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TurkStream on the diversifying south-eastern European gas market

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December 2020 saw the completion of another part (Bulgaria–Serbia) of the European section of the TurkStream gas pipeline, through which gas has been exported from Russia to south-eastern Europe since January 2020. The capacity of the entire route is not yet being fully used, but it has already reduced Russia's dependence on transit via Ukraine. In 2020, around 12 bcm of gas was sent via TurkStream instead of Ukrainian pipelines: half to Turkey, and the rest to Bulgaria, Greece and North Macedonia. Ultimately, the pipeline will also transport gas via Serbia to Hungary, Austria and Romania. The rapid implementation of the entire project, in a region where infrastructure investments usually take a long time, represents a success for the Kremlin. Neither the economic challenges linked to the COVID-19 pandemic nor the political opposition of the US to new links between Europe and Russia (which will mainly strike at the Nord Stream 2 pipeline) have got in the way of the project's completion.

However, TurkStream will not stop the changes happening on the south-eastern European gas market, many of which are unfavourable for Russia. Some of them may paradoxically even be accelerated due to TurkStream's launch. In recent years, infrastructure has been developed which enables the region's countries to diversify their gas supply sources and routes, including Azerbaijan or (in the form of LNG) the USA and Qatar. Additionally, the launch of TurkStream has freed up large capacities of trans-Balkan gas pipeline, as well as those running along the Ukraine–Hungary–Serbia route, all of which can be used to deliver gas supplies from outside Russia.

The project and its implementation status

The idea of constructing a new gas pipeline through Turkey to Europe arose at the end of 2014 after Russia withdrew from the South Stream project, for reasons including the demand from the European Commission that its construction and use should be fully compliant with EU law. TurkStream was constructed with a capacity of 31.5 bcm (initially planned to be 63 bcm), giving Russia new options to supply gas via the Black Sea to Turkey and south-eastern and central Europe, bypassing Ukraine. The pipeline's offshore section runs under the Black Sea from the compressor station near Anapa in Russia to Kıyıköy in Turkey; thereafter it splits into two branches, the first supplying the Turkish market, and the second (still uncompleted) to south-eastern and central Europe.

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Despite the political challenges – on the one hand, international sanctions and Russia's difficult relationship with the EU after its annexation of Crimea and involvement in the war in eastern Ukraine; and on the other, the complex nature of Russian-Turkish relations – the project has proceeded without any holdups. In 2018, the construction of the pipeline's offshore section was completed, and the end of 2019 saw the completion of part of its European leg to Bulgaria. As of 1 January 2020, Russian gas to Turkey, Bulgaria, Greece and North Macedonia has been sent via TurkStream instead of the trans-Balkan route via Ukraine and Romania. According to data published in the Turkish media, 5.8 bcm of gas was transported to Europe in 2020 via this route. There is no information about supplies to Turkey itself, which are estimated at about 6 bcm.

" Despite the pandemic and the unfavourable political situation, the European line of TurkStream is being expanded, and Russian gas is reaching other Balkan countries via a new route.

In 2020, further parts of the European gas pipeline were built in Bulgaria and Serbia, and its capacity was increased (at the Bulgarian-Turkish border point) to around 20 bcm per year. On 1 January 2021, Gazprom began delivering gas onto the Serbian market via TurkStream (Serbia's demand for Russian gas in 2019 was 2.13 bcm). As of 1 April this year, Russian gas is being transported via TurkStream to Bosnia and Herzegovina via Serbia (imports from Russia amounted to 0.24 bcm in 2019), and from Bulgaria to Romania (imports from Russia in 2019 reached 0.99 bcm).

