SFPA
Slovak Foreign Policy Association

A spirit of solidarity?

Evaluating Slovakia's potential contribution to regional and intra-EU natural gas security of supply

Andrej Nosko, Veronika Oravcová and Nolan Theisen

A spirit of solidarity?

Evaluating Slovakia's potential contribution to regional and intra-EU natural gas security of supply

Authors:

Andrej Nosko, Veronika Oravcová and Nolan Theisen

Acknowledgment: The authors would like to thank to Barbora Legényová and Alžbeta Gavalcová for their support with data collection and Catriona Menzies for language editing. The project was supported by European Climate Foundation.

Bratislava 2022

Research Center of the
Slovak Foreign Policy Association
Staromestská 6/D
811 03 Bratislava
Slovak Republic

Introduction

The Russian invasion of Ukraine in February 2022 fully exposed the problem of energy dependence on the Russian federation, notably in the energy sector. High energy dependence on Russian energy sources (natural gas, oil, as well as nuclear fuel) in Europe, especially Central and Eastern European (CEE), is a limiting factor for the EU to impose full sanctions on energy imports.[1] The EU responded by announcing the REPowerEU strategy in May 2022 in order to wean the bloc completely off of Russian energy by 2027.[2]

Alongside supply substitution, mostly via LNG, in July 2022 member state ministers responsible for the energy portfolio agreed to reduce gas consumption by 15% by March 2023, guided by the Save Gas for a Safe Winter plan[3]. The agreement was twofold: first, EU members have to introduce natural gas saving measures, and second the plan is to create opportunities for cooperation in the event of a severe winter and gas shortages. It also proposes a mandatory solidarity mechanism for all EU countries during a gas shortage. According to the EC's preliminary analysis based on Member State reporting in August and September, the EU is on track to meet this target compared to the previous 5-year average.

The importance of regional cooperation in the CEE gas sector cannot be understated and is not new. The development of critical infrastructure in the region over the past decade was triggered by the 2009 gas crisis, when the Russian-Ukrainian dispute led to the total cessation of gas supplies via the Brotherhood pipeline transiting Slovakia. Now the situation is much different, as the REPowerEU plan makes clear that Europe will systematically and permanently end its dependence on Russian energy imports. This undertaking, the immediate task at hand – maximizing demand reduction over the next 16 months to maintain sufficient gas stock and to moderate prices requires even more dialogue, coordination and pooling of resources on both the supply and demand side of the natural gas equation. Implementing energy efficiency and energy

[1] Fulwood, M. Russian gas to the EU: to sanction or not to sanction (2022). The Oxford Institute for Energy Studies: https://a9w7k6q9.stackpathcdn.com/wpcms/wp-content/uploads/2022/04/Russian-gas-to-the-EU-to-sanction-or-not-to-sanction.pdf

[2] REPowerEU: A Plan to rapidly reduce dependence on Russian fossil fuels and fast forward the green transition (18 May 2022). European Commission: https://ec.europa.eu/commission/presscorner/detail/en/ip_22_3131

[3] Communication from the Commission to the European Parliament, The Council, the European Economic and Social Committee, and the Committee of the Regions, "Save Gas for a Safe Winter"(2022). Official Journal of the European Union: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52022DC0360

savings measures will not only preserve gas storage stocks but keep overall prices lower for both industry and households.

Europe successfully lined its gas storage stocks entering the current 2022/2023 gas year (from 1 October 2022 to 30 September 2023), surpassing the 1 November 80% target by 1 October, reaching one of the highest EU storage levels on record (89% or 985 TWh). This is largely owing to two conditions that cannot be overstated or, unfortunately, relied upon for refilling next summer: a bedrock of Russian molecules and a Chinese economy stifled by lock-down dampening LNG demand.

In July 2022 ENTSO-G[4] warned that 'without immediate market/political reaction' for demand reduction Europe's storage stocks would be depleted during the *next* winter and risk curtailment during cold winter days. The message was reinforced by the International Energy Agency (IEA) in a report published in December 2022, finding that the EU has enough gas for this winter but could face shortages next year if Russia further cuts supplies.[5] Nevertheless, well thought out actions are need urgently to relieve high prices affecting individuals and the wider economy,

Slovakia is highly dependent on natural gas, especially for its residential heating sector and large energy-intensive industrial sector, as it has well-developed gas infrastructure and around 94% of the population has access to gas. But, as a landlocked country, it has to rely on neighbouring countries (above all) in securing natural gas imports. Regional cooperation is therefore crucial. Under the solidarity principle, in a severe gas crisis, neighbouring member states will help to ensure that households and essential social services have access to gas supplies. In practice, suppliers with customers who can save more would not store the gas, but sell it to states with a shortage.

The Visegrad Group (the Czech Republic, Hungary, Poland and Slovakia) and possibly the Slavkov Format (Austria, the Czech Republic and Slovakia) are key platforms for cooperation that could be used to revisit energy security solidarity in a non-binding manner, simply to update and explain new national policies to combat the current energy crisis and implement REPowerEU, something no one could have previously imagined when devising security of supply guidelines in the aftermath of the 2009 gas crisis that lead to the big regulatory revision in 2016. Speaking of

[4] ENTSO-G Yearly Supply Outlook 2022/2023 (2022). ENTSO-G: https://www.entsog.eu/sites/default/files/2022-07/SO0036-22_Yearly_Supply_Outlook_2022-2023_0.pdf

[5] How to Avoid Gas Shortages in the European Union in 2023 (2022). International Energy Agency: https://www.iea.org/reports/how-to-avoid-gas-shortages-in-the-european-union-in-2023

timelines, there is the immediate term tied to next winter and the medium term which will require more coordinated actions to keep energy prices down.[6]

The aim of this paper is to assess Slovakia's preparedness in the natural gas sector, its political position on solidarity from public statements, and propose avenues for revitalizing the regional solidarity mechanism both to manage the current crisis and to accelerate the transition away not only from Russian gas but gas entirely, to meet 2030 climate targets, and beyond that to build the green hydrogen market for industrial decarbonization.

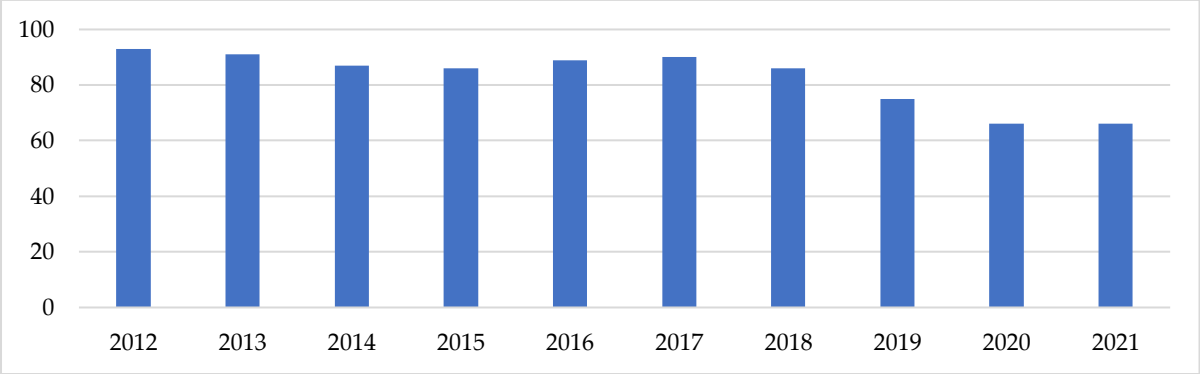
[6] REPowerEU: affordable, secure and sustainable energy for Europe (2022). European Commission: https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/repowereu-affordable-secure-and-sustainable-energy-europe_en

Overview of Slovakia's natural gas sector

Slovakia is dependent on natural gas imports and has very limited domestic production that covers less than 2% of overall consumption. Moreover, domestic production has been gradually falling (see Figure 1). The 2009 gas crisis was the key event that put energy security (not just gas, but more generally) centre stage in modern[7] Slovak energy policy[8] and underlined the importance of energy policy for a properly functioning Slovak economy.

Following the gas crisis, Slovakia engaged in a programme of natural gas supply diversification, supported by Projects of Common Interest (PCI), and installed several reverse flows with neighbouring countries (the Czech Republic, Austria and Ukraine), completed a new interconnector with Ukraine (in 2014), Hungary (in 2015) and more recently (October 2022) with Poland, providing access to the LNG terminal in Świnoujście. Another large diversification project in the natural gas sector is the Eastring pipeline that is supposed to connect the Slovak transition system with Bulgaria via Hungary and Romania. However, it has been removed from the PCI list[9] and its future is questionable.[10]

Figure 1. Domestic extraction of natural gas in Slovakia (mil m^3)



Source: Ministry of Economy of the Slovak Republic

[7] Energy security was a serious concern for Czechoslovakia in the early nineties, when an alternative oil pipeline was being built to Czech Republic and alternative gas pipelines seriously discussed. See: Nosko, A. Securitization within Economic Sector (2008). In: The Case of Diversification of Energy Resources. KG: VDM Verlag Dr. Muller Aktiengesellschaft & Corporation.

