



## Special Report on South Stream as Gazprom Abandons the Project and Announces a New Gas Pipeline to Turkey

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### Special In-Depth Report on South Stream

*Gazprom abandons project, proposes new pipeline to Turkey*

On the 1<sup>st</sup> of December, the Russian President, Vladimir Putin, made a significant announcement: the South Stream gas pipeline project has been abandoned, and Gazprom is proposing a pipeline to Turkey as a replacement.

The in-depth report that follows provides background information on the South Stream project, and highlights the difficulties faced by the project long before the decision was taken to abandon it. The report then considers the merits of the proposed alternative – a pipeline to Turkey – before concluding with an analysis of the winners and losers from the decision to abandon South Stream.

#### *The South Stream project*

The South Stream pipeline was planned for the delivery of Russian gas under the Black Sea, through Turkish territorial waters, to Bulgaria. From Bulgaria, the pipeline would have passed through Serbia, Hungary, and Slovenia, before reaching Tarvisio in Italy. Additional spurs were planned from Hungary to the Baumgarten gas hub in Austria, and from Serbia to Croatia and Bosnia-Herzegovina.

During 2011, Russia signed intergovernmental agreements with governments from each of the partner countries, while Gazprom formed 50-50 joint ventures with local energy companies in each of the South Stream partner countries. For the offshore section, Gazprom held a 41 percent shareholding in a consortium shared with ENI, EDF, and Wintershall.

The offshore section was projected to consist of four 15.75 bcm per year strings, giving a total capacity of 63 bcm per year.

Crucially, the Russian onshore section of South Stream required the construction of significant new pipeline capacity. Two lines were planned to connect the Russkaya compressor station near the town of Anapa, in Russia's Krasnodar region (where South Stream was planned to enter the Black Sea) with the existing Russian gas pipeline network. Collectively, the new pipelines on Russian territory were referred to by Gazprom as the 'Southern Corridor'.

The 880 km-long 'Western Route' was planned to connect the Pisarevka compressor station in Russia's Voronezh region with the Russkaya compressor station via the Shakhtinskaya compressor station in Russia's Rostov region, and the Korenovskaya and Kazachya compressor stations in Russia's Krasnodar region.

The second, 1626 km-long 'Eastern Route' was planned to connect the Pochinki compressor station in Russia's Nizhnyi Novgorod region with the Korenovskaya compressor station, where it would run in parallel to the Western line to the Russkaya compressor station.

These details are highly significant. Firstly, the Pisarevka compressor station is on the Russian-Ukrainian border, and serves the 'Soyuz' gas export pipeline. It is therefore clear that the Western Route was intended to divert gas exports away from Ukraine to South Stream. Secondly, new gas production in Russia's Yamal region is delivered to European Russia via the Bovanenkovo-Ukhta and Ukhta-Gryazovets pipelines. From Gryazovets, gas is currently delivered

westwards to Torzhok (and further on to Europe via Belarus) and northwards to Vyborg, where it is fed into the Nord Stream pipeline. Between 2007 and 2012, Gazprom built the 36 bcm capacity Gryazovets – Pochinki pipeline. Therefore, the Eastern Route is designed to bring gas from new production in Russia's Yamal region down to Russkaya for export via South Stream. This information may seem excessively detailed but I assure you, dear reader, that it will become significant later, when we discuss Gazprom's proposed alternative to South Stream.

#### *Delays and problems with partners*

The South Stream project ran into difficulties long before President Putin's announcement on the 1<sup>st</sup> of December 2014. In December 2011, then Prime Minister Putin issued instructions to Gazprom that construction should begin before the end of 2012. Final Investment Decisions (FIDs) were taken for each of the sections in late 2012, and a symbolic first welding took place at the Russkaya compressor station in Anapa. So far, so good.

