk groups**



Source: ECA, based on Regulation 2017/1938.

**36** The cycle of work for CRAs is repeated every four years. New documents were due on 1 October 2022. All risk groups submitted a CRA by the end of 2023 except North-Eastern (no member state volunteered to lead the group) and Eastern Mediterranean (no infrastructure yet to warrant the group's activation). The Commission provided support to nine of the 13 risk groups, as two did not request support and two others did not yet have working infrastructure in place. We found the updated CRAs effectively to be a Commission-driven modelling exercise focusing on the total cut-off of Russian gas.

**37** The gas SoS Regulation requires PAPs and emergency plans to include sections on the “regional dimension” of SoS, notably information on common measures and cooperation mechanisms (see paragraphs 27-32). These aspects should be agreed within each risk group to ensure the information presented in the regional chapters of the member states’ national plans is consistent. Our review of the 2019 PAPs and emergency plans showed that regional chapters differed significantly in quality and content from one member state and regional risk group to another, and often lacked inputs from one or more risk groups.

**38** The fact that regional risk groups did not produce the information needed for national plans raises questions about the added value of their work. The Commission has acknowledged that emergency plans in particular lacked regionally agreed measures for confronting regional crises and, more generally, a sufficient regional dimension<sup>19</sup>. The Commission has also acknowledged that ‘long-lasting disruptions could still lead to a risk of uncoordinated action by member states, threatening to endanger security of supply in neighbouring member states’<sup>20</sup>. Our analysis of member states’ deliverables showed that six member states included cutting off gas supply to a neighbour as a possible response to an emergency.

**39** These issues, combined with those specific to individual member state deliverables, raise questions as to how the regional risk groups should work in future (distribution of work, choice of risk scenarios, content and format of reporting beyond the Commission’s contribution, etc.) to capture the benefits of cooperation and regional focus more efficiently without creating an excessive reporting burden. Our survey of the member states shows that most of them (21 out of 23 respondents) would like the architecture of SoS reporting to be reviewed and simplified while also increasing the focus at EU level on practical cooperation and resilience measures.

**40** Regional risk groups also need to take account of the impact of the rapid phase-out of gas imports from Russia. Some of the eastern pipeline supply corridors have lost their relevance while LNG imports increased from 80 bcm in 2021 to 120 bcm in 2022<sup>21</sup>. Given these changed circumstances, the current configuration of risk groups based on gas pipeline routes has become obsolete in some cases. The Commission has

<sup>19</sup> Ibid.

<sup>20</sup> Commission review on the functioning of Regulation (EU) 2022/1369, COM(2023) 173.

<sup>21</sup> Infographic – Where does the EU’s gas come from?, Council of the EU (25 February 2024).

acknowledged that ‘the current regional approach to the risk groups seems no longer to be fit for purpose’<sup>22</sup>.

### **Bilateral solidarity agreements between member states remain mostly out of reach**

**41** Solidarity is a key principle underpinning EU energy policy, as stated in Articles 194 and 222 TFEU and reiterated in the gas SoS Regulation. The Regulation’s solidarity mechanism is intended to be a measure of last resort. In a severe gas emergency, when the market fails to supply enough gas to meet the demand of a member state’s solidarity-protected customers (such as households and essential social services), neighbouring member states should provide gas on request to meet that demand. Under the Regulation, the details of solidarity measures (including technical, legal and financial arrangements) were to be concluded bilaterally between neighbouring member states by December 2018.

**42** Even if the probability of triggering formal solidarity is low, member states have been reluctant to conclude such agreements. None of the 40 agreements the Commission estimates are necessary had been concluded by December 2018. In May 2020, as none had yet been signed, the Commission [opened infringement proceedings against 25 member states](#) for failure to comply with the solidarity provisions. Eight agreements have been concluded up to January 2024. According to the Commission, the main reasons for this slow progress include technical complexity, the lack of expertise in national administrations and difficulty in reaching agreement on a fair financial compensation mechanism.

**43** In order to address the lack of progress on bilateral solidarity, especially in the context of the energy crisis, a temporary default solidarity measure was introduced for 2023 by Council Regulation 2022/2576. The measure would apply in a gas emergency between member states that do not have bilateral agreements.

**44** In December 2022, the Commission carried out a ‘dry run’ solidarity exercise with 11 member states and ENTSOG to test the framework introduced by the gas SoS Regulation and Regulation 2022/2576 for responding to a gas SoS emergency. The main focus of the chosen scenario was a complete stop to Russian gas. The exercise generally confirmed the EU’s preparedness for a gas emergency, but also outlined continuing challenges and a number of areas requiring further work. This includes the complexity of fair compensation for gas provided in response to a solidarity request, even under the temporary mechanism in Regulation 2022/2567. Based on the main

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<sup>22</sup> Commission review of the application of Regulation (EU) 2017/1938, [COM\(2023\) 572](#).

findings of the ‘dry run’ exercise, the Commission has concluded that the default solidarity arrangement should be made permanent<sup>23</sup> when the revised Directive 2009/73/EC enters into force.