[8] Energy Policy of the Slovak Republic (2014). Ministry of Economy of the SR: https://www.mhsr.sk/uploads/files/47NgRIPQ.pdf?csrt=12588055296218934290

[9] 6.25.1 Eastring (2022). Ministry of Economy of the SR: https://www.mhsr.sk/energetika/medzinarodna-spolupraca/projekty-spolocneho-zaujmu-pci/plynarenstvo/6251-eastring

[10] See: Mišík, M. and Nosko, A. The Eastring gas pipeline in the context of the Central and Eastern European gas supply challenge (2017). In: Nature Energy 2, 844–848

Up until 2009 Slovakia's only physical natural gas source was the Russian Federation. Gas flowed one way via Ukraine (Brotherhood pipeline) from east to west, supplying Slovakia and other European countries. This proved to be highly problematic during the crisis when no gas flowed from an easterly direction, and it was technically impossible to obtain gas from western Europe. Neither was it technically possible to transport gas from western Slovakia (where most of the underground gas storage (UGS) facilities are) to eastern Slovakia and that presented risks for the technical balancing of the domestic system. An outcome of the 2009 crisis was the recognition of energy security challenges across the various energy sectors. These days Slovakia has good gas infrastructure connections with all its neighbouring countries, and the transit infrastructure that previously (before the 2009 gas crisis) enabled east–west flows now allows physical reverse flows and in a north-south direction.

Table 1. Gas market participants in the Slovak Republic

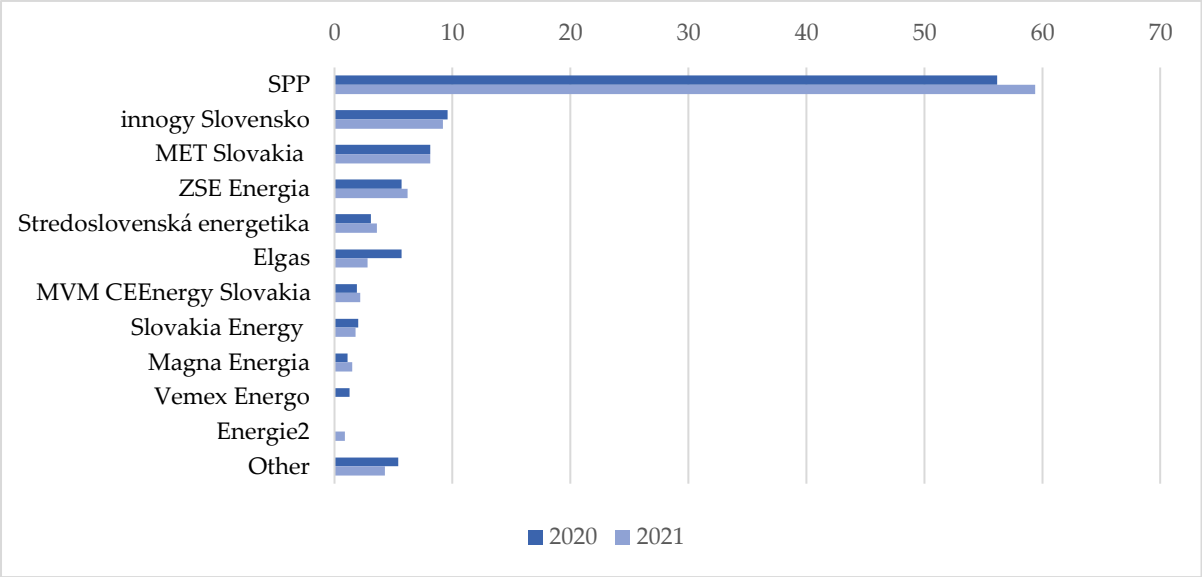
transmission system operator (TSO)	eustream, a.s.
distribution system operator (DSO) within Slovakia	SPP - distribúcia, a.s.
number of local distribution network operators	38
underground gas storage (UGS) operators	NAFTA a.s., POZAGAZ a.s.
number of active gas suppliers	26
gas consumers	

Source: Regulatory Office for Network Industries

As of 2022, the transportation network operated by eustream consists of almost 2,270 km of gas pipelines and five compressor stations. It has a capacity of over 90 bcm annually. SPP - distribúcia, a. s. (SPP-d) operates a network connecting more than 1.52 million consumers. Slovenský plynárenský priemysel, a.s. (SPP) is the largest gas supplier in Slovakia and the supplier of last resort (see Figure 2). Since 2014 the Slovak Republic owns 100% of the shares, exercising its shareholder rights through the Ministry of Economy of the Slovak Republic.

The transit gas pipeline is owned by SPP Infrastructure which owns 100% of the eustream shares. SPP Infrastructure is owned by SPP (Slovak government) 51% and EP Infrastructure (49%), part of which, Energetický a průmyslový holding, a.s. (EPH), also exercises management control over the company through Slovak Gas Holding, B.V.

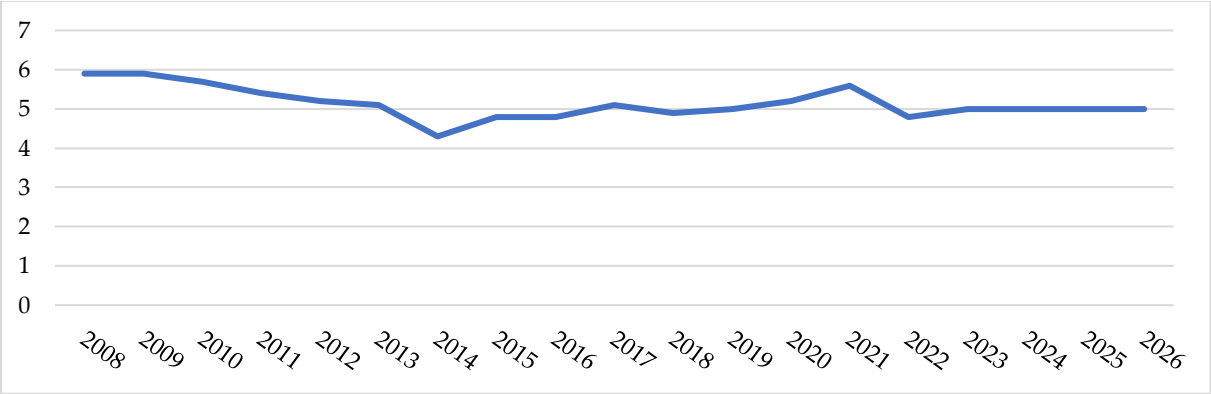
Figure 2. Market shares of gas suppliers to end consumers (in %)



Source: Regulatory Office for Network Industries

As shown in Figure 3, the Ministry of Economy forecasts fairly stable levels of natural gas consumption over the coming years. Consumptions levels may be affected by factors such as average annual temperature or the continued implementation of energy efficiency measures, e.g. insulating buildings or through modern technological solutions for buildings. In the household segment, the level of consumption will be affected by changes in the gas price and the availability of alternative fuels.[11]

Figure 3. Natural gas consumption and projection (in bcm)