In mid-2013, Gazprom announced that offshore construction would begin in Q2 2014, and that the project would be launched before the end of 2015. Bulgaria and Serbia were planned to be the first onshore sections constructed. Symbolic 'first welding' ceremonies took place in October and November 2013, before the environmental impact assessment (EIA) reports had been filed and even before construction contracts had been awarded. The EIA reports for Serbia and Bulgaria were filed in February 2014, while the construction contracts for the Bulgarian and Serbian sections were awarded in May

and June 2014, respectively.

Gazprom did not only experience delays in Bulgaria and Serbia. In December 2013, Gazprom announced that technical design documentation for the Hungarian section would be completed by Q2 2014. In April-May 2014, Gazprom announced that the preparation of the documentation remained ongoing. Finally, in late September 2014, Gazprom announced:

A bidding procedure is underway in Hungary for selecting a contractor to carry out design and survey activities, spatial planning and environmental impact assessment for South Stream's Hungarian section towards Baumgarten in Austria... The designer will be selected before the end of October 2014.

The design documentation for the Hungarian section was not completed before the project was abandoned on the 1<sup>st</sup> of December.

Likewise, project documentation for the Slovenian section, the final sections in Italy and Austria, and the spurs to Croatia and Bosnia & Herzegovina was not completed before the project was abandoned.

Regarding the offshore section, the South Stream consortium signed contracts for steel pipes in February 2014 – half were to be supplied by Russian companies and half by EUROPIPE, a German company.

The following month, a €2bn contract was signed with an Italian company, Saipem, for offshore construction between Q3 2014 and Q3 2015. Saipem has experience in underwater pipeline construction in the Black Sea, having laid the offshore section of the Blue Stream pipeline just over a decade ago. On the 1<sup>st</sup> of

July 2014, the Russian Ministry of Construction, Housing and Utilities granted the construction permit for the onshore construction of South Stream in Russia and offshore construction in Russia's exclusive economic zone of the Black Sea. Just over three weeks later, the Turkish government approved the EIA report for the laying of South Stream in Turkey's exclusive economic zone. The laying of pipes was due to begin in Russian waters in late 2014, in Turkish waters in Q1 2015, and the first offshore line was scheduled for commissioning in late 2015.

#### *Third party access and ownership unbundling: South Stream and the EU Third Energy Package*

EU gas market legislation proved to be an even bigger headache for Gazprom than delays and problems with its partner countries.

Given that the South Stream pipeline was designed for the delivery of Russian gas to Europe by a single company (Gazprom), the participants in the project did not envisage other gas suppliers using the pipeline. However, under the terms of EU gas market legislation provisions on third party access, Gazprom and its partners in each of the transit countries would have been obliged to reserve an (unspecified) percentage of the pipeline's capacity for use by other (third party) energy companies. The aim of this legislative provision is to allow market entry for companies that do not own pipelines, and to prevent the monopolistic dominance of gas markets by companies that do own pipelines.

Gazprom is currently waiting for a European Commission ruling on the onshore sections of Nord Stream with regard to the same issue – if Gazprom

cannot use the onshore sections at full capacity, then the offshore section of Nord Stream will continue to operate below capacity, as it has done since the launch of its two lines in 2011 and 2012. The issue of third party access with regard to Nord Stream provided a clear example of potential complications with South Stream.

At an EU-Russia Summit in December 2012, the Russian Energy Minister, Alexander Novak, proposed that South Stream be designated as a project of national significance and therefore exempted from EU gas market legislative provisions regarding third party access. However, in September 2013, the EU omitted South Stream from its list of Projects of Common Interest.

In addition to the concerns over third party access, the European Commission also expressed concerns that, although Gazprom's 50 percent shareholding in each of South Stream's onshore sections (51 percent in non-EU member Serbia) did not technically violate EU gas market legislative provisions on ownership unbundling (which prohibit gas producers from exercising majority control over gas transportation and gas sales subsidiaries), the combination of Gazprom's 50 percent shareholdings and role as major gas supplier to the region would give it effective control over the management of the pipeline.