### **Project of common interest selection was complex and project outcomes are unclear**

**45** There are three main stages in the process of selecting gas projects of common interest.

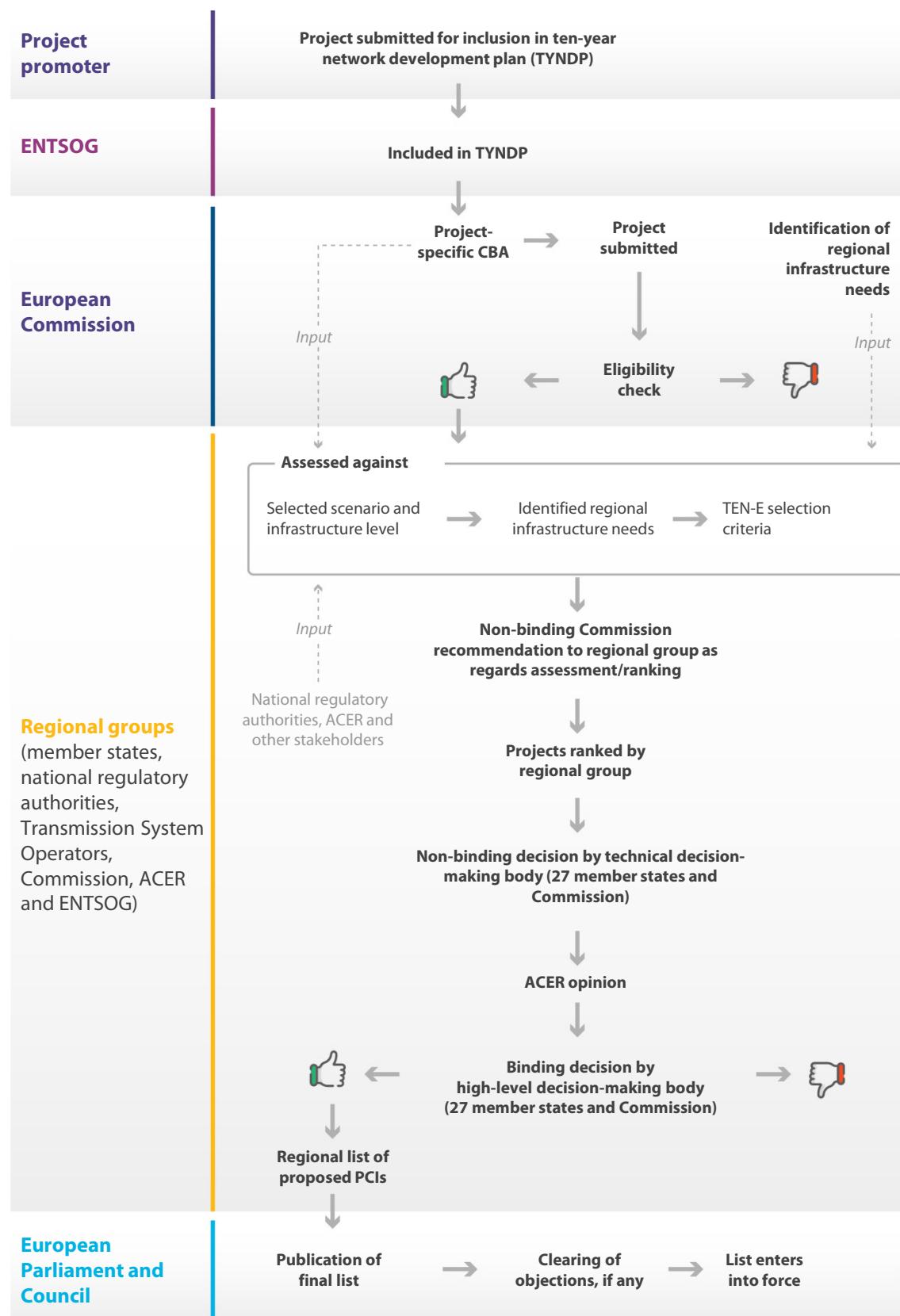
- The first stage is a cost-benefit analysis (CBA). This must be positive, and projects must also demonstrate a cross-border impact if they are to be considered further.
- The second stage is to identify regional infrastructure needs, including SoS needs, on the basis of the “infrastructure gaps” assessment in the latest ENTSOG [ten-year network development plan](#) and discussion with member states on their current gas infrastructure needs at national and regional level.
- In the third stage, the Commission assesses the relative merits of each project against a number of criteria listed in the [TEN-E Regulation](#) (e.g. market integration, security of supply, competition, sustainability). At this stage projects are awarded points in relation to the identified needs.

**46** The process results in a non-binding ranking of candidate PCIs which the Commission proposes to one of four regional groups of member states (north-south west, north-southeast, southern, and Baltic gas corridors). This is also the basis for the final list of PCIs, which is chosen by a high-level decision-making body comprising the 27 member states and the Commission that is not bound by any earlier results or rankings (see [Figure 11](#)). We found that 10 % of the projects included in the last three PCI lists were not recommended for inclusion in the Commission’s non-binding lists as its comparative analysis showed them to be less beneficial than alternative projects in the same region. Once a project is classified as a PCI, it can apply for EU funding from the CEF (see paragraph [07](#) and [Annex I](#)).

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<sup>23</sup> COM(2023) 547.

**Figure 11 – Gas PCI selection process**



Source: ECA, based on Commission.

**47** Our survey of the member states showed that many of them (16 out of 20 respondents) support the PCI selection process. However, we found a number of issues with this process, from which lessons can be learnt for the future selection of hydrogen PCIs.

**48** To speed up project delivery, PCIs were supposed to be prioritised by member states for faster approval than other gas infrastructure projects. Monitoring by the European Union Agency for the Cooperation of Energy Regulators (ACER) shows that 45 % of gas PCIs exceeded the 3.5-year target approval time<sup>24</sup> set in the TEN-E Regulation. Our survey included a question on whether member states had put in place legal and/or regulatory provisions to ensure accelerated permitting for gas PCIs. Ten out of 21 member states answered that they had not done so. PCIs are delayed in member states with and without an accelerated permitting procedure, and ACER's monitoring of PCI progress does not point to permitting issues being the main cause of delays. This suggests accelerated permitting is not sufficient in itself to ensure PCIs are delivered faster than other gas projects.

**49** The PCI selection process normally leads to the selection of individual projects with the greatest expected benefit, to the exclusion of others. This principle was departed from in 20 % of cases (57 out 291 PCIs across the five lists). An objective was first chosen (e.g. increased regional gas storage)<sup>25</sup>, and competing or potentially competing clusters of PCIs listed under the given objective. The market was then left to decide which one(s) to implement. The rationale for choosing a cluster approach for some PCIs and not others is not explained by the Commission. The cluster approach does not lead to a clear outcome (i.e. a single PCI), but to multiple PCIs for the same objective, despite the application of a complex selection process.

**50** The five gas PCI lists total 291 projects (see *Figure 3*), which had or have a potential positive impact on the EU's SoS. For example, we found that the 18 PCIs that received CEF funding for construction (see *Annex I* and *Annex II*) have improved or will improve the inter-connection of member states' gas networks and diversify their gas supply. Other completed PCIs did not receive CEF funding but have had similarly positive impacts, notably in the context of the recent SoS crisis. In practice, there are fewer than 291 distinct projects, as some were repeated across lists, some were never built and still others were merged to form new ones. While there is a clear outcome of each PCI selection process (i.e. an official PCI list), the Commission is unable to provide

<sup>24</sup> Consolidated report on the progress of electricity and gas PCIs, ACER (2023), p. 20.

<sup>25</sup> Annex VII of Regulation (EU) 347/2013.

an overview of the final result of all 291 gas PCI projects, and considers only the 20 gas projects on the current list to be PCIs. Its PCI transparency platform only provides an overview of projects from the latest (fifth) PCI list and former PCIs that the Commission knows to have been completed or to be under construction. The incomplete information on project results makes it difficult to assess the implementation rate of PCIs and the added value of a project being a PCI.