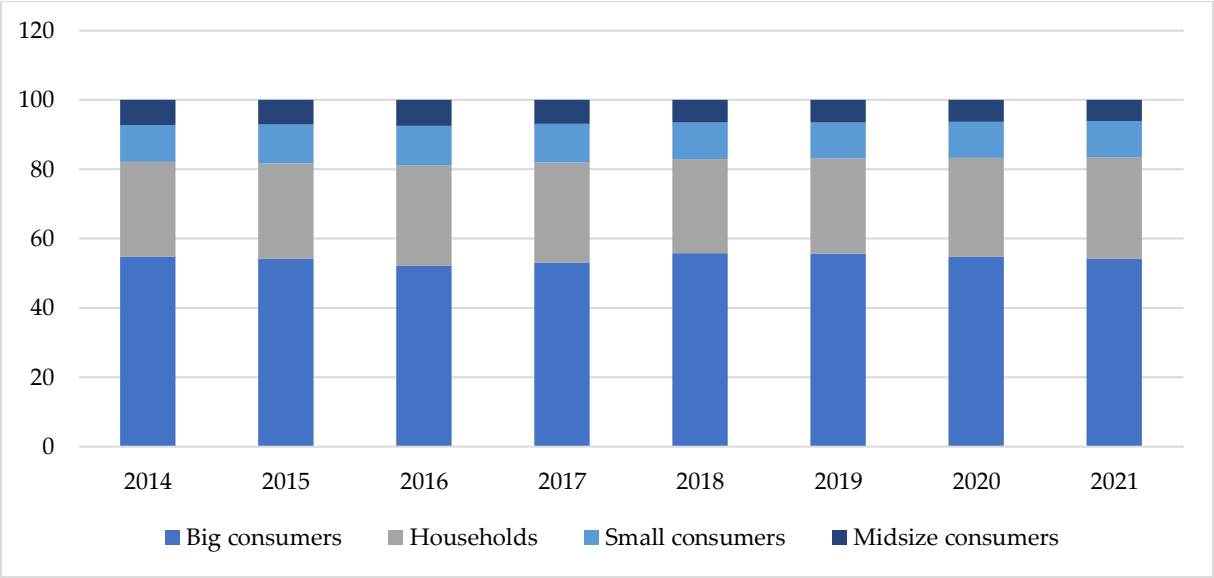


Source: Ministry of Economy of the Slovak Republic

[11] Správa o výsledkoch monitorovania bezpečnosti dodávok (2021). Ministry of Economy of the SR: https://www.mhsr.sk/energetika/energeticka-politika/sprava-o-vysledkoch-monitorovania-bezpecnosti-dodavok?csrt=10887148786888518930

The bulk of gas consumption (see Figure 4) is mostly used for heating and electricity generation in steel and iron industries, and also as a feedstock in the chemical, and petrochemical, industries.

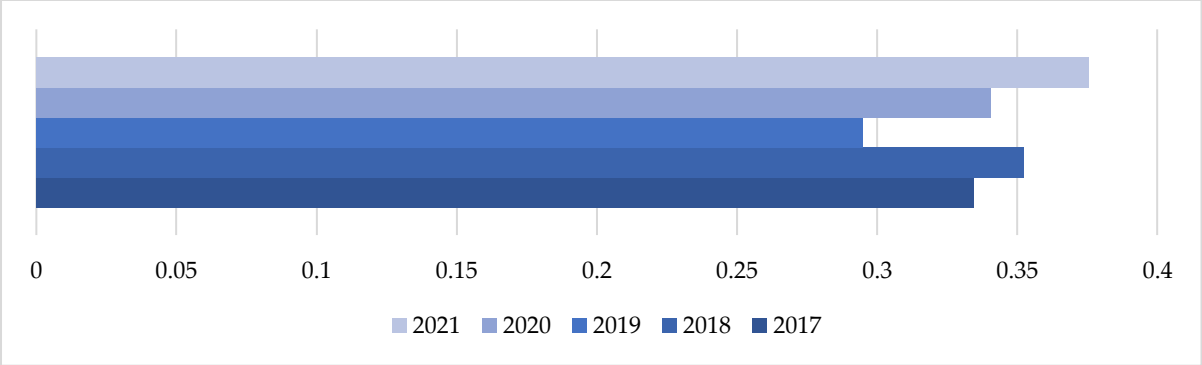
Figure 4. Gas consumption by consumer category (in %)



Source: Regulatory Office for Network Industries

The HHI for gas supply measuring market concentration for all gas customers in 2021 was 0.3756, indicating a high level of concentration in the gas market.

Figure 5. Herfindahl-Hirschman Index (HHI)



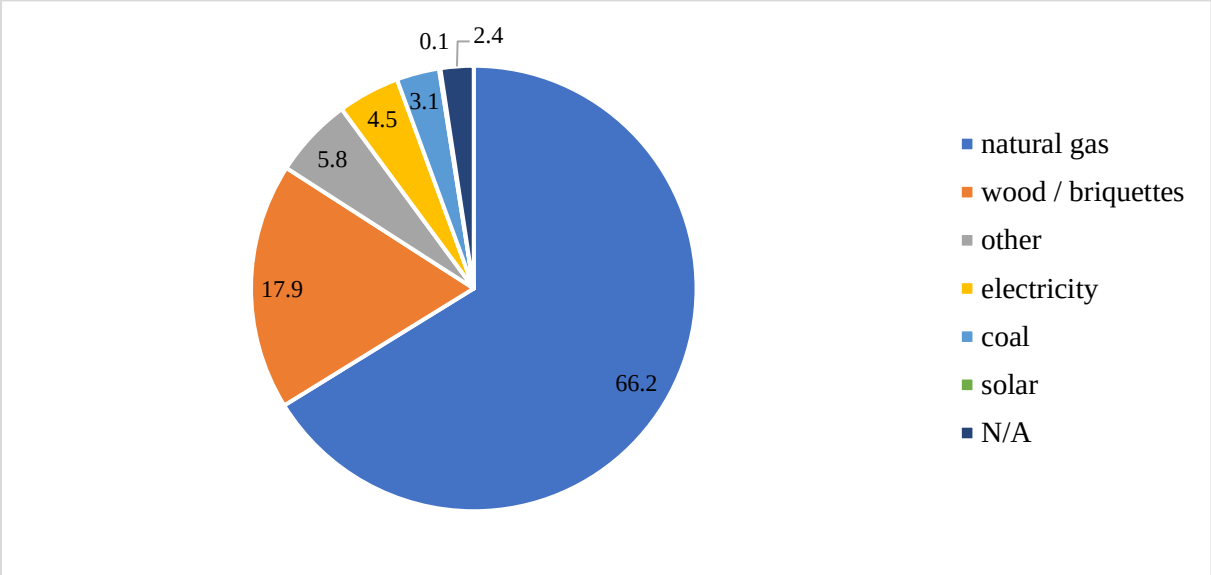
Source: Regulatory Office for Network Industries

Currently, approximately 77% (2,233) of municipalities are connected to the gas infrastructure, which accounts for more than 94% of all inhabitants of Slovakia. Looking closer at households, the latest data published by the Statistical Office of the Slovak Republic in 2021 shows there are more than 1.2 million houses and 2.2 million apartments in Slovakia.[12] Gas is the predominant heating source in more than 1.48

[12] Population and Housing Census (2021). Statistical Office of the SR: https://www.scitanie.sk/#

million apartments, which accounts for 66.2% of all apartments (see Figure 6), while more than 68% of houses are connected to the gas infrastructure. Compared to 2011, that is an increase of 366,613 apartments (or 32.9%).[13]

Figure 6. Household heating (apartments) in Slovakia by fuel (2020)



Source: Statistical Office of the Slovak Republic and Slovak Hydrometeorological Institute

The household sector is a key category in the production of air emissions in Slovakia and represents approximately 10% of total GHG emissions. In terms of the national emissions, households with solid fuel heating present a particular problem.[14] In the household sector monitored emissions have risen since 2005. The reason for this is that some households have switched from natural gas heating to cheaper alternatives such as wood, wood chips or other biomass in response to the increase in electricity and natural gas prices for households.[15] In 2019 there was an increase in the use of natural gas (from 15.6% to 16.6% of houses), electricity, wood briquettes and pellets compared to 2017, which indicates a transition to more modern technologies.[16]

[13] Plyn ako prevažujúci zdroj na vykurovanie využíva 66,2 percenta bytov (2022). Trend: https://www.trend.sk/spravy/plyn-ako-prevazujuci-zdroj-vykurovanie-vyuziva-66-2-percenta-bytov

[14] Annual Reports (2022). Slovak Hydrometeorological Institute: https://www.shmu.sk/en/?page=997

[15] Air Quality Report (2019). Slovak Hydrometeorological Institute: https://www.shmu.sk/File/oko/rocenky/2019_Sprava_o_KO_v_SR%20v3.pdf

[16] Slovak Statistics and Demography (2021). Statistical Office of the SR: https://slovak.statistics.sk/wps/wcm/connect/c77ae1bb-c234-4fa3-bd37-b75800053a2d/Slovenska_statistika_a_demografia_3_2021.pdf?MOD=AJPERES&CVID=nGAuU5g&CVID=nGAuU5g&CVID=nGAuU5g&CVID=nGAuU5g&CVID=nGAuU5g&CVID=nGAuU5g&CVID=nGAuU5g&CVID=nGAuU5g&CVID=nGAuU5g&CVID=nGAuU5g&CVID=nGAuU5g

In order to diversify sources, SPP made its first purchase of 80 million m^3 of liquefied natural gas (LNG). It is transported by LNG tanker to the LNG terminal on the Croatian island of Krk.[17] In recent months, SPP has been making every effort to ensure continuous energy supplies for all its customers, from large industrial customers to households. By entering into diversification contracts, it can currently cover more than 65% of its customers' consumption from sources other than Russian ones. In preparation for the winter season, it is important to ensure there is a combination of sufficient storage capacity and a stable gas flow all year round. To date, SPP has managed to fill its storage tanks and together with its regular diversified deliveries, this gives the company the optimism that it will be able to cope with the 2022/2023 winter season without customer supplies being affected.[18]

Slovakia has a storage capacity of 4.015 bcm or 65% annual consumption, about ¾ of which is located at the Láb site operated by NAFTA a.s., POZAGAS a.s., Malacky operates the smaller Láb site and a third is located in the Czech Republic and operated by SPP Storage, s.r.o,, each with a storage capacity of 0.65 billion m3. SPP uses storage primarily for seasonal balancing to ensure the security of supply for household gas customers for 30 days.