#### *Intergovernmental (dis)agreements*

The European Commission expressed its dissatisfaction with these issues in December 2013, when it called upon the South Stream partner states to renegotiate their intergovernmental agreements with Russia. On the 5th of December, Marlene

Holzner, a spokesperson for the EU Energy Commissioner, stated:

We have looked into the inter-governmental agreements [IGAs] that were made between the member states through which South Stream would flow and Russia, and we have seen that on a number of very important core issues of our energy market, these core principles are not reflected in the IGA and that is why we have advised those member states to renegotiate these IGAs.

While the European Commission is unable to prevent the construction of South Stream, it can take action once the pipeline is in operation, if it is in contravention of EU energy market legislation. According to Holzner, if at that point Gazprom refused to renegotiate the terms and conditions of South Stream, then the European Commission would first advise the participant EU member states not to apply the IGAs. Then, “if they go ahead we may have to start infringement procedures” against that EU member state.

On the 12<sup>th</sup> of December, the EU Energy Commissioner, Gunther Oettinger, met with Energy Ministers from the six EU participants in the South Stream project (Bulgaria, Hungary, Greece, Slovenia, Croatia, and Austria). At that meeting, it was agreed that Oettinger would hold negotiations with Gazprom in January 2014, on behalf of the EU and the six EU member states.

In response, the Russian government reiterated its unwillingness to renegotiate its intergovernmental agreements on South Stream. However, at the

meeting between Oettinger and the Russian Energy Minister, Alexander Novak, in Moscow on the 17<sup>th</sup> of January, the two sides agreed to create a joint working group to address the legal and technical aspects of South Stream. Amid rising international tensions, the work of the group was suspended in March 2014.

#### *Construction contracts: another contentious issue*

A final contentious issue was the awarding of construction contracts in Bulgaria and Serbia. In Bulgaria, the contract was awarded to Stroytransgaz, whose major shareholder, Gennady Timchenko, currently faces US sanctions. In Serbia, the construction contract was awarded to Centrgaz, a 99.99 percent Gazprom-owned subsidiary. In both cases, the European Commission expressed its concern that the contracts had been awarded without a competitive tender. In early June, the President of the European Commission, Jose Manuel Barroso, announced that infringement procedures had been launched against Bulgaria. Several days later, the Bulgarian Prime Minister, Plamen Oresharski, announced that the construction of South Stream in Bulgaria would be suspended until EU concerns were satisfied. Then, on the 21<sup>st</sup> of July, Serbian sources reported that the European Commission had recommended that Serbia halt work on South Stream until the legal status of the pipeline had been clarified:

Not a single intergovernmental agreement on South Stream, signed by Russia, complies with EU law. Our position is uniform both for EU member states and for third countries, such as Serbia. It is in

the best long-term interest of Serbia, as a candidate EU member, to comply with EU law with regard the South Stream pipeline.

#### *Why was South Stream abandoned now?*

Clearly, the South Stream project had been struggling for some time. In particular, pressure from the European Commission regarding third party access, ownership unbundling, and the allegedly non-competitive awarding of construction contracts was a cause for concern for Gazprom. So why did Gazprom (and the Russian government) abandon the project in the beginning of December?

The first reason is scheduling. Despite the delays, it appeared that Gazprom was ready to begin offshore construction. Once that began, there would have been no going back. A final, definite decision had to be made, and the decision was to take a step back and abandon the project.

The second reason is financial. Although financial data on the project is lacking, Gazprom itself has issued statements confirming that the cost of pipes for the first line amounted to 1bn Euros, while the contract for the laying of the first offshore line was worth approximately 2bn Euros. Therefore, had all four lines been implemented, the offshore section would have cost a minimum of 12bn Euros.