### **Insufficient progress on carbon capture use and storage risks posing a challenge to long-term security of supply**

**51** The carbon emissions linked to gas consumption will be an increasingly important element of the EU's SoS landscape in view of its climate goals (specifically net zero emission by 2050). Even considering the expected significant decrease in gas consumption, the EU will still need substantial amounts of natural gas in 2040 for energy-intensive industries that have "inherent CO<sub>2</sub> emissions resulting from [...] industry processes"<sup>26</sup> and in the power sector<sup>27</sup>. The deployment of carbon capture use and storage (CCUS) therefore falls within long term security of supply as defined by the IEA (see paragraph **01**), notably by supporting a diversified, balanced and climate neutral power grid<sup>28</sup>. The Commission has identified CCUS as a critical strategic net zero technology<sup>29</sup>.

**52** In a previous audit we found that, between 2009 and 2017, neither of the EU's programmes supporting CCUS succeeded in deploying this technology in the EU and that, despite large amounts of funding, none of the planned commercial-scale project was completed and operational<sup>30</sup>. To date, there are four commercial CCUS projects operating in the EU that together can capture up to 1,5 million tonnes of CO<sub>2</sub> per year<sup>31</sup>. The Commission has proposed a target for annual CO<sub>2</sub> storage capacity of 50 million tonnes by 2030, but not for its use. It is estimated that up to 450 million tonnes of CO<sub>2</sub> will need to be captured through CCUS every year by 2050 to meet EU climate goals<sup>32</sup>. In comparison, the EU's CO<sub>2</sub> emissions from energy use were almost

<sup>26</sup> Carbon capture, use and storage, European Commission.

<sup>27</sup> The role of natural gas in Europe towards 2050, NTNU (2021).

<sup>28</sup> A new era for CCUS, IEA (22 February 2024).

<sup>29</sup> Proposal for a Regulation on Net Zero Industry Act, COM(2023) 161.

<sup>30</sup> Special report 24/2018.

<sup>31</sup> CCUS project explorer, IEA.

<sup>32</sup> SWD(2024) 63 final, Impact Assessment report Part 1.

2 400 million tonnes in 2022<sup>33</sup>. Lack of progress on CCUS in this area can pose a risk to the EU's long-term security of gas supply. The Commission published [a strategy on CCUS](#) in February 2024.

## **EU crisis response measures sent strong signals to the market, but often cannot demonstrate achievement of their stated objectives**

**53** The crisis triggered by Russia's invasion of Ukraine, together with what the Council has described as "[Russia's weaponisation of gas supplies](#)", tested the EU's resilience to a sudden change in the supply-demand balance. We assessed whether the measures taken by the EU in response to the crisis ensured security of supply (see [Figure 5](#)). We would expect to find that:

- 15 % gas demand reduction was achieved with the support of the EU's policy;
- the gas storage obligation measure was achieved and created greater certainty;
- the price cap should provide an effective price ceiling for gas trading in the EU;
- the Commission can demonstrate that AggregateEU fulfils its stated aims;
- the Commission is able to coordinate EU actions and negotiations with gas producing third countries to improve security of supply.

## **15 % gas demand reduction achieved thanks to member state actions, as well as high prices and a warm winter**

**54** The Commission estimated in July 2022 that a full cut-off of Russian gas could lead to a 30bcm shortfall in EU supply and depleted storage by the end of winter 2022-23, even with high LNG imports<sup>34</sup>. To pre-empt this problem, Council Regulation 2022/1369 introduced a voluntary reduction in demand of at least 15 % (45 bcm), initially for the period from August 2022 to March 2023, then extended to March 2024.

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<sup>33</sup> CO2 emissions from EU territorial energy use, Eurostat.

<sup>34</sup> Commission Communication 'Save gas for a safe winter', COM(2022) 360.

**55** Gas consumption in the EU had already decreased by 10.4 % due to high prices in the year to August 2022, when the 15 % target was adopted<sup>35</sup>. The target set in Regulation 2022/1369 provided a clear signal to the market and a framework for action. According to the updated NECPs submitted by 17 member states in 2023, short-term actions to reduce demand focused on two main areas: information campaigns on saving gas/electricity, and measures to reduce heating and cooling. The target was exceeded in the period August 2022-March 2023, which saw an 18 % overall reduction in gas consumption in the EU. The Commission estimates that 50 % of this reduction was due to households, 43 % to industry and 7 % to the power generation sector<sup>36</sup>.

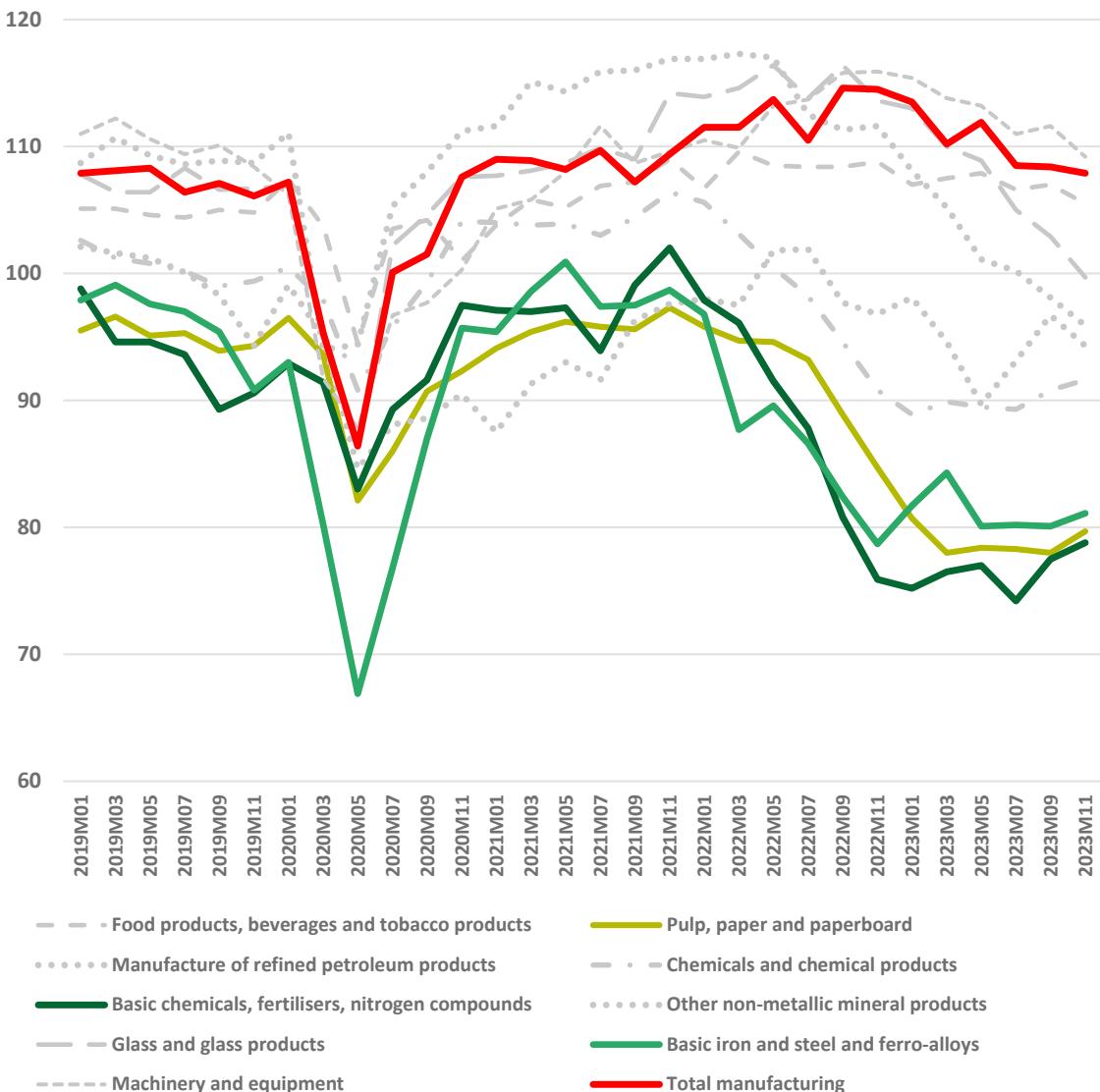
**56** While the measures taken by member states contributed to demand reduction, it is difficult to assess with any certainty the relative impact of these measures compared to other factors beyond their control. For example, households and businesses responded both to higher prices and to information campaigns to save gas, while the Commission estimates that one sixth of the winter 2022-23 fall in demand was due to a warm winter leading to lower gas demand for heating. Similarly, an 18 % year-on-year drop in industry demand in 2022 was driven by a range of factors including fuel switching, energy efficiency measures and demand destruction (high gas prices causing production to shut down). Demand reduction appears to have been most pronounced in energy-intensive industries (e.g. iron and steel, basic chemicals and pulp and paper), where production is still below pre-crisis levels (see *Figure 12*).