Table 2. Underground storage facilities

Gas storage	Operator	Working volume (storage capacity) (billion m3)	Maximum firm mining power* (mil. m3/day)	Maximum solid impression power (mil. m3/day)
Láb 1,2,3,5 (SK)	Nafta	3.36	36.96	31.9
Láb 4 (SK)	Pozagas	0.65	6.85	6.85
Dolní Bojanovice (CZ)	SPP Storage	0.65	8.8	8.8

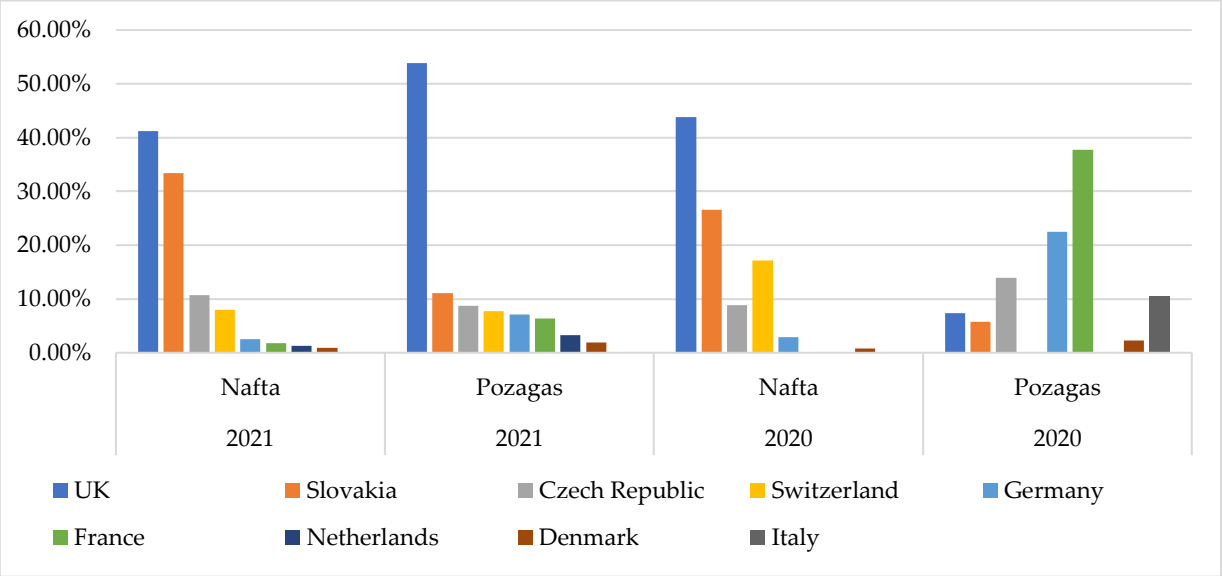
Source: Ministry of Economy of the Slovak Republic
Note: (at 101.325 kPa and 15 °C)

Both operators provide land gas storage services for a number of foreign gas companies (see Figure 7). As one can see from the figures, in 2021 the highest capacity utilisation was by the UK, followed by Slovakia, the Czech Republic and Switzerland. In 2020 the highest capacity utilisation of Pozagas company storage was by France and Germany.

[17] SPP prvýkrát nakúpil LNG, dodávky plynu sú bez obmedzení (2022). SPP: https://www.spp.sk/spp-prvykrat-nakupil-lng-dodavky-plynu-su-bez-obmedzeni/

[18] SPP uzavrel zmluvu s ExxonMobil a ďalej posilňuje bezpečnosť dodávok plynu pre Slovensko (2022). SPP: https://www.spp.sk/spp-uzavrel-zmluvu-s-exxonmobil-a-dalej-posilnuje-bezpecnost-dodavok-plynu-pre-slovensko/

Figure 7. Storage capacity utilisation by country



Source: Regulatory Office for Network Industries

Slovakia's gas crisis readiness

Given the readiness of storage this heating season, the pervasive challenge facing Slovakia and the EU is not shortage but financial and economic costs resulting from the sustained high gas price environment – industry, SMEs and households. The collapse of a market operators like SPP, the Slovak supplier of last resort, would require government intervention in the event that operators were unable to deliver on their contractual obligations. The current regulatory framework was simply not designed to cope with a large systemic rupture in the market, which led to the collapse of Slovakia Energy – a member of Bohemia Energy – in 2021[19].

At the time of writing (November) the government has not come forward with its full package of market interventions to ensure affordability and security of supply in the energy market. Regulatory Office for Network Industries is drafting a proposal for end-user customers that it will submit to the government reclassifying up to 24% of Slovak households (432,000) as protected customers.[20] Otherwise, there is no information on prices for regulated customers[21] nor on whether the category of price-regulated customers itself will be extended to include municipalities, public agencies, small and medium enterprises and, to some extent, the largest energy consumers. Other than a price ceiling for electricity.[22]

Law on Energy 251/2012 definition of vulnerable consumers connected to the distribution network are as follows:

- household gas customers,
- small businesses,
- gas consumers producing heat and domestic hot water for household or personal use under and who are unable to switch to another fuel,

[19] Bohemia Energy, materská skupina Slovakia Energy, končí pre extrémny rast cien energií (2021). Forbes Slovensko: https://www.forbes.sk/bohemia-energy-materska-skupina-slovakia-energy-konci-pre-extremny-rast-cien-energii/

[20] ÚRSO ukázal, kto sa prepadne do energetickej chudoby. Odhady hovoria až o vyše 430-tisíc domácnostiach (2022). Pravda: https://ekonomika.pravda.sk/energetika/clanok/647989-urso-ukazal-kto-sa-prepadne-do-energetickej-chudoby-odhady-hovoria-az-o-vyse-430-tisic-domacnostiach-priklady/

[21] On December 1 the government announced only 15% increase in prices for gas, although the Regulatory Office for Network Industries initially calculated an increase of 225%. The compensations are, however, questionable as on December 15 Eduard Heger's minority government lost a no-confidence vote in parliament

[22] Vláda schválila zastropovanie cien silovej elektriny pre domácnosti, chce ich tak uchrániť pred dramatickým zdražovaním (2022). Sme: https://domov.sme.sk/c/23071512/vlada-schvalila-zastropovanie-cien-silovej-elektriny-pre-domacnosti-chce-ich-tak-uchranit-pred-dramatickym-zdrazovanim.html

- medical facility operators,
- social services facilities,
- children under social legal protection or social guardianship, schools.[23]

In addition, the Ministry of Economy Decree 416/2012 favours industry by setting restrictive measures for customers that are less affected by outdoor air temperatures (more than 50% of their annual gas consumption).

Slovakia's Low-carbon strategy 2050 relies on natural gas as a key transition fuel for national emissions reductions. First for the decarbonization of the heat sector, especially shifting from coal in DH systems to gas, biomass and the installation of combined heat and power (CHP) units.[24] All solid fuel heating plants will have to start decommissioning in 2025. Air quality has been a persistent challenge for Slovakia at the intersection of heavy emitters in transport, industry, coal power plants and individual heating sources. Noting Slovakia's high share of nuclear in electricity and gas in heat, the National Energy and Climate Plan identifies three areas with the greatest potential for decarbonising energy – (i) substituting coal with low-emission sources; (ii) energy efficiency measures; and (iii) transport.[25] There have been several strategies and attempts to encourage fuel switching, but none has been a great success (for example in the first round of subsidies there was only one applicant).