The combined cost of South Stream's onshore and offshore sections had been estimated at 16-17bn Euros, although recent Russian reports suggest that the cost of the offshore section could have reached 14bn Euros while the cost of the onshore (European)

section had climbed from 6.6bn to 9.5bn Euros, giving a combined total of almost 25bn Euros (\$31bn). Indeed, Russian sources quoted an unnamed Gazprom official who estimated the cost of South Stream's offshore and European sections as costing a combined 23.5bn Euros.

In addition, Gazprom had been preparing to invest huge sums, reportedly up to 12.5bn Euros, in its own 'Southern Corridor' to bring gas from central Russia to Russia's Black Sea coast – the starting point of South Stream. If connecting new gas production on the Yamal Peninsula with central Russia via the Bovanenkovo-Pochinki pipeline is included in the overall cost of the South Stream project, the tally is even higher. These costs across multiple sections have led to recent reports referring to South Stream as the '\$50bn pipeline'.

Although these costs are merely unverified estimates, they illustrate the huge level of investment required by Gazprom to make the project a reality. Given the stagnation of European gas demand, the decline in international oil prices, and Russia's own parlous economic situation, it may well be the case that both Gazprom and Russian political leadership decided that the project was simply too much of a financial gamble. The project may have been deemed especially risky given the stagnation in European gas demand and uncertainties over the functioning of South Stream's European onshore sections in relation to EU gas market legislation.

A third and final factor to be noted is the change in government in Bulgaria, and recent Bulgarian opposition to the project. Indeed, President Putin specifically mentioned the opposition of Bulgaria's

new government to the pipeline as a factor in deciding to abandon the project. President Putin suggested that Bulgaria ‘was not behaving like a sovereign state’ and should seek compensation from the European Commission for lost potential transit revenues.

#### *Plan B: Turkey*

The decision to abandon the South Stream project does not mean that Gazprom will not build a pipeline across the Black Sea. In making the announcement to abandon South Stream, both President Putin and the Gazprom CEO, Alexei Miller, announced a new pipeline from Russia to Turkey, which will aim to deliver extra gas to Turkey and supply South-Eastern Europe via Greece.

Turkey is Gazprom’s second-largest European customer (aside from former Soviet Union countries), and has imported approximately 26-27 bcm of Russian gas every year since 2011. For comparison, Gazprom Export reported exports of 161.5 bcm to Europe in 2013, including 40.2 bcm to its largest customer, Germany, 25.3 bcm to its third-largest customer, Italy, 12.5 bcm to its fourth-largest customer, the UK, and 9.5 bcm to its fifth-largest customer, Poland.

Russia and Turkey are already connected by the 16 bcm per year capacity Blue Stream pipeline, launched in 2003. Since 2011, Gazprom has exported approximately 14 bcm per year to Turkey via Blue Stream. The remaining 13 bcm per year of Russia’s gas exports to Turkey are delivered via Ukraine.

Gazprom has already announced that the new pipeline to Turkey will have the same projected

capacity as South Stream – 63 bcm per year. Gazprom envisages that approximately 14 bcm per year will be deliveries to Turkey re-routed from Ukraine. This will leave 49 bcm per year of capacity for delivering gas to Europe. According to Gazprom, the deliveries to Europe will be made from a proposed gas hub on the Turkey-Greece border.

President Putin also suggested that Turkey would receive a discount on its Russian gas imports, effective from January 2015: “We are ready to further reduce gas prices along with the implementation of our joint large-scale projects”.

#### *The rationale behind Plan B*

The decision to re-route the pipeline to Turkey, rather than cancel the project entirely, raises some interesting questions about Gazprom’s gas export strategy. In particular, given that one of the main reasons for cancelling South Stream was financial, why does Gazprom want to continue with the project at all?

Simply put, we must remember that Gazprom has already started work on South Stream’s Russian sections, and that to abandon the project entirely would be a huge waste of resources. Although work had barely begun on South Stream’s European onshore sections, the symbolic first welding at Anapa took place in December 2012, while work on the Russkaya compressor station itself began in December 2013.