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<sup>35</sup> EU gas consumption decreased by 17.7 %, Eurostat (19 April 2023).

<sup>36</sup> SWD(2023) 63.

**Figure 12 – Monthly production by volume, manufacturing in EU from January 2019 to November 2023 (2015 = 100)**



Source: Chart by Anouk Honoré ([Oxford Institute for Energy Studies](#)), based on Eurostat data.

**EU-wide gas storage filling obligation was achieved, following previous practice and creating greater certainty**

**57** Gas storage supplies 25-30 % of the gas consumed during the winter months in the EU. It plays an important role balancing the European gas system, notably by covering demand peaks in winter. Prior to the crisis, Gazprom controlled approximately 10 % of the EU's underground gas storage (UGS)<sup>37</sup>. In 2021, these storage sites were filled to a much lower level, compared both to previous years and to

<sup>37</sup> Commission report on certain aspects concerning gas storage, COM(2023) 182.

other storage sites in the EU, as part of [Russia's weaponisation of gas supplies](#). ACER has reported that, in January 2022, "the majority of National Regulatory Authorities for gas did not report that current Gas In Storage (GIS) levels was a big concern"<sup>38</sup>.

**58** In June 2022 the EU adopted its gas storage filling obligation. All UGS in the EU was to be 80 % full by 1 November 2022 and 90 % full by 1 November each year thereafter until 2025, with intermediate filling levels set for February, May, June and September. These targets have all been achieved so far and even exceeded (99 % storage filled in November 2023), sending a signal that the EU will ensure sufficient gas reserves for an average winter and removing the risk of a repetition of gas storage manipulation.

**59** This measure, while creating certainty, is not a significant departure from previous practice. It reflects average storage filling levels in the EU prior to the crisis (see [Figure 13](#)). The average EU-wide storage filling level on 1 November of the five years 2016-2020 was 91.5 %<sup>39</sup>. Eleven member states, together accounting for 56 % of EU gas consumption, had national storage obligations before the crisis, and four had strategic gas storage reserves<sup>40</sup>.

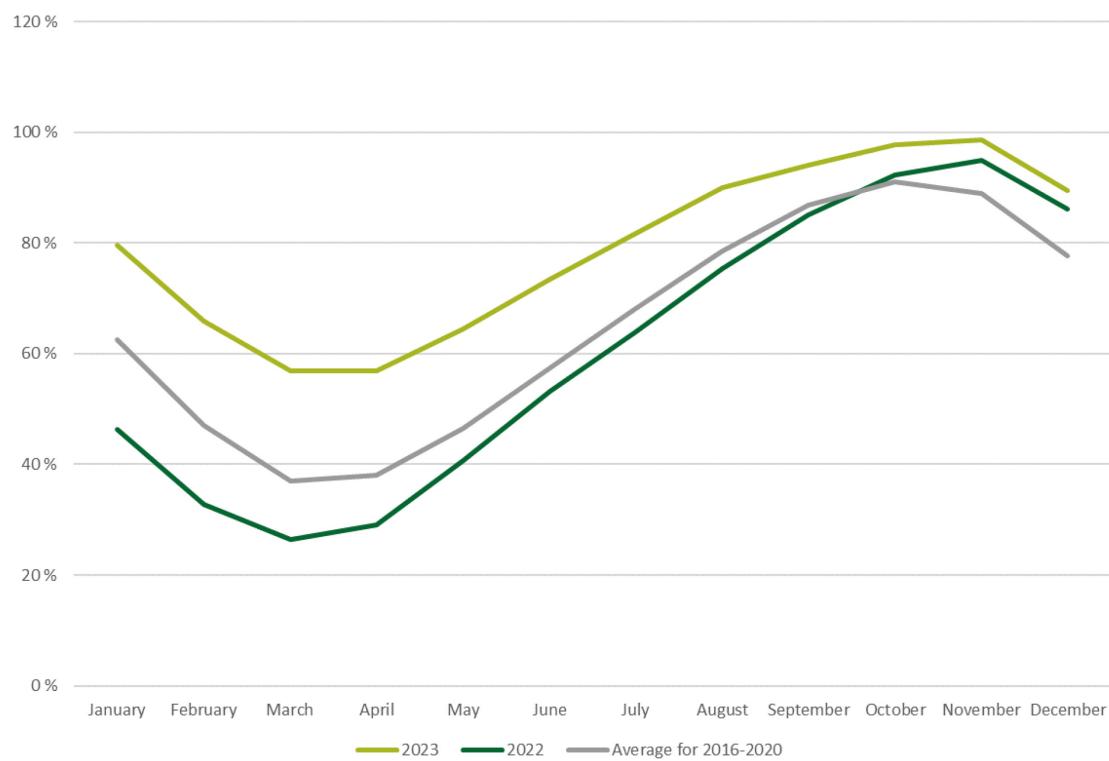
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<sup>38</sup> [Report on Gas Storage Regulation and Indicators](#), ACER (2022).