The high price environment has already triggered responses from some households, further incentivised by government subsidies for switching from gas boilers to biomass or heat-pumps. Substantial share of Slovakia's Recovery and Resilience Plan, about EUR 528 million, will go towards upgrading the building stock, which includes home renovation grants for up to 30,000 older detached houses by 2026. The grant is conditional on least 30% savings of primary energy, including but not limited to: home insulation, replacement of windows, replacement of heating source (including switching to a gas boiler), green roofs, installation of shading technology, asbestos removal.[26]

While Slovakia is a rural country with a large number of standalone homes, a significant share of households live in apartment blocks supplied by district heating or a communal boiler. For the most part, households move away from the district

[23] Law on Energy 251/2012 Coll. (2022). Zákony pre ľudí: https://www.zakonypreludi.sk/zz/2012-251

[24] Low-Carbon Development Strategy of the Slovak Republic until 2030 with a View to 2050 (2019). Ministry of Environment of the SR: https://www.minzp.sk/files/oblasti/politika-zmeny-klimy/low-carbon-development-strategy-slovak-republic.pdf

[25] Integrated National Energy and Climate Plan for 2021 to 2030 (2019). European Commission: https://energy.ec.europa.eu/system/files/2020-03/sk_final_necp_main_en_0.pdf

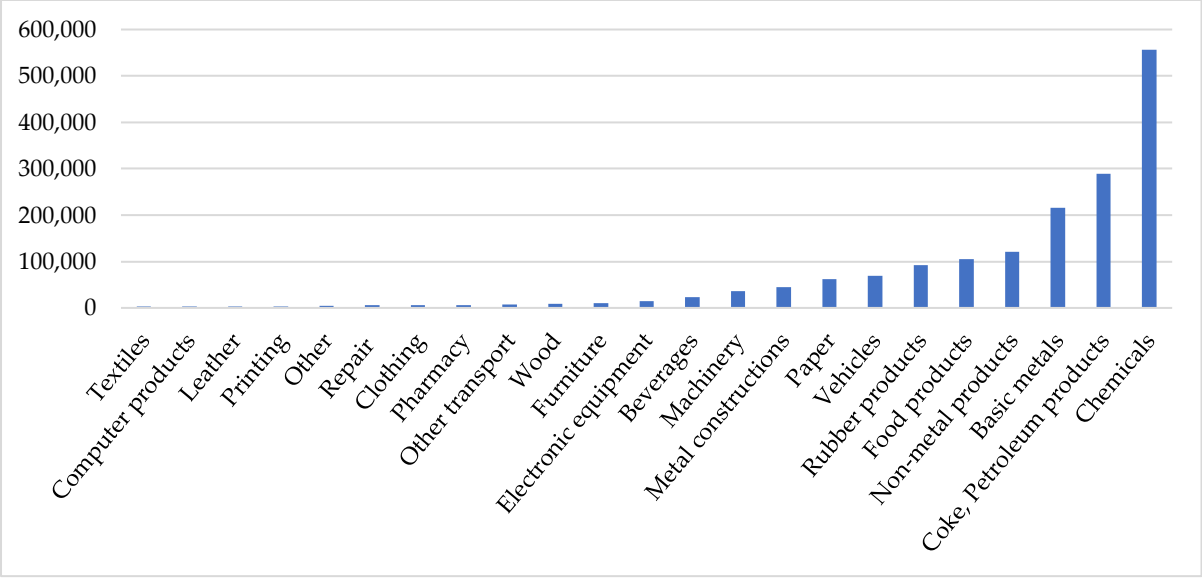
[26] Opatrenia, na ktoré môžete získať príspevok (2022). Slovak Environment Agency: https://obnovdom.sk/opatrenia.php#A

heating systems to boilers for financial and efficiency reasons. Currently 761,000 households are connected to DH, with one third relaying on gas. Only a small number of apartments are equipped with air-conditioning units (air-to-air heat pumps) that could be called upon during a gas shortage. Furthermore if a significant number of apartments decide to switch to electrical convection or heat pumps, this would create a huge new demand load on the system, which also may not be appropriate for parallel and synchronous direct electricity heating loads. As a result apartment blocks could suffer from cascading black-outs that could be hard to resolve under the sustained use of electric heaters.

Moreover, the high gas prices have already had a direct effect on the market for alternative heating systems, driving up heat pump prices 30-40% and pushing delivery dates in excess of 8-12 months.[27] It is also increasing demand for coal and biomass and raising price, growing by over 30% (hardwood) and 60% (softwood) year-on-year. Households that do not normally burn wood would likely switch to biomass with a high water content, which burns much less efficiently and emits more particles into the air.

Outside of household heating, industry is the next largest consumer of gas. It is used as raw material input for industrial processing in chemicals and petrochemicals, metalworking, glass and cement, food, paper and automotive, which make up about half of Slovakia's industrial demand. The largest gas consumer in Slovakia is chemical company Duslo Šaľa, at 11% of total domestic consumption, followed by the Slovnaft refinery in Bratislava. As an energy carrier, the aluminium producer Slovalco is the largest electricity producer from gas, followed by US Steel Košice and ferroalloy manufacturer OFZ.

Figure 8. Consumption of natural gas in industry in 2020 (in 1000 m^3)



[27] Based on informal interviews with Slovak suppliers

Source: Statistical Office of the Slovak Republic

This is already being felt in the wider Slovak economy since most of these large gas consuming companies have suspended operations or reduced production due to rising energy costs.[28] In this way high gas prices are impacting GDP, taxes, and employment.

There is no easy way for industry to overcome the high gas price environment in the short-term while EU and Slovak gas volumes remain tight well through the next winter. For a company like Slovalco, it may make more business sense to suspend industrial production and sell existing energy supply contracts. In the mid- to long-term, industry will need to transition away from all fossil inputs to technologies like green hydrogen. Industry is capable of changing its current practices and becoming greener, but it needs confidence to make long term investments. The challenges it currently faces are not only market unpredictability, but also the unpredictability of the regulatory framework and regime.

The largest industry players are already responding where they can, by shifting basic electricity production to renewable sources. Železiarne Podbrezová will invest EUR 3 million into a new rooftop solar power plant, which will be the largest solar installation in the country.[29] Solar panels will also power the mechanical workshop and supply warehouse. Duslo Šaľa will become the first industrial factory to use large scale wind energy (37 to 43 MW) with a planned EUR 60 million investment.[30]

[28] Fortischem announces mass layoff, hundreds of jobs at risk (2022). Slovak Spectator: https://spectator.sme.sk/c/23003488/fortischem-announces-mass-lay-off.html

[29] Na strechách hál vznikne najväčšia fotovoltická priemyselná elektráreň na Slovensku (2022). Podbrezovan: http://www.podbrezovan.sk/na-strechach-hal-vznikne-najvacsia-fotovolticka-priemyselna-elektraren-na-slovensku/

[30] Veterný park chystá už aj prvá slovenská veľkofabrika. Babišovo Duslo naň vynaloží 60 miliónov eur (2022). Denník N: https://e.dennikn.sk/3056657/veterny-park-chysta-uz-aj-prva-slovenska-velkofabrika-babisovo-duslo-nan-vynalozi-60-milionov-eur/

Slovakia's on and off solidarity

The solidarity mechanism from Article 13 of Regulation (EU) No 2017/1938 commits member states to ensuring necessary flows for third countries to meet the gas demand of its essential customers in emergency situations.[31] This is meant for member states with low storage relative to consumption, like Poland, which would rely on gas storage from a country like Slovakia, with high storage and connectivity.

However, the European Commission found Slovakia's Emergency Plan materialized also in energy law in potential conflict with the solidarity mechanism. According to the Law on Energy 251/2012, if a member state requests the Slovak Republic to exercise solidarity in the supply of gas, the distribution network operator may impose restrictive supply measures and the competent authority can take over the duties of the TSO in a particular territory.[32]

Slovakia created the working group to agree the technical, legal and financial arrangements that will ensure the practical operation of this mechanism[33] that was set up under the umbrella of the Slovak Gas and Oil Association and Slovak Gas Agency. Its members represent the Ministry of Economy, the Regulatory Office, and the gas companies SPP (gas supplier), SPP-d (gas distribution), Nafta (gas storage) and eustream (gas transit).[34] However, no specific agreements have been reached yet. Furthermore, under the 10-year development plan, eustream is to maintain contact with the operators of the networks connected to the border points in the network. This cooperation has led to the publication of the capacity outlook, which reflects the needs and capacity planning of all the neighbouring networks.