Regarding the ‘Western Route’, on the 25<sup>th</sup> of April 2014, the Gazprom CEO, Alexei Miller, announced that 576 km of the 881 km-long pipeline had been laid

and welded. Miller added that foundations had been laid and compressor units were being installed at the Russkaya, Korenovskaya, and Kazachya compressor stations, while the foundations at Shakhtinskaya were being laid. Miller also announced that the construction of new interconnectors at the Pisarevka compressor station had been completed, and that the reconstruction of three compressor stations in the region (Pisarevka, Bubnovka, and Yekaterinovka) had begun.

Furthermore, as noted earlier, Gazprom has already ordered the pipes for the offshore section. On the 13<sup>th</sup> of November, Gazprom announced that it had received 300,000 tonnes of steel pipes since May 2014, and that the pipes were being welded in the Bulgarian port of Burgas, in preparation for laying. For comparison, EUROPIPE estimate that their order for 450,000 tonnes is equivalent to two-thirds of the offshore length of one line of South Stream (600km of 931km). Therefore, the 300,000 tonnes already received equate to approximately 400km of pipeline. This is slightly longer than the length of the offshore section of Blue Stream (380km).

To summarise, Gazprom has already built the connection between the northern end of its Southern Corridor and the main distribution point for gas production from Yamal (the Gryazovets-Pochinki pipeline). The development of the Southern Corridor is more than 50 percent complete. Gazprom has also already taken delivery of enough steel pipe to build one 15.75 bcm line from Russia to Turkey along the route of Blue Stream, and has signed contracts with companies for the laying of the offshore lines.

Under these conditions, it is clear that re-routing

South Stream to Turkey, rather than abandoning the project altogether, means that the money already invested is not wasted, even if some will accuse the Russian gas giant of throwing good money after bad.

I would suggest that Gazprom's announcement that it intends to build the link to Turkey at the same capacity as South Stream is not realistic. Rather, if the link to Turkey is implemented, we are more likely to see two lines of 15.75 bcm rather than four. There are good reasons to support this prediction. Firstly, it will save Gazprom from having to develop the 'Eastern Route' of its Southern Corridor. Secondly, Gazprom will be able to reduce its offshore construction costs, and cancel its contracts for steel pipes for the third and fourth lines.

Finally, Gazprom's plans to deliver almost 50 bcm to Europe across the Turkish-Greek border are not realistic. If the aim is to re-route deliveries from Ukraine to the Turkish route, then it is worth noting that Greece and Bulgaria between them purchased 5 bcm from Gazprom in 2013, while Serbia and Macedonia purchased a combined 1.2 bcm. This would still leave huge volumes that Gazprom would hope to sell onwards to European countries further north, and this plan would be restricted by a lack of cross-border connections in South-Eastern Europe.

If the 'Blue Stream II' alternative is implemented in two lines instead of four, approximately 14 bcm of the 32 bcm capacity could be used for re-routing deliveries to Turkey from the current Ukrainian route. This would still leave 18 bcm for sale in South-Eastern Europe, of which the geographically-proximate countries of Greece, Bulgaria, Serbia, and Macedonia could absorb just 6.2 bcm. What of the remaining 12



bcm? Where could that be delivered? That question remains unanswered.

#### *Turkey: Emergence of a new regional gas hub?*

The plan to replace South Stream with a new pipeline across the Black Sea to Turkey, while retaining the aim of delivering large amounts of gas to European consumers, must be seen in the context of other regional developments. In particular, Turkey will host the Trans-Anatolian Pipeline (TANAP), which will be a link between the Shah Deniz II gas field project in Azerbaijan and the Turkish-Greek border, where gas will be delivered into the Trans-Adriatic Pipeline (TAP). TAP will then deliver gas from Turkey to Italy via Greece, Albania, and an offshore section under the Adriatic Sea. Gas is already being delivered from Azerbaijan to Turkey via Georgia, using the South Caucasus Pipeline, which came online in 2006.