<sup>39</sup> [Aggregated Gas Storage Inventory \(Data overview/Historical data\)](#), Gas Infrastructure Europe (GIE).

<sup>40</sup> [Report on Gas Storage Regulation and Indicators](#), ACER (2022).

**Figure 13 – Average storage filling levels in the EU**



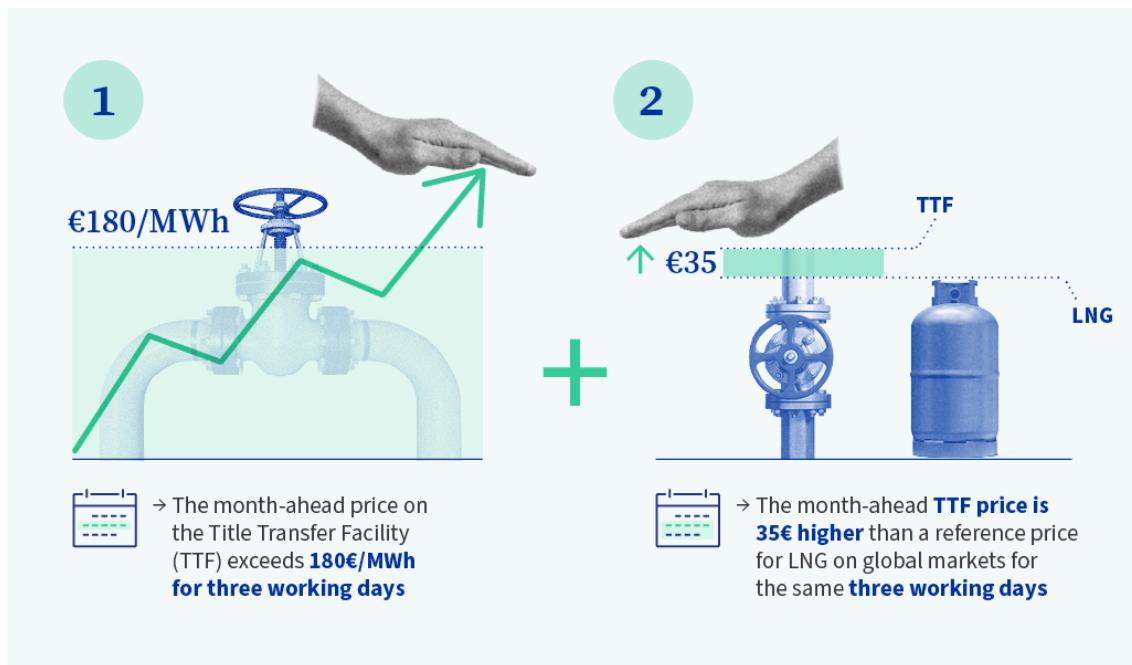
Source: ECA based on [GIE](#).

### There are risks linked to the potential activation of the gas price cap

**60** The market correction mechanism, commonly known as the gas price cap is intended to correct what the Commission considers market malfunctions such as the surge in gas prices in August 2022. It is triggered when the price of month-ahead gas futures traded on the Dutch TTF exceeds €180/MWh and is €35/MWh above a global reference price for LNG (see [Figure 14](#)). This means that it would not be possible to buy and sell the most commonly traded gas futures in the EU for a given period above a price ceiling calculated according to Regulation 2022/2578. The cap will apply until 31 December 2025. The Commission argues that the existence of the cap “[limited prices in EU gas markets<sup>41</sup>](#)” during the energy crisis. However, it is not possible to assess its effectiveness as it has not been triggered to date though some risks linked to its possible activation have been identified.

<sup>41</sup> COM (2023) 650 Final.

**Figure 14 – Trigger for the gas price cap**



Source: Council of the EU.

**61** The price cap applies to all contracts concluded on the EU's gas trading platforms related to gas deliveries one month to one year in the future. It will not apply to other types of contracts, or to contracts concluded outside the EU. At least one global exchange has arranged for gas trading to shift from Netherlands to UK trading platform at no extra cost if the price cap were triggered. The European Securities and Markets Authority considers it likely that gas trading would move out of the EU once prices started to approach the price cap<sup>42</sup>. It has warned that, if this happens it “**could possibly impact the orderly functioning of markets, and ultimately financial stability**”. In a scenario of significant gas shortage, which would cause a price spike, the Commission has the power to suspend the cap.

<sup>42</sup> Effects assessment of the impact of the market correction mechanism on financial markets, ESMA (2023).

## AggregateEU has generated interest from the market but insufficient data to conclude on its benefits

**62** In April 2022 the Commission established an EU [Energy Platform](#) for the common purchase of gas. This led on to AggregateEU, which was launched in April 2023, initially until December 2023. The aim of AggregateEU, according to the Commission, is to provide an alternative channel for buying and selling gas, including through joint purchases, as well as a demand aggregation service and new forms of cooperation. Other key intended benefits are increased transparency, support for smaller companies from landlocked countries (in relation to LNG purchasing) and the facilitation of cooperation models such as group purchasing through a central buyer<sup>43</sup>. To ensure the use of the platform, the 24 member states connected to the EU gas grid (Ireland, Malta and Cyprus are exempt) had to ensure that entities under their jurisdiction submitted demand equivalent to 15 % of the member state's storage filling target by the end of 2023<sup>44</sup>.

**63** In practice, AggregateEU is an online platform that groups gas demand from EU or [Energy Community](#)-based entities (industry, traders etc.) according to the member states they would like gas delivered to, and invites suppliers to make offers in response. Demand and supply are matched on a pro-rata basis and ranked according to price (so all buyers have an equal opportunity to buy at the lowest price for their delivery point). The Commission's involvement ends at this point. Buyers and sellers negotiate outside the framework of the platform and are not bound by the prices offered there.

**64** AggregateEU appears to be fulfilling its aim of supporting smaller companies as two thirds of companies seeking to buy gas on the platform are classified as small entities by the Commission (companies present in a single member state or local gas retailers).

**65** AggregateEU, as intended, does provide an alternative channel to buy and sell gas. There were four rounds of "matchmaking" on the platform in 2023, involving 180 entities submitting demand for 54 bcm of gas. The volumes requested are equivalent to 50 % of EU gas storage capacity, much higher than the compulsory 15 % of EU gas storage required by law. This suggest that AggregateEU has generated genuine interest among gas entities. However, we could not determine AggregateEU's added value in relation to gastrading platforms, nor the market failure that

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<sup>43</sup> [AggregateEU – questions and answers](#), European Commission.

<sup>44</sup> [Council Regulation \(EU\) 2022/2576](#).