When it comes to narrative of decision makers towards solidarity, it is mostly positive. In late July, Prime Minister Eduard Heger appealed to the EU and individual member states for mutual solidarity in the rapid shift away from Russian oil and gas supplies.[35]

---

[31] Regulation (EU) 2017/1938 of the European Parliament and of the Council of 25 October 2017 concerning measures to safeguard the security of gas supply (2017). Official Journal of the European Union: https://eur-lex.europa.eu/eli/reg/2017/1938/oj

[32] Law on Energy 251/2012 Coll. (2022). Zákony pre ľudí: https://www.zakonypreludi.sk/zz/2012-251

[33] Správa o výsledkoch monitorovania bezpečnosti dodávok (2021). Ministry of Economy of the SR: https://www.mhsr.sk/energetika/energeticka-politika/sprava-o-vysledkoch-monitorovania-bezpecnosti-dodavok?csrt=10887148786888518930

[34] Integrated National Energy and Climate Plan for 2021 to 2030 (2019). European Commission: https://energy.ec.europa.eu/system/files/2020-03/sk_final_necp_main_en_0.pdf

[35] Nemecko má veľký problém, no Slováci tiež. Obmedzenie výroby firiem už ťahá priemysel ku dnu (2022). Federation of employers' associations of the SR: https://www.azzz.sk/nemecko-ma-velky-problem-no-slovaci-tiez-obmedzenie-vyroby-firiem-uz-taha-priemysel-ku-dnu-p846.htm

The former deputy prime minister Ivan Mikloš argued that solidarity between member states was essential for the EU to bring an end to Russian fossil fuel imports.[36]

Under its former leadership prior to 12 September, the Ministry of Economy stressed that the solidarity mechanism was a recommendation only and that Slovakia had been filling its gas storages and concluding LNG contracts.[37] It argued that solidarity is to ensure no country shuts itself off so that gas continues to flow.[38]

The new Minister of Economy, Karel Hirman, appointed on September 13, stated that the principle of solidarity is crucial to ensure sufficient energy supplies in a prolonged crisis. For Slovakia, that means securing LNG volumes from other countries and filling its own storage to be prepared to help other countries. In Minister Hirman's own words, "solidarity means providing mutual assistance in case of need and mutual respect for energy flows".[39] Furthermore, he has publicly highlighted the need for Slovakia and the Visegrad countries to do more in cooperation with non-EU Eastern Partnership and Western Balkan countries.

The issue of solidarity among member states has resonated among gas players. In January 2022, the CEO of Nafta warned that gas stores were low across Europe, despite the EU solidarity rules, that the mechanism was not yet tested and the situation differed from 2009, when the crisis was limited to Central and Eastern European countries and the Balkans.[40] Nonetheless, in terms of storage levels and interconnectors the region is better prepared than last year. In September the CEO of SPP claimed that

[36] Energeticky nezávislé Slovensko (2022). Ministry of Environment of the SR: https://www.minzp.sk/files/ezd/prve-zasadnutie-stala-konferencia-energeticky-nezavisle-slovensko.pdf

[37] Analytik so solidaritou medzi štátmi počas plynovej krízy nepočíta (2022). RTVS: https://spravy.rtvs.sk/2022/08/analytik-so-solidaritou-medzi-statmi-pocas-plynovej-krizy-nepocita/

[38] Budeme mať cez zimu dosť ENERGIE? Aké sú zásoby plynu? Prežije Európa bez Ruska? Čo pripravujeme? (2022). Zlatá minca: https://www.youtube.com/watch?v=eDYAYxRETwg

[39] K. Hirman: Štáty EÚ odmietli korekčný mechanizmus tlmiaci energetickú krízu (2022). JOJ TV: https://www.noviny.sk/zahranicie/719358-k-hirman-staty-eu-odmietli-korekcny-mechanizmus-tlmiaci-energeticku-krizu

[40] Zásobníky plynu sú poloprázdne, obchodníci ho pri vysokých cenách radšej predávali hneď, hovorí šéf Nafty (2022). Denník N: https://e.dennikn.sk/2658522/zasobniky-plynu-su-poloprazdne-obchodnici-ho-pri-vysokych-cenach-radsej-predavali-hned-hovori-sef-nafty/

Slovakia could contribute to the solidarity mechanism and provide gas supplies to Poland as its storage capacities cannot meet demand.[41]

According to the Slovak Association of Energy Suppliers (APES), the Slovak gas sector should follow EU solidarity principles. This includes the proposal for a gas allocation mechanism among member states in states of emergency, which it supports, and for maintaining strategic gas reserves under the control of the state rather than commercial suppliers.[42]

[41] Generálny riaditeľ SPP pre HN: Plynu máme viac, ako potrebujeme. Myslím si, že ho bude chcieť Poľsko (2022). HNonline: https://hnonline.sk/finweb/ekonomika/96042093-generalny-riaditel-spp-pre-hn-plynu-mame-viac-ako-potrebujeme-myslim-si-ze-ho-bude-chciet-polsko

[42] Čo prinesú nové návrhy Európskej komisie a ako to ovplyvní trh s plynom? (2022). Energie-Portal: https://www.energie-portal.sk/Dokument/navrhy-komisie-plyn-nazory-expertov-108446.aspx

Platforms for regional gas supply solidarity

From bilateral agreements, to the Ministry of Economy's gas working group, to loose regional platforms like the Visegrad Group or Slavkov Format and the Regional Coordination group designated by the European Commission, gas supply solidarity communication and coordination need to be strengthened.

The Visegrad Group serves as a natural starting point for dialogue and exchange that can be extended to the larger regional grouping defined by the European Commission. While this grouping is recognized at the EU level (gaining particular attention during the 2015 migration crisis), the V4 countries have not always spoken with one voice, and their opinions have differed on a number of issues in the past. The flexible cooperation format is characterised by loose institutionalisation (the only permanent institution is the Visegrad Fund that supports various projects and activities, mainly cultural, sports and educational) that allows the Visegrad countries to concentrate on issues of joint interest, whilst avoiding potentially conflicting themes while adopting different positions on issues of strategic interest. That is why the Visegrad countries have never been a coherent bloc that speaks with one voice nor an integrationist structure defined by strict membership rules, and their differences are as much part of the cooperation as the commonalities.[43]

Although the Visegrad cooperation is activated on an ad-hoc basis and does not have the institutional tools for consensus building, the cooperation has proved effective in areas where the countries have faced similar challenges, like in the energy sector[44] (being pro-nuclear, gas diversification projects, reluctance to deploy more domestic renewables – the latter can be seen in the National Energy and Climate Plans and the fact that all four countries set 2030 renewable targets below the Commission's recommended level).

Slovakia currently holds the V4 presidency (July 2022–June 2023) which gives it the opportunity to table its most important topics. For example, "one of the objectives of the Slovak Presidency will be to strengthen sustainable development in the Central European region" by promoting "fairness, solidarity, social justice, technological neutrality and cost effectiveness in policies and instruments to achieve the EU's common energy and climate goals".[45] Although the main items on the programme are

[43] Strážay, T. When pragmatism wins: Slovakia in the Visegrad Group (2018). In: Yearbook of Slovakia's Foreign Policy, Research Center of the Slovak Foreign Policy Association: https://www.sfpa.sk/wp-content/uploads/2019/04/Yearbook-of-Slovakias-Foreign-Policy-2018.pdf

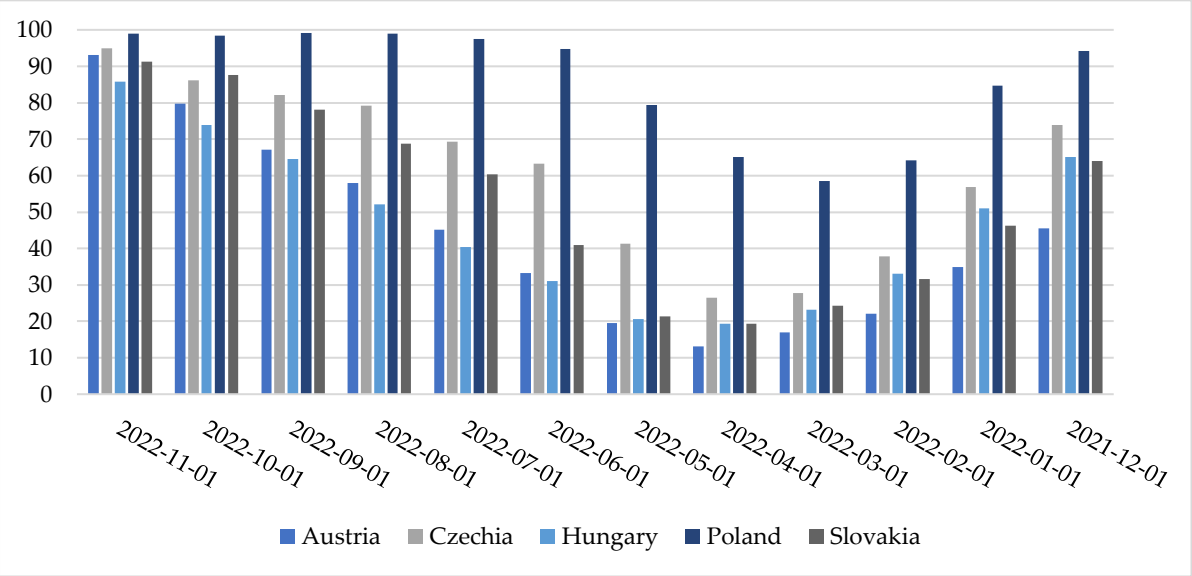
[44] Mišík, M. and Oravcová, V. The Myth of Homogeneity: The Visegrad Group's Energy Transition (2022). In: The Palgrave Handbook of Zero Carbon Energy Systems and Energy Transitions