TANAP is planned to have an initial capacity of 16 bcm per year, with 6 bcm to be delivered to the Turkish market, and 10 bcm delivered onwards towards Europe. Accordingly, TAP is proposed to have an initial capacity of 10 bcm per year. In September 2013, nine European energy companies signed 25-year gas sales agreements for the purchase of gas from Shah Deniz II. Of the 10 bcm total contracted volume, 1 bcm will be delivered to customers in Greece and Bulgaria, while 9 bcm will be delivered onwards to Italy.

In terms of timescale, the shareholders of TAP (SOCAR, Statoil, BP, Fluxys, Enagás and Axpo) expect that the construction of TAP will begin in 2016 and take two years. In September 2014, the TANAP shareholders (SOCAR, Botaş, and TPAO) announced that construction would begin in April 2015, and could

be completed by 2018.

The question for Gazprom is that, in light of the additional volumes reaching South-Eastern Europe via TANAP and TAP, will the proposed volumes from Gazprom's Turkish pipeline be necessary? The extra volumes that Gazprom hopes to export to Turkey alone will have to compete with new volumes from Shah Deniz II, as will Gazprom's expected exports to Greece.

Regarding the additional volumes that Gazprom hopes to export to Europe via Turkey, it is far from clear how those volumes could be delivered – spare capacity in South-East Europe for cross-border deliveries of gas from South to North simply does not exist. Furthermore, Gazprom cannot promote the building of such capacity, as this would be a replication of the now-abandoned South Stream.

#### *Conclusions*

Gazprom abandoned South Stream partially due to the cost of the project, but mainly because of pressure from the European Commission over the operation of South Stream's onshore European sections. In particular, Gazprom faced pressure to ensure third party access to South Stream's onshore sections, and possibly even to reduce its shareholding in those onshore sections to ensure that it held only minority stakes.

In response, Gazprom has proposed the construction of a new pipeline across the Black Sea to Turkey, which is essentially an expansion of the existing Blue Stream pipeline. Gazprom's proposed plan is to deliver gas to Europe from the Turkish-Greek border,

at volumes similar to those planned for South Stream.

However, without the construction of South Stream's onshore European sections, there is a lack of cross-border interconnection capacity to deliver gas from South to North in South-Eastern Europe. Furthermore, it is far from clear that the markets of South-East Europe can absorb large amounts of Russian gas delivered via Turkey and Greece. This is especially the case given the plans for TANAP and TAP to bring gas from Azerbaijan to South-Eastern Europe.

Interestingly, it seems that the only options for Gazprom to ensure the onward export of gas from Turkey to Europe would be either by constructing an LNG terminal in Turkey (currently unlikely), or by trying to gain access to TAP under EU gas market legislative provisions for third party access. Yet even if Gazprom is able to participate successfully in capacity auctions to secure 25-30 percent of the capacity of TAP, this would only grant Gazprom the capacity to deliver 2.5 – 3 bcm per year to Southern Italy from the Turkish-Greek border. So even in the best-case scenario, this would be insufficient.