The Balkan countries' demand for gas is modest[1] TurkStream's profitability is to be guaranteed by gas exports via this route to Hungary and Austria, which import much larger volumes of Russian gas (in 2019, 11.26 and 16.28 bcm respectively). To enable transmission to these countries (and to the Baumgarten gas hub in Austria) some parts of the infrastructure on the Serbian-Hungarian and possibly the Hungarian-Austrian border have still to be completed. In June 2019, Serbia and Hungary concluded an agreement to build a 15 km-long interconnector, with a capacity of 6 bcm, which would enable Russian gas to be transmitted via TurkStream to Hungary; the investment should be completed by October 2021.[2] Hungary has also been negotiating a new long-term contract for supplies from Russia, as the current arrangements are expected to expire in October 2021.

Unlike the South Stream gas pipeline, the European branch of TurkStream is being constructed in compliance with EU law. In each country of the region, local operators are responsible for the implementation and operation of individual sections. In Bulgaria and Hungary, the decision to go ahead with the construction was taken after the open season procedures for surveying market interest were opened up to all interested parties, leading to most of the route's capacity being booked. In the case of Bulgaria, Gazprom managed to reserve 90% of the capacity offered at that time[3]. Any remaining pipeline capacity should be made available at auctions organised in accordance with the EU calendar.

The importance of TurkStream for Bulgaria

Russia's decision to implement the TurkStream project meant that Bulgaria risked losing its transit role in the transmission of Russian gas to Turkey and Greece, and in consequence, a significant decrease in its revenues from transit fees (estimated at over €100 million annually). It also risked a reduction in the security of its natural gas supplies. So far, the trans-Balkan gas pipeline running from Ukraine

[1] According to Gazprom data, in 2019 Croatia was the largest recipient of Russian gas (2.82 bcm annually), followed by Greece (2.41 bcm), Bulgaria (2.39 bcm) and Serbia (2.13 bcm).

[2] The connector's capacity is planned to increase later to 8.5 bcm: according to the current plans, this should be ready by October 2023.

[3] As part of the binding phase of the open season procedure completed in 2019, the remaining 10% of the capacity in the Bulgarian branch of TurkStream was reserved (in addition to Gazprom) by Bulgartransgaz and the MET Group, registered in Switzerland.

and Romania through Bulgaria has been the main route for Russian gas exports to Turkey, Greece and North Macedonia, and onto the Bulgarian market. Sofia therefore made sure that the European leg of TurkStream ran through Bulgarian territory, and not through that of Greece, which had also been considered. At the same time, however, Russian plans to suspend transit through Ukraine, together with the changes on the European gas market (including the greater availability of LNG), have accelerated the progress of projects intended to allow Bulgaria to diversify its sources and supply routes. New interconnectors have been created (in 2016, the Giurgiu–Ruse interconnector on the border with Romania) and the existing ones have been expanded (a bi-directional transmission at the Kulata–Sidirokastro link with Greece has been launched). Further interconnectors are being planned and implemented (the IBS Niš–Novi Iskar with Serbia, and the IGB Stara Zagora–Komotini). Together with the launch of the gas exchange in 2019, the process of liberalising the gas market, which had been delayed for years, was also accelerated. Bulgaria's strategic goal is to create a regional hub (the Balkan Gas Hub) in the country, allowing gas from Russia and the Caspian region (including LNG) to be traded.

" Thanks to TurkStream, Bulgaria remains an important transit country; it has strengthened its role on the regional gas market, and is diversifying its sources of supply.

Bulgaria's dependence on Russian gas has decreased in recent years. In 2018, its share in domestic consumption was almost 100%, but by 2020 (thanks to LNG imports via Greece beginning) it had already fallen to 76%. This dependency is continuing to decline, for reasons including the start of gas imports from Azerbaijan as of January 2021,[4] as well as expanding opportunities to import LNG.

Joining the TurkStream project has allowed Bulgaria to maintain its position as a transit country, although the volume of Russian gas sent via Bulgarian infrastructure has decreased in recent years, mainly due to Turkey's diversification of sources of supply.[5] Even before TurkStream was launched in 2019, it amounted to 7.5 bcm, i.e. less than half the amount of the year before (15.5 bcm) and 60% less than in 2017 (17.8 bcm). After the launch of TurkStream, transit through Bulgaria fell even lower: in 2020 less than 6 bcm of gas was sent via the European leg to the markets of Bulgaria, Greece and North Macedonia. Russia's commencement of gas exports via TurkStream to Serbia (and ultimately to Hungary) in 2021, as well as to Romania via the Black Sea route, will help to raise the Bulgarian transit volumes, but will probably not compensate for the loss of transit to Turkey. Moreover, the scale of the growth will depend on the new supply contracts, as well as on how competitive Russian gas remains on the market.