AggregateEU addresses as the divergence in prices across EU gas markets caused by the crisis was already substantially reduced at the time of AggregateEU's launch<sup>45</sup>.

**66** Evaluating the extent to which the other benefits the Commission claims AggregateEU delivers (see paragraph 62) have materialised requires a level of information on concluded contracts that is not available. The Commission has no right of access to contracts concluded as result of offers made on the platform. It cannot know whether these were bilateral or done through joint-purchase consortiums, or whether prices paid were lower than those offered on the main EU gas trading platforms. The Commission is aware of this and stated that the scheme would only deliver its full benefits if “the Commission and Member States ensure transparency to the EU Energy Platform of intended and concluded gas supply purchases across the Union, in order to assess whether the objectives of security of supply and energy solidarity are met”<sup>46</sup>.

### International outreach provided strong messages but little scope to achieve the Commission's stated aims

**67** In addition to supporting the common purchase of gas, the EU Energy Platform “aims at coordinating EU action and negotiations with external upstream suppliers to prevent EU countries from outbidding each other, whilst leveraging our political and market weight to [...] achieve better conditions for all EU consumers”<sup>47</sup>. To achieve this, the Commission has launched a number of outreach initiatives targeting gas-producing countries and has the right to review intergovernmental energy agreements (energy IGAs) between member states and non-EU countries. We found in both cases the Commission lacks the tools and legal competences to achieve its stated aims.

**68** In response to the crisis, the Commission launched outreach activities drawing on its many long-standing bilateral contacts with gas-producing non-EU countries. These were intended to send a strong message that the EU would take action to diversify gas supply, thereby increasing its SoS. It signed non-binding joint statements with the USA, Norway and Canada, and memorandums of understanding with Egypt/Israel and

<sup>45</sup> [Market monitoring report on key developments in EU gas wholesale markets](#), ACER (June 2023).

<sup>46</sup> Commission Communication “Energy Emergency - preparing, purchasing and protecting the EU together”, [COM\(2022\) 553 final](#).

<sup>47</sup> [EU energy platform](#), European Commission (21 September 2023).

Azerbaijan. However, despite Commission actions, given the nature of these documents and the Commission's limited competences in international affairs, there is very little scope for them to produce concrete deliverables that will improve the EU's gas security of supply. A few of the steps that have been committed to in these documents, such as the intention to "jointly develop tools [...] to stabilise energy markets" with Norway, or the creation of an EU-Canada working group on LNG, could not deliver the expected results.

**69** Member states reach out bilaterally to gas-producing non-EU countries. In certain cases, as defined by Council [Decision 2017/684](#), they must report any resulting energy IGAs to the Commission. The decision introduced the requirement for an *ex-ante* (before signature) Commission assessment of gas and oil IGAs to help ensure such agreements are compatible with EU law. According to one institute tracking energy IGAs, [very many agreements of different kinds have been reached between member states and non-EU countries](#) since the start of the crisis. None of them have been reported to the Commission. As these agreements are not public, it is difficult for the Commission to know what type of agreement member states conclude with non-EU countries and therefore whether or not these agreements should be notified to them as IGAs as defined by Decision 2017/684.

## Conclusions and recommendations

**70** Our overall finding is that, while the EU's framework addressed all aspects the secure supply of natural gas, albeit unequally, the achievement of crisis-response objectives often cannot be demonstrated. The EU's SoS architecture encouraged cooperation among member states but falls short on some of its key deliverables, and the EU is still developing an affordability framework. The EU adopted a number of short-term measures in response to Russia's weaponisation of gas supplies, sending strong signals to the market that the member states would work together to overcome this challenge. However, the benefits of EU measures have not always been clear, and the EU faces a new security of supply landscape with increased reliance on LNG and the need to decarbonise gas consumption.

**71** Certain EU policies and measures have positively impacted the EU's gas security of supply, notably by requiring or financing infrastructure that connects member states' gas networks, enabling bi-directional gas flows (notably west-east as well as east-west) and supporting diversification of gas supply. The EU's gas SoS policy has been much more explicit in its objectives for availability than for affordability. The crisis has compelled the EU to give greater weight to the issue of affordability in its gas SoS framework, and member states also took a range of actions to address this issue. The EU is now developing a policy framework for gas affordability. But the framework still does not sufficiently address the need for the EU to explicitly consider and analyse affordability drivers and challenges (see paragraphs [19-26](#)).

## Recommendation 1 – Complete the EU's gas affordability framework

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The Commission should take greater account of the affordability dimension of gas security of supply by:

- (a) ensuring an EU-level assessment of affordability in relevant key EU deliverables;
- (b) assessing the feasibility of including a consideration of affordability risk in national risk assessments mandated in the gas SoS Regulation when revising the gas security of supply Regulation;
- (c) assessing the feasibility of updating the requirements for member states' reporting so as to cover information on affordability in addition to energy poverty, for example in NECPs.

**Target implementation date: 2025**

**72** The EU's gas SoS reporting framework for member states and regional groupings of member states provides a basis for the systematic consideration of multiple risks, preventive measures to take to avoid them and emergency action should those risks materialise. However, 18 member states did not complete the reporting process for preventive and emergency plans and two sent nothing at all in the 2019 reporting round, pointing to this process' lack of efficiency and questionable added value. While the regional risk groups foster cooperation, we found that they are not delivering as expected due to for example overlaps between groups. Certain risk groups became obsolete following the new gas flows in response to the cut-off of Russian gas. This shows that, while the SoS reporting framework encourages cooperation among member states, added value and efficiency are lacking in some key respects in relation to the stated aim of supporting national and regional gas SoS arrangements. Most member states are in favour of reviewing the architecture of national and regional gas SoS reporting obligations. To this should be added the outstanding challenge of completing solidarity agreements, whether bilaterally or through an EU-wide mechanism (paragraphs [27-44](#)).

## **Recommendation 2 – Optimise the process of member state reporting on gas security of supply**

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To ensure that the most salient gas SoS issues are identified and addressed coherently both nationally and regionally, the Commission should:

- (a) assess the feasibility of streamlining the member states' gas SoS reporting requirements and the process of drafting and submitting the main deliverables (national and common risk assessments, preventive action and emergency plans), when revising the gas SoS Regulation;
- (b) assist member states further with the production of deliverables that are complete and submitted on time, notably by exploring digital tools for reporting and review.

**Target implementation date: 2025**

## **Recommendation 3 – Revise the structure of regional cooperation**

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The Commission should review the current structure of regional cooperation by:

- (a) adapting the configuration to changed circumstances (increased weight of LNG, reduced role of certain pipeline supply corridors);
- (b) reducing overlaps between, and clarifying roles and responsibilities within, risk groups.