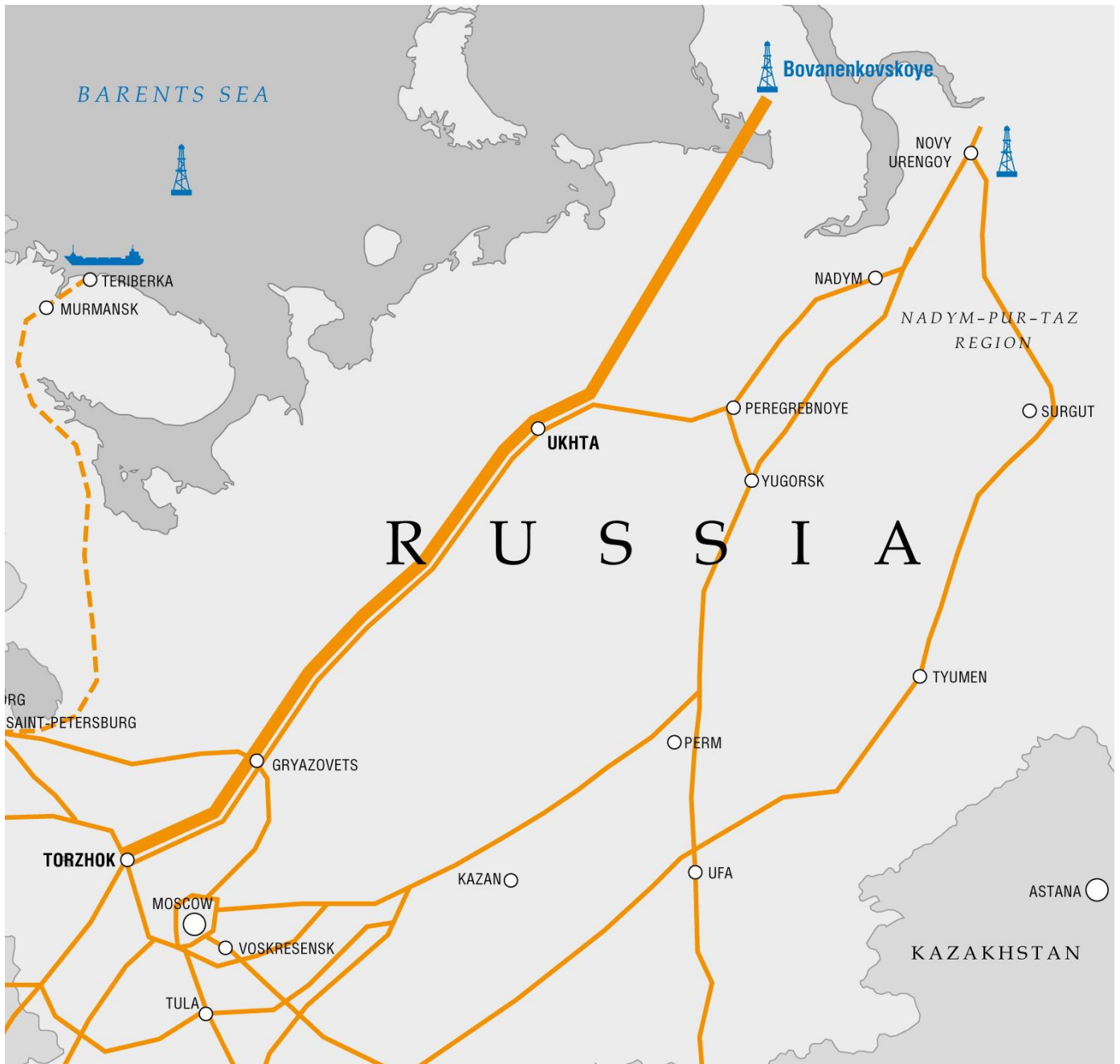
To conclude, it is entirely unrealistic to expect Gazprom to follow through with its plans to build 63 bcm per year of gas export capacity to Turkey via the Black Sea. It is more likely that Gazprom will scale back the project by cancelling the construction of the Eastern Route of its Southern Corridor in Russia and by building just two of the proposed four lines across the Black Sea, giving a capacity of 32 bcm.

In this scenario, we may assume that 14 bcm of that capacity will be used for deliveries to the Turkish market re-routed from Ukraine. Yet even under these conditions, it seems that Gazprom will find it very difficult to market the other 18 bcm of gas per year in South-Eastern Europe from a hub on the Turkish-Greek border, in light of competition from TAP and the current lack of regional cross-border connections.

Therefore, we expect further announcements from Gazprom in the coming months, as this project remains uncertain at best, and likely to undergo further changes.

Appendix: Maps

Fig.1. Gas deliveries from new production at Yamal (Bovanenkovo) to Gryazovets