The implementation of the Bulgarian section of TurkStream and the other diversification projects are opening the way for Bulgaria to fully implement its gas imports according to the market rules, reduce its dependence on supplies from Russia, and minimise Russian influence in the domestic gas sector. For these reasons, Moscow will try to maintain its position on the Bulgarian gas market by controlling the option to trade the excess gas and to allow other suppliers access to TurkStream's capacities. It will also want to influence Bulgaria's political and economic elite during the negotiations of Sofia's new long-term contract with Gazprom (which will expire in 2022). Russia is more likely to achieve its goals due to the non-transparency of the decision-making processes and the high level of corruption in Bulgaria, which for example translate into arbitrary decisions taken by the local authorities.

[4] In 2013, a contract was signed between the state-owned company Bulgargaz and the Azerbaijani SOCAR concern to supply 1 bcm per year.

[5] See A. Łoskot-Strachota, 'Turkey: accelerating the diversification of gas supply sources', OSW, 21 March 2019, www.osw.waw.pl.

Serbia's motivations for participating in TurkStream

Belgrade has become involved in the TurkStream project for several reasons. The construction of this pipeline on Serbian territory will significantly improve the security of its natural gas supplies. So far, these have only been transmitted along the route from Russia through Ukraine and Hungary, and Serbia was the last country (apart from Bosnia) on the pipeline route. Moscow's long-declared desire to suspend transit via Ukraine has been a major challenge for Belgrade. Now Serbia has a chance to become an important country for the transit of Russian gas to Central Europe, and thus to gain additional revenues estimated at around €50 million a year. The opening of the new route is also expected to reduce the costs for transporting gas to Serbia by US$30 per 1000 m^3.

" TurkStream is an opportunity for Serbia to reduce its dependence on Russian gas and remodel its relations with Russia.

Russia and Gazprom itself have significant influence in the Serbian gas sector, which has contributed to the rapid construction of the TurkStream section in Serbia. Gazpromneft controls NIS, the local energy company. The *de facto* spokesman for Russian interests, Dušan Bajatović, is also the director of the state-owned company Srbijagas; he is also a prominent politician in the Socialist Party of Serbia (SPS), which is part of ruling coalition. For years, Bajatović has been blocking the implementation of EU-promoted diversification projects (such as the Dimitrovgrad–Niš gas connection with Bulgaria, which has a planned capacity of 1.8 bcm) and the liberalisation of the gas market, moves which would limit Russia's influence in the Balkans. These influences, the lack of transparent rules for the operation of the natural gas market, and the monopolistic position of Gazprom and Srbijagas[6] are the main obstacles to the diversification of sources and supply routes and the liberalisation of the local market, and have also affected the regulations of TurkStream's operation in Serbia.

Belgrade's concession to Russia was to exclude the section of the TurkStream passing through Serbia from the EU's third energy package rules. In 2020, the market regulator of the Energy Agency of the Republic of Serbia (AERS) decided to exclude 88% of the capacity of the Serbian section of TurkStream from the EU's third-party access (TPA) rule for 20 years. At the same time, the company Gastrans (controlled by Gazprom) was certified as an independent gas transmission system operator. Moreover, Gastrans has not been obliged to apply the regulated transmission tariffs on TurkStream's Serbian section. These decisions met with a critical reaction from the Energy Community, deeming them to be in violation of EU law, which Serbia is obliged to apply as a member of the Community.