**Target implementation date: 2025**

**73** The procedure for selecting projects of common interest (PCI) is complex, involving three stages, each with its own methodology, many steps and multiple stakeholders. This process normally led to a project being given PCI status because it provides the greatest expected benefits. In 20 % of cases, this did not happen as clusters of competing or potentially competing PCIs were listed under a given objective for the market to then decide which to fund. Security of supply was given due consideration in PCI selection, but the Commission is unable to provide an overview of the final result of all 291 gas PCIs. The incomplete information on project results makes it difficult to assess the implementation rate of PCIs and the added value of a project being a PCI. There will be no further gas PCIs (bar two exceptions to connect Malta and Cyprus to the EU grid), but the same process is being applied to

hydrogen PCIs, so the same flaws may occur. In the context of the EU's net zero objective and the continued need for natural gas in the future, we found that insufficient progress on CCUS risks posing a challenge to long term security of gas supply in view of the EU's climate goals (paragraphs 45-52).

## **Recommendation 4 – Improve transparency of the implementation of PCIs**

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After consulting the member states, ENTSOG and promoters, the Commission should improve the transparency and clarity of data on PCI outcomes to include information on former PCIs, project costs and PCIs merged. This could be done on the PCI transparency platform or the Europa.eu webpage and should apply to all future PCI lists.

**Target implementation date: 2025**

**74** In 2022-2023, the EU initiated many emergency measures mainly under Article 122 TFEU, sending strong signals to the market that the member states would work together to respond to the challenge of Russia's weaponisation of gas and ensure security of supply. The impact of these measures, in relation to their stated aims, cannot always be determined due to other factors influencing outcomes or due to lack of evidence. The 15 % demand reduction (compared to a 5-year average), was achieved, helping to restore certainty to the market, though demand was already falling due to high prices before the target was adopted. It is difficult to assess the relative impact of the measures taken by member states compared to other factors beyond their control (e.g. high gas prices, demand destruction, warm weather) when assessing the effectiveness of this measure (see paragraphs 54-56).

**75** The EU also put in place mandatory gas storage filling, first at a rate of 80 % by November 2022, then 90 % by November of each year thereafter until 2025. Achieving these targets contributed to market certainty and assurance about security of supply at a time of crisis. It is however not a significant departure from previous practice. It reflects average storage filling levels in the EU prior to the crisis (see paragraphs 57-59).

**76** The EU adopted measures to cap wholesale gas prices above a price ceiling calculated according to Regulation 2022/2578 for certain types of contracts in an effort to temper what it considered market excesses. Gas prices have been far below the cap, so it is not possible to assess its effectiveness as it has not been triggered to date. We

found there are risks to the potential activation of the price cap. The European Securities and Market Authority has warned that gas trading may shift outside the EU should prices come close to the cap and that this would carry risks to the orderly functioning of the market. In a scenario of significant gas shortage, which would cause a price spike, the Commission has the power to suspend the cap (paragraphs [60-61](#)).

**77** AggregateEU, the matchmaking tool for gas buyers and sellers the Commission created, provides an alternative channel to buy and sell gas. It has attracted interest from smaller entities that the Commission is aiming to help. However, we could not determine its added value in relation to gas trading platforms, nor did we identify a market failure that AggregateEU addresses. Furthermore, the Commission cannot demonstrate the achievement of its other stated aims because it cannot obtain information on the contracts actually agreed as a result of offers received via the platform. Finally, we found that the Commission's efforts to coordinate EU actions and negotiations with external upstream suppliers cannot be achieved because it lacks the tools and legal competences to do so (paragraphs [62-69](#)).

This report was adopted by Chamber I, headed by Mrs Joëlle Elvinger, Member of the Court of Auditors, in Luxembourg at its meeting of 15 May 2024.