[45] Programme of the Slovak Presidency of the Visegrad Group (July 2022 – June 2023) (2022). Visegrad Group: https://www.visegradgroup.eu/download.php?docID=493

achieving climate neutrality, the green transition and the circular economy, the V4 Presidency is also an opportunity to raise the issue of solidarity in natural gas and common cooperation. This is in line with the Visegrad priorities of the 2017–2018 Hungarian Presidency, whose key energy priorities included "coordinating V4 actions aimed at implementation of the new security of Gas Supply regulation cross-border cooperation and solidarity mechanisms" as well as progress in areas of cooperation that are in keeping with the Energy Union goals, that are closely linked to the dimensions of energy security and internal energy market and are important to all Visegrad countries.[46]

As far as gas security of supply the countries have similarities and differences. Poland has the lowest storage capacity while Hungary, Slovakia and to a lesser degree Czechia have capacity for third parties.[47] Prior to winter 2022/2023, Slovakia had the second lowest storage levels, as can be observed (see Figure 9). As of 1 November 2022, it had filled just over 91% of its storage capacity. Hungary had the lowest level (more than 85%) and Poland the highest at almost 100% of overall capacity. It should be noted that the figures for the Czech Republic include the storage in Dolní Bojanovice, which is connected to the Slovak infrastructure.

Figure 9. Level of gas storage in Slovakia and neighbouring EU countries (in %)



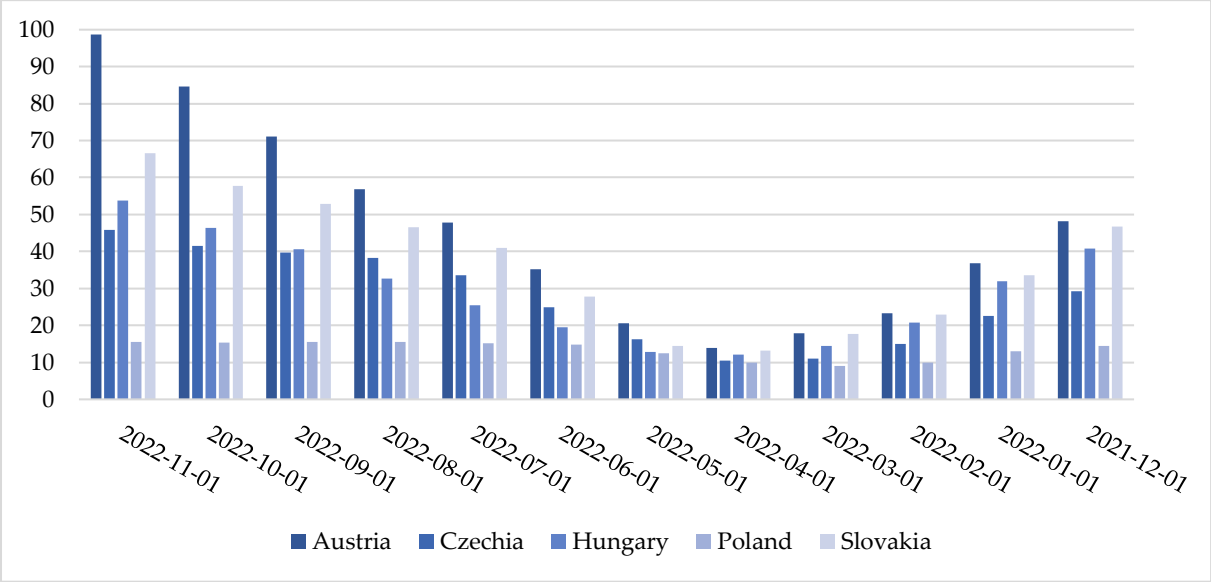
Source: Gas Infrastructure Europe

[46] 2017–2018 Hungarian Presidency (2017). Visegrad Group: https://www.visegradgroup.eu/documents/2017-2018-hungarian/20172018-hungarian

[47] ACER and CEER views on the proposal for a regulation amending Regulations (EU) 2017/1938 and (EC) n715/2009 relating to the access to gas storage facilities (2022). ACER: https://www.acer.europa.eu/sites/default/files/documents/Position%20Papers/Regulators%20feedback%20EC%20storage%20regulation%20proposal_final_formatted.pdf

When we look at the level of gas storage in Slovakia and its EU neighbours in terms of the overall consumption ratio, the numbers are very different (see Figure 10). Poland, which is closest to filling its storage capacity (see Figure 9), has the lowest storage level in proportion to its overall gas consumption (above 15%). While Austria has almost filled its storage capacity compared to overall consumption, and Slovakia comes second on almost 67% of its consumption.

Figure 10. Level of gas storage in Slovakia and neighbouring EU countries relative to overall gas consumption (in %)



Source: Gas Infrastructure Europe

Slovakia is also active in a number of other regional groupings, such as the Slavkov Format, Bucharest Nine (security-focused), Central and South Eastern Europe energy connectvity (CESEC) and the Three Seas Initiative. Since none of these is based on exclusive membership, Slovakia can benefit from participating in all of them and exploit the synergy effects for both its own benefit and the region's.[48]

The Slavkov Format was established between Austria, the Czech Republic and Slovakia in 2015 with the aim of strengthening mutual ties for the benefit of the three states, their citizens, the region and the EU as a whole.[49] Past topics of joint discussion include regional cooperation, energy security, the development of transport infrastructure, the social dimension of European integration, as well as experiences of providing employment support for young people or using European funds to develop

[48] Strážay, T. When pragmatism wins: Slovakia in the Visegrad Group (2018). In: Yearbook of Slovakia's Foreign Policy, Research Center of the Slovak Foreign Policy Association: https://www.sfpa.sk/wp-content/uploads/2019/04/Yearbook-of-Slovakias-Foreign-Policy-2018.pdf

[49] Slavkov cooperation (2022). Ministry of Foreign and European Affairs of the SR: https://www.mzv.sk/sk/web/sk/diplomacia/regionalna-spolupraca/slavkovska-spolupraca

cross-border cooperation. Similar to the Visegrad format, the activities are always coordinated by one of the three rotating presidencies lasting for one year, currently held by Slovakia until June 2023.

This platform could hold potential for cooperation in the energy sector, which it was originally intended to repair with Austria opposing Czechia's nuclear energy policy. The challenging relations stem from Vienna opposing EU accession of the new member states that joined after 2004. Austria's resistance to the Czechia and Slovak nuclear energy plans is a long-standing area of contention.[50] In particular, gas market integration vis-à-vis infrastructure and regulation could be promising area of common interests.[51]

Bilateral discussion forums on the unfolding energy situation are also important for Slovakia and attended by representatives of the Ministry of Foreign Affairs, NGOs, and independent experts under Chatham House Rule.[52] These are aimed at fostering mutual knowledge and understanding of foreign policy goals and interests, deepening bilateral dialogue at the expert level and encouraging independent proposals and initiatives for the joint progress of the countries involved at both the European and international level. They are an ideal format for frank discussions on topics of common interest such as security, energy and cross-border cooperation, that could lead to bilateral agreements.

For example, Poland and Hungary responded cautiously to the idea of strengthening trilateral cross-border cooperation between Slovakia, the Czech Republic and Austria, triggered by a joint statement at a press conference that made reference to coordinating positions before the European Council meeting, considered a privilege of the Visegrad countries, though no such mechanism is in place.[53]

Most countries remain focused on national rather than regional priorities, and consequently the above-mentioned regional formats have been used sparingly as forums for energy security dialogue in the current crisis. The meeting of V4 energy ministers in early February produced the only joint statement of the year on the topics of energy transition and security, focused on interconnectivity of the EU electricity and

[50] Groszkowski, J. The Slavkov Declaration. A new format of regional cooperation (2015). OSW: Centre for Eastern Studies: https://www.osw.waw.pl/en/publikacje/analyses/2015-02-04/slavkov-declaration-a-new-format-regional-cooperation

[51] Slovensko chce viac prepojiť trh s plynom s ČR a Rakúskom (2015). Webnoviny: https://www.webnoviny.sk/venergetike/slovensko-chce-viac-prepojit-trh-s-plynom-s-cr-a-rakuskom/

[52] Bilateral discussion forums (2022). Ministry of Foreign and European Affairs: https://www.mzv.sk/sk/web/sk/diplomacia/regionalna-spolupraca/bilateralne-diskusne-fora

[53] Strážay, T. #V4 2015: neľahké hľadanie odpovedí na európske výzvy (2015). In: Yearbook of Slovakia's Foreign Policy, Research Center of the Slovak Foreign Policy Association: https://www.sfpa.sk/wp-content/uploads/2016/04/Rocenka-zahranicnej-politiky-SR-2015.pdf

hydrogen networks.[54] The loose nature of the institutionalism of the cooperation requires more coordinated common actions or the implementation of best practices.