The launch of Russian gas supplies via TurkStream freed up some of the capacities (6 bcm per year) in the pipelines being part of Ukrainian corridor and running via Hungary to Serbia. This opened up opportunities for Belgrade to look for new, cheaper sources of gas, such as the LNG terminal on the Croatian island of Krk, or the European gas hubs. At the end of 2021, the long-term contract with Gazprom for gas supplies to Serbia is to expire; that may be help in reshaping relations with Russia, especially as Serbia has taken certain measures which could contribute to reducing Russia's influence in the energy sector. In December 2020, the government adopted the Srbijagas restructuring plan, which assumes *inter alia* the real separation of transport and distribution, which would meet the conditions for opening accession negotiations with the EU in the chapter devoted to energy issues. However, it is currently difficult to assess whether it will indeed lead to the EU regulations being implemented in Serbia. The construction of a second interconnector with Bulgaria, which could be used to import gas from Azerbaijan and Greece (LNG), was planned to begin in May this year. However, we should expect Russia to try and block both the restructuring of Srbijagas and the diversification of supplies, using its influence both on the Serbian political scene and in that country's gas sector.

[6] For years, Srbijagas has been generating large losses (for reasons including its sale of gas below the purchase cost), which the state budget covers.

Alternative infrastructure projects in the region

The TurkStream project has been implemented during the rapid development of gas infrastructure in south-eastern Europe. The pipeline was constructed and launched during a time of an oversupply of gas (including LNG) on the global and European markets, which by extension meant that prices were low. This encouraged the acceleration of work on projects alternative to Russia's as well as the diversification of supplies in the region, and resulted in a fall in gas imports from Russia and Russian transit through regional infrastructure, even before TurkStream was launched.

> **In parallel with TurkStream, numerous new connections to enable supplies of non-Russian gas have been created in south-eastern Europe.**

In the last year or so, apart from TurkStream, other connections enabling the transmission of natural gas have been launched; for example, from Greece to Bulgaria, and from Bulgaria to Romania as part of the BRUA project. In the future, BRUA may allow the import of gas from Romania's Black Sea shelf (mainly by Hungary). The completion of the TAP and TANAP gas pipelines as part of the Southern Gas Corridor has enabled supplies from Azerbaijan to Greece, Albania and Italy.

The EU and the Energy Community have been pressing for years to implement projects that would guarantee a genuine diversification of supplies in Serbia and increase the diversity of their sources in Bulgaria. In stress-tests carried out by the European Commission since 2014 examining the effects of a possible suspension of supplies from Russia, both of these countries were among the most vulnerable in Europe.[7] In 2021, after many years of delay, the construction of the Novi Iskar–Dimitrovgrad–Niš interconnection between Serbia and Bulgaria is scheduled to start; this link will facilitate gas supplies to Serbia, for example from Greece or Turkey via Bulgaria. The value of the entire investment is €85 million, almost 60% of which is being funded by the EU. The US is also putting pressure for the gas infrastructure in the region to be expanded. Washington has been particularly active in supporting the implementation of diversification projects in Albania and Bosnia and Hercegovina, such as the southern connection between Croatia and B&H.[8] This would enable B&H to be supplied from the LNG terminal in Croatia. If the Ionian-Adriatic Gas Pipeline (IAP) project goes ahead, it could also import gas (from Azerbaijan, among others) via Turkish territory. In January, the authorities of the Federation of Bosnia and Herzegovina adopted a law that will enable a link with Croatia to be constructed. The Albanian government is also considering building a floating LNG terminal in the port of Vlorë; the US companies Excelerate Energy and ExxonMobil are currently preparing a feasibility study for this project.

The redirection of Russian gas to TurkStream in 2020 also freed up part of the capacity of the trans-Balkan gas pipeline linking Ukraine, Romania, Bulgaria, Greece, North Macedonia and Turkey, which enabled bi-directional flows. The capacities hitherto used for Russian gas exports on the Ukraine–Hungary–Serbia route have also become available to market participants since the beginning of 2021. At the same time, significant changes have been taking place concerning the rules of access to gas pipeline capacity in the region. The transit contracts with Gazprom, which had defined rules of gas transmission via the existing routes for many years, including the trans-Balkan gas pipeline in particular, have gradually been expiring (as happened recently in Romania[9]), or *de facto* ceasing to apply (as in Bulgaria). As a consequence, application of the EU rules for access to infrastructure has become more common, including open season procedures and capacity booking through auctions. This enables more transparent and non-discriminatory access to gas pipelines for all the interested parties.[10]

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[7] 'Stress tests: cooperation key for coping with potential gas disruption', European Commission, November 2014, ec.europa.eu.

[8] Zagvozd – Novi Travnik, 135 km in length.

[9] On 22 February this year the last Romanian-Russian transit agreement was terminated prematurely.

[10] See A. Łoskot-Strachota, 'More EU, less Russia. Transforming gas transmission rules in Central and South-Eastern Europe', *OSW Commentary*, no. 354, 14 October 2020, www.osw.waw.pl.

The increased availability of capacities in the existing and new gas pipelines opens up the possibility for the countries in the region to import gas from alternative sources. This is supported by the expansion of LNG terminals in neighbouring countries. In recent years, the capacity of LNG terminals has been increasing, primarily in Turkey and Greece. One country which will benefit from this is Bulgaria, which since 2019 has been importing LNG via the Revithoussa terminal. The Bulgarian operator is also participating in a project to build a second LNG terminal in Greece.[11] Access to the capacity of the trans-Balkan gas pipeline will also allow Bulgaria to import gas from Turkey. For other countries in south-eastern and central Europe, the recently opened terminal on the Croatian island of Krk, as well as the Italian terminals, may offer options for alternative sources and supply routes.

Changes in the role of individual states in gas transit

The expansion of new connections and supply routes in south-eastern Europe is altering the transit importance of individual countries. With the opening of TurkStream and the minimisation of Russian gas exports via the trans-Balkan gas pipeline, Romania's transit role has decreased. Similarly, gas transit from Russia via Hungary is declining, at least temporarily. On the other hand, it is evident that the important role of Bulgaria in regional gas transmission, while presently smaller than in previous years, has been maintained. These reshuffles will encourage the expansion of new connections and the implementation of individual countries' ideas for shaping the regional gas market (one example of which, in the case of Romania and Hungary, is the BRUA project).[12]

" The new routes are changing the transit importance of the countries in the region, reducing the role of cooperation with Ukraine, and increasing it in relation to Greece and Turkey.

Changes in the directions and routes of gas flows are also affecting international cooperation between the countries of south-eastern Europe. Along with the decrease in transit, the importance of Ukraine is decreasing, while the role of Turkey and Greece (especially for Bulgaria) is rising. At the same time, along with the opening of access to the trans-Balkan gas pipeline to new suppliers and sources, new options for cross-border cooperation are arising: including, for example, the possibility of Ukraine importing gas via the Balkans (the Ukrainian company ERU has been testing the option of importing from Greece).

In the future, the role of south-eastern and central European countries in regional gas transmission and trade will depend on the date of completion, the final shape and the actual use of TurkStream, as well as on the success of the alternative projects to Russia's. It will also depend more on the competitiveness of access to regional infrastructure and gas from other sources. The further development of the BRUA projects and the launch of extraction work on Romania's Black Sea shelf will be important parts of this jigsaw,[13] as will the future of the other Black Sea gas reserves – including those being explored in Ukraine and Turkey.

The reforms observed in the countries of the region, the effectiveness of the continued liberalisation of the Bulgarian market and the changes in the regulation of Serbia's gas market will also be important. Although this process is still ongoing and can be difficult (especially in the case of non-EU countries such as Serbia), the existence of common and transparent rules for access to capacity or the implementation of new investments will boost competition and make the region's infrastructure more attractive, and may in consequence contribute to the gradual reduction of the roles of Gazprom

[11] In 2020, it bought a 20% stake in the Greek FSRU terminal in Alexandroupoli (under construction), and reserved an annual capacity of 0.5 bcm for the years 2022–2032.

[12] See K. Całus, A. Łoskot-Strachota, 'BRUA i rumuńskie pomysły na środkowoeuropejski rynek gazu' ['BRUA and Romanian ideas for the Central European gas market'], *Komentarze OSW*, nr 365, 24 November 2020, www.osw.waw.pl.

[13] *Ibid.*

and Russia.[14] The fact that a number of long-term contracts with Gazprom will expire in the coming years (those with Serbia, Turkey and Hungary in 2021, with Bulgaria in 2022) offers an opportunity to reduce dependence on Russian gas. These market and infrastructural changes are being actively supported by EU institutions (financially) and the US (politically). The process is also supported by regional platforms (CESEC, EC, the Three Seas Initiative) facilitating cooperation between the countries of the region, often differing in their specific interests, as well as by Brussels' persistent emphasis on implementing the common EU gas market rules.

Less Russia on the regional gas markets?

The implementation of TurkStream was intended to allow Russia to maintain or even strengthen the role of Russian gas and Gazprom's position in south-eastern Europe, in addition to reducing transit through Ukraine. However, with the emergence of alternative routes & sources of supply and the growing global availability of gas (including LNG), the countries of the region are importing less and less Russian gas. Thus, the European leg of TurkStream, which was built and now operates in accordance with EU rules, has become just one more of several gas pipelines in the region which are formally available to all interested third parties. Although Russia will remain an important supplier of natural gas to the markets of south-eastern Europe, the level of its exports will be ever more dependent on the market situation and the price competitiveness of Gazprom, as well as its flexibility in using the greater number of available routes (including Ukrainian pipelines).

> **TurkStream will not stop the ongoing processes of change on the south-eastern European gas market, which are unfavourable for Russia; and, paradoxically, it may even accelerate some of them.**

Although TurkStream has now been launched, and Gazprom has reserved the lion's share of its capacity, the decline in Russian influence in the gas sectors of south-eastern European countries is also clear. This is due to ongoing diversification and integration (both intra-regionally and with neighbouring EU countries & Turkey), the ongoing liberalisation of the region's gas markets, and cooperation with the EU and the US. The importance of cooperation with Russia for Greece, which has been excluded from TurkStream, is clearly declining; and recently the same has become true for Bulgaria. Even in Serbia, which is delaying the diversification and implementation of EU law, the availability of alternative routes and sources of supply is opening up the possibility of reforming the gas market and revising the basis of its gas relations with Russia.

The ongoing energy transition in the EU will pose a challenge for the future of natural gas investments in the region and for the use of both TurkStream and other pipelines. While gas will continue to be used as a bridge fuel in many south-eastern European countries, the need to meet emission reduction targets will force reductions in the use of natural gas in the coming decades. Along with the withdrawal of EU funding for gas investments, this will reduce the profitability of new infrastructure in the region. It cannot be ruled out that some of the region's less gas-intensive countries will decide to accelerate their transition to carbon-neutral energy sources. These changes will also set challenges for Gazprom and Russia. We may expect Moscow to take action in order to maintain the highest possible demand for natural gas in the region for as long as possible – including by making new investments (after TurkStream, for example, in gas power plants[15]), joint hydrogen projects, or by developing natural gas-fuelled transportation.

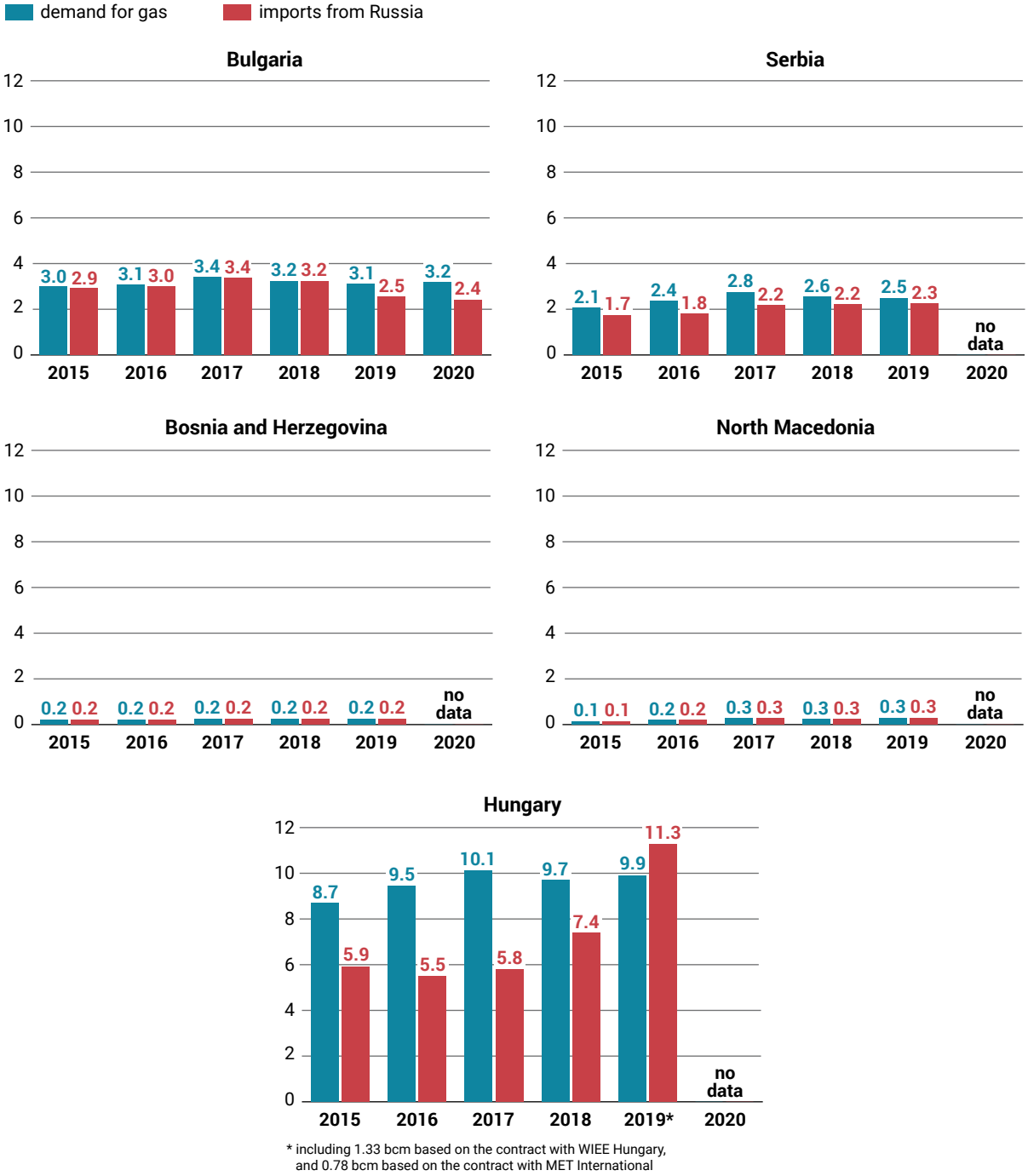
[14] For more see 'More EU, less Russia...', *op. cit*.

[15] For example, the Bulgarian oil refinery Neftokhim Burgas, owned by the Russian Lukoil concern, has announced the complete transition of its heat and power plant (which had until now been partially using fuel oil) to natural gas. '"Нефтохим" ще преобразува ТЕЦ-а си на газ с 339 млн. лв.', Mediapool.bg, 25 January 2021, www.mediapool.bg.

Map. TurkStream and the gas infrastructure in Central and South-Eastern Europe

Sources: ENTSOG, gas system operators of individual countries.

Charts. Demand for gas and import of natural gas from Russia in south-eastern European countries receiving gas from TurkStream



* including 1.33 bcm based on the contract with WIEE Hungary, and 0.78 bcm based on the contract with MET International

Sources: gas system operators of individual countries, the Energy Community, Gazprom Export.