*For the Court of Auditors*

Tony Murphy  
*President*

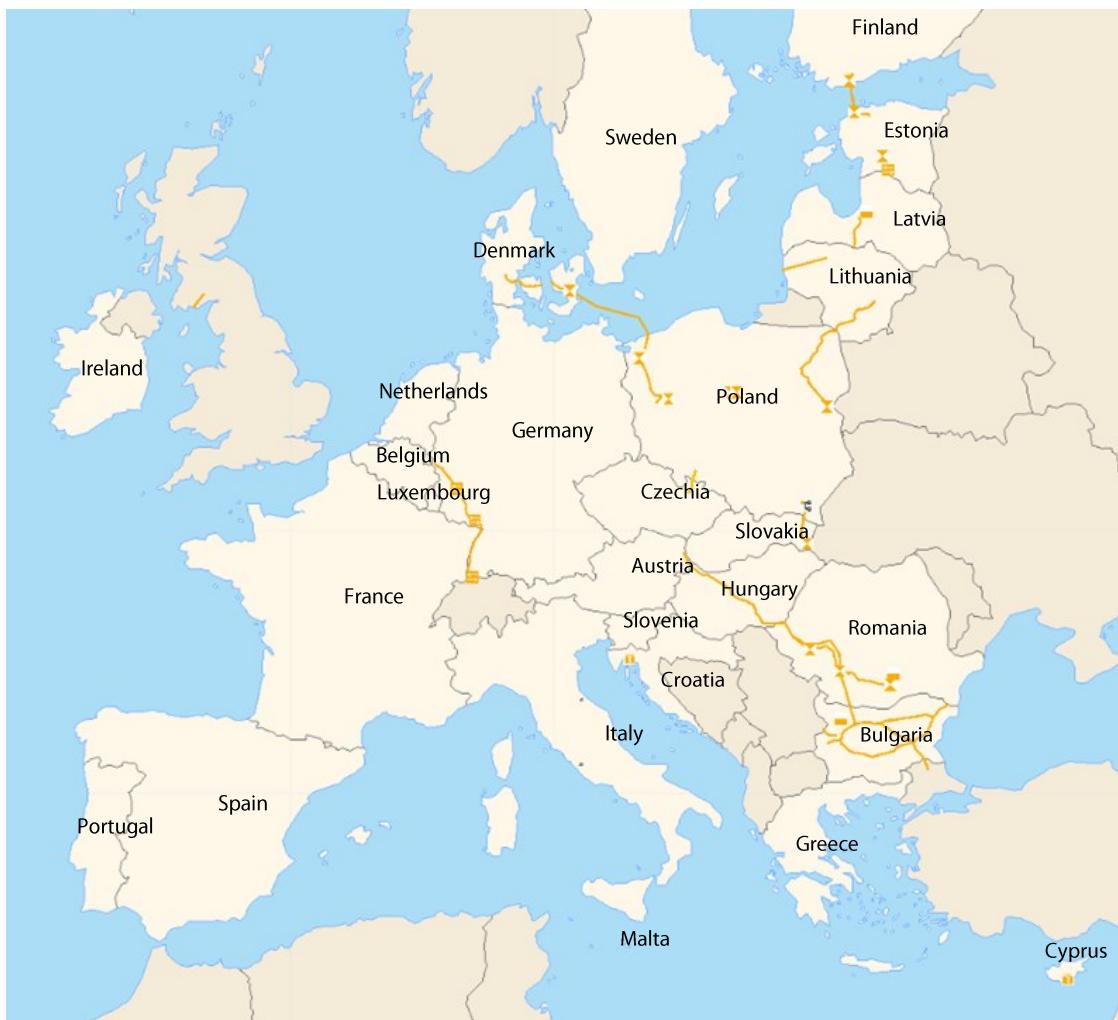
# Annexes

## Annex I – CEF funding for construction of projects of common interest

Proposal name	PCI list	Member state	CEF funding (in million €)
PCI Twinning of Southwest Scotland onshore system between Cluden and Brighouse Bay (United Kingdom)	1	UK	34.8
Construction of the Klaipeda-Kuršėnai Gas Transmission Pipeline	1	LT	28.6
Construction of the Gas Interconnection Poland-Lithuania (GIPL) including supporting infrastructure	1	PL, LT	295.4
Poland-Czech Republic interconnection [currently known as Stork II] between Liboš-Hat (CZ-PL) – Kedzierzyn (PL)	1	PL, CZ	62.7
Reverse Flow on TENP – Works	1	DE	8.7
Development on Romanian territory of the National Gas Transmission System on the Bulgaria-Romania-Hungary – Austria – direction execution works Stage 1	1	RO	179.3
Balticconnector works	2	FI, EE	187.5
Estonia-Latvia gas interconnection enhancement (Estonia-Latvia Enhancement)	2	EE	18.6
Construction works for the Poland – Slovakia Gas Interconnection	2	SK, PL	134.6
Construction of LNG terminal Krk	2	HR	82.5
LNG Evacuation Gas Pipeline Omišalj-Zlobin-Bosiljevo-Sisak-Kozarac-Slobodnica – Works for Phase I	2	HR	16.4
Removing internal bottlenecks to end isolation & allow transmission of NG from Eastern Mediterranean (CyprusGas2EU)	2	CY	101.3
Construction works for Rehabilitation, modernization and expansion of the Bulgarian transmission system-Phase2	3	BG	27.1
Enhancement of Inculalns Underground gas storage	3	LV	44
Construction works for the PCI infrastructure cluster 8.3	3	PL, DK	214.9
Construction works for the Enhancement of Latvia-Lithuania interconnection	3	LV, LT	4.8
Gas Interconnection Bulgaria-Serbia (IBS) – Construction works	4	BG	44.5
Chiren UGS expansion (Bulgaria) – construction works	4	BG	77.9
Daily withdrawal capacity increase – Bilciureşti UGS	5	RO	38

## Annex II – Map of gas PCIs that received CEF funding for construction

- LNG terminal
- Gas reverse flow
- Gas node
- Underground gas storage
- Gas compressor station
- Gas pipeline



Source: European Commission.

# Abbreviations

**BCM:** Billion Cubic Meters

**CCUS:** Carbon Capture Use And Storage

**CEF:** Connecting Europe Facility

**CRA:** Common Risk Assessment

**ENTSOG:** European Network of Transmission System Operators for Gas

**EP:** Emergency Plan

**IEA:** International Energy Agency

**IGA:** Inter-Governmental Agreement

**LNG:** Liquified Natural Gas

**MWh:** Megawatt hour

**NECP:** National Energy And Climate Plan

**PAP:** Preventive Action Plan

**PCI:** Project of Common Interest

**SoS:** Security of Supply

**TEN-E:** Trans-European Networks for Energy

**TTF:** Title Transfer Facility

**VTP:** Virtual Trading Platform

# Glossary

**Connecting Europe Facility:** EU instrument providing financial support for the creation of sustainable interconnected infrastructure in the energy, transport, and information and communication technology sectors.

**Cost-benefit analysis:** Comparison of the estimated costs of a proposed course of action with the benefits it is expected to bring.

**Demand destruction:** Long-term decline in demand for gas or other commodities in response to persistent high prices or restricted supply.

**European Network of Transmission System Operators for Gas:** Association promoting cooperation among gas transmission system operators in EU member states and other connected countries.

**European Union Agency for the Cooperation of Energy Regulators:** EU agency that works closely with member state energy regulators to support the effective functioning of the internal market for electricity and natural gas.

**Liquefied natural gas:** Natural gas converted to liquid form for storage or transport.

**Project of common interest:** Cross-border infrastructure project between two or more EU countries in the context of a trans-European network.

**Security of supply:** Uninterrupted availability of a resource at an affordable price.

**Transmission system operator:** Organisation responsible for national or regional energy transmission.

## Replies of the Commission

<https://www.eca.europa.eu/en/publications/sr-2024-09>

## Timeline

<https://www.eca.europa.eu/en/publications/sr-2024-09>

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The ECA's special reports set out the results of its audits of EU policies and programmes, or of management-related topics from specific budgetary areas. The ECA selects and designs these audit tasks to be of maximum impact by considering the risks to performance or compliance, the level of income or spending involved, forthcoming developments and political and public interest.

This performance audit was carried out by Audit Chamber I Sustainable use of natural resources, headed by ECA Member Joëlle Elvinger. The audit was led by ECA Member João Leão, supported by Paula Betencourt, Head of Private Office; Florence Fornaroli, Principal Manager; Nicholas Edwards, Head of Task; Greta Kapustaite, Lorenzo Pirelli, Michal Szwed and Jonas Kathage, Auditors. Agata Sylwestrzak, Paola Magnanelli, and Janina Schmidt Maximo provided linguistic support. Giuliana Lucchese provided graphic design support.



*From left to right:* Giuliana Lucchese, Michal Szwed, Paola Magnanelli, Nicholas Edwards, João Leão, Paula Betencourt, Florence Fornaroli, Greta Kapustaite, Lorenzo Pirelli.

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The International Energy Agency defines energy security as “the uninterrupted availability of energy sources at an affordable price”. Russia’s invasion of Ukraine triggered a gas supply and affordability crisis in the EU. This tested the EU’s gas security of supply framework and led to the adoption of a number of temporary security of supply measures at EU level as the EU diversifies away from Russian pipeline gas to rely more on liquified natural gas. We found that the EU’s framework addressed the secure supply of gas unequally and that the achievement of crisis-response objectives often cannot be demonstrated. Based on our findings, we recommend that the Commission:

- complete the EU’s gas affordability framework;
- optimise the process of member state reporting on gas security of supply and revise the structure of regional cooperation;
- improve transparency of the implementation of projects of common interest.

ECA special report pursuant to Article 287(4), second subparagraph, TFEU.



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