Enablers of the solidarity mechanism in the region:

- High gas storage and connectivity

Slovakia was arguably the most impacted by Russia's gas supply cut through Ukraine in 2009. The EU responded with the Security of Supply Regulation (EU/994/2010)[55] ('SoS Regulation) which requires among other obligations that member states ensure continued to delivery to 'protected customers and the beginning of a decade long infrastructure development plan, which not only have provided important security of supply but also market integration and price convergence benefits. In a very short time reverse flow was built with the Czech Republic and enabled Slovakia to supply gas to Ukraine in 2014, and this year the Polish-Slovak piece of the North-South corridor interconnector began operations.

Outside of Poland, the Visegrad countries and Ukraine maintain sizeable gas storage capacity relative to consumption, which puts Slovakia, Czechia, Hungary and Ukraine (in the future) in the position to not only assist Poland but also Moldova and the West Balkans.

- EU Third Energy Package and gas security of supply Regulation 2017/1938

The 2016 EU Clean Energy (or Third Energy) Package introduced the legal framework for a solidarity mechanism to ensure deliveries to vulnerable consumers during emergency supply shortage scenarios. It led to the creation of ENTSO-G and subsequent regionally oriented technical gas coordination groups among TSOs. Most of eastern regions defined by the European Commission in the map below are part of the Ukraine Risk Group, coordinated by Italy, which aims to establish a pre-existing channel of TSO information exchange.

Barriers to the solidarity mechanism in the CEE region

- Conflicting national legislation

Both Slovakia and Hungary maintain national energy laws that are potentially contradictory to the security of supply Regulation 2017/1938 by allowing for the restriction of cross-border flows in emergency situations. Slovakia's Emergency Plan allows the Ministry of Energy to invoke storage system operators to halt deliveries to companies supplying foreign customers, which has since been adopted in the Law on

[54] Meeting of V4 Energy Ministers (2022). Visegradgroup: https://www.visegradgroup.eu/meeting-of-v4-energy

[55] Current Regulation (EU) 2017/1938

Energy 251/2012. Similarly, Hungary's Gas Act allows the competent authority to direct TSOs to reduce transit flows during emergency situations.

- Absence of regional planning and bilateral agreements

As part of the Regulation 2017/1938 implementation process, Visegrad group countries submitted revised national Risk Assessment (RAs), Preventive Action Plans (PAPs) and Emergency Plans (EPs) to the European Commission in 2019/2020. The Commission found these to be incomplete: EPs were missing information on regional measures while PAPs were missing information on the application of solidarity provisions.[56]

- Absence of bilateral agreements

Perhaps most important to the solidarity mechanism in practice, for emergency situations, are bilateral inter-governmental agreements. These are needed to clarify minimum emergency gas flows according to pre-defined protected customers, yet most EU member states, including Slovakia, do not currently have any in place.

[56] Commission's opinions on the preventive action plans and emergency plans submitted by EU countries in 2019 (2019). European Commission: https://energy.ec.europa.eu/topics/energy-security/secure-gas-supplies/commissions-opinions-preventive-action-plans-and-emergency-plans-submitted-eu-countries-2019_en

Future outlook for regional cooperation and recommendations for Slovakia

The response to the 2009 gas crisis over the past decade focused on cooperative infrastructure development not only for diversification but also market access, which has contributed significantly to the resiliency of the region in the current crisis. However, no one anticipated the situation in 2022, which requires more comprehensive solidarity extending to demand side measures, particularly in the short term through the next heating season.[57]

Regulation 2017/1938 approaches security of supply entirely on the supply side, defining solidarity in terms of ensuring cross-border flows in times of crisis to meet the demand of all vulnerable and protected customers in the EU. This is very much 2009 gas crisis thinking, which remains critical for any potential supply disruption, but inadequate for the current situation. In the short and medium term, but especially over the next 16-months, the demand side of the equation should become a new focal point of solidarity. Now there should be much more impetus for supporting household energy efficiency measures and energy savings to keep a lid on gas prices for the industrial sector that cannot substitute natural gas in the short term. These are the same no regret policies needed for the energy transition that are critical to meeting 2030 climate targets.

We therefore suggest the following recommendations to enhance the solidarity mechanism in the region and contribute to EU gas solidarity overall:

<u>Short-term recommendations</u>

- Full implementation of Third Energy Package and Regulation 2017/1938

In the event of gas disruptions and emergency situations it is crucial to ensure that deliveries and physical flows continue across borders, including the use of underground gas storage by third countries.

ACER and CEER guidelines for 'burden sharing' for MSs without storage to reach arrangements with SSOs from other MSs for at least 15% of annual gas consumption. Important to link storage targets to national (seasonal) consumption needs (protected customers and essential needs) taking into account structure of cross-border obligations for market players taking into account technical and economic aspects. This could serve to define a regional strategic storage following the beneficiary pays principle.

[57] Council Regulation (EU) 2022/1369 of 5 August 2022 on coordinated demand-reduction measures for gas (2022). Official Journal of the European Union: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32022R1369

MSs without UGS would need some guarantee that the amount of stored gas would be accessible and available regardless of situation in host country, even under declared gas crisis. Existing entities other than TSOs can be tasked by competent authorities to procure and manage strategic storage at the regional or Community levels, including entities designated as supplier of last resort. Need to avoid complicated negotiations and excessively bureaucratic processes when urgent action is needed.

Regional solidarity and cooperation can also be incorporated into Slovakia's National Energy and Climate Plan which is under revision and should be ready by June 2023.

- Promote energy saving measures and light renovations

It is essential that consumers make energy savings, particularly given the high energy prices, and the gas supplier SPP has already noticed a drop in household consumption (calculated without accounting for weather conditions). The Regulatory Office for Network Industries and Slovak Innovation and Energy Agency (under the remit of the Ministry of Economy) have also launched energy saving campaigns.

There should be major incentives for consumers of all types to decrease their consumption. Educational and campaign measures targeted on households, SMEs and municipal sectors providing case studies and easily replicable guidance on how to save energy. Subsidy schemes should also support involvement of the private sector through facilitating or subsidising consumer-loans used for energy efficiency measures and energy upgrades.

Developing the ESCO market and identifying 'quick' fixes that can fit into the immediate 16-month time horizon to relieve gas inventory and prices from the end of this winter to the next.

- End-user price regulation review

From a purely economic perspective, the price signal should be the main driver of 'organic' energy savings. In liberalized Western European markets demand reduction is clearly observable this year in response to increasing prices, for example by September Belgium demand dropped 13% year on year. Alternatively, most CEE governments traditionally regulate end-user prices to keep them artificially low and stable for household consumers. However, maintaining this subsidy in today's sustained high price environment has become untenable for state budgets, forcing politicians and regulators to re-evaluate. The challenge of the pricing tool is further compounded by inefficient legacy district heating systems that are in dire need of investment and modernization.

Mid-term recommendations: 3-5 years

- Developing joint ESCO markets and addressing energy poverty

Energy efficiency is the best means of making savings, but decarbonisation is important as well. However, the building renovations and decarbonisation measures for industry lag behind. Regional cooperation could be extended to these areas, where sharing best practices is key, such as in the case of the Interreg cross-border projects. However, the cooperation should be extended at national level to track energy efficiency progress – as seen in the case of filling the underground gas storage units. Following other countries' achievements can help to speed up domestic processes. Also, the various schemes aimed at cost-effective measures should be enhanced beyond the national level.

For a region in need of infrastructure modernization, public and private building renovations and industrial decarbonisation measures are lagging behind the rest of Europe. This is something that can benefit tremendously from regional cooperation, not only for data driven best practices and progress updates, but to integrate and grow cross-border energy service contract (ESCO) markets that are struggling to meet surging demand.

This must also be used to prevent mass household switching to biomass which is already a major contributor to Slovakia's poor air quality. Therefore, the recommendation to tackle energy poverty combined with the initiative from Slovakia's Regulatory Office for Network Industries represents a good starting point.

- Accelerate deployment of renewable energy sources

In response to the potential for gas shortages and rising fossil fuel prices, large industrial players and companies have started deploying renewable energy sources, which is important for enhancing domestic and regional energy security as well. It is vital to continue this trend.

Long-term recommendation to 2030

- Joint research and development programmes

As evidenced by the joint statement of the Visegrad energy ministers earlier in the year, development of the green hydrogen market is a common strategic interest. It will certainly be a challenge for these heavily industrialized economies to decarbonize the sector, especially from 2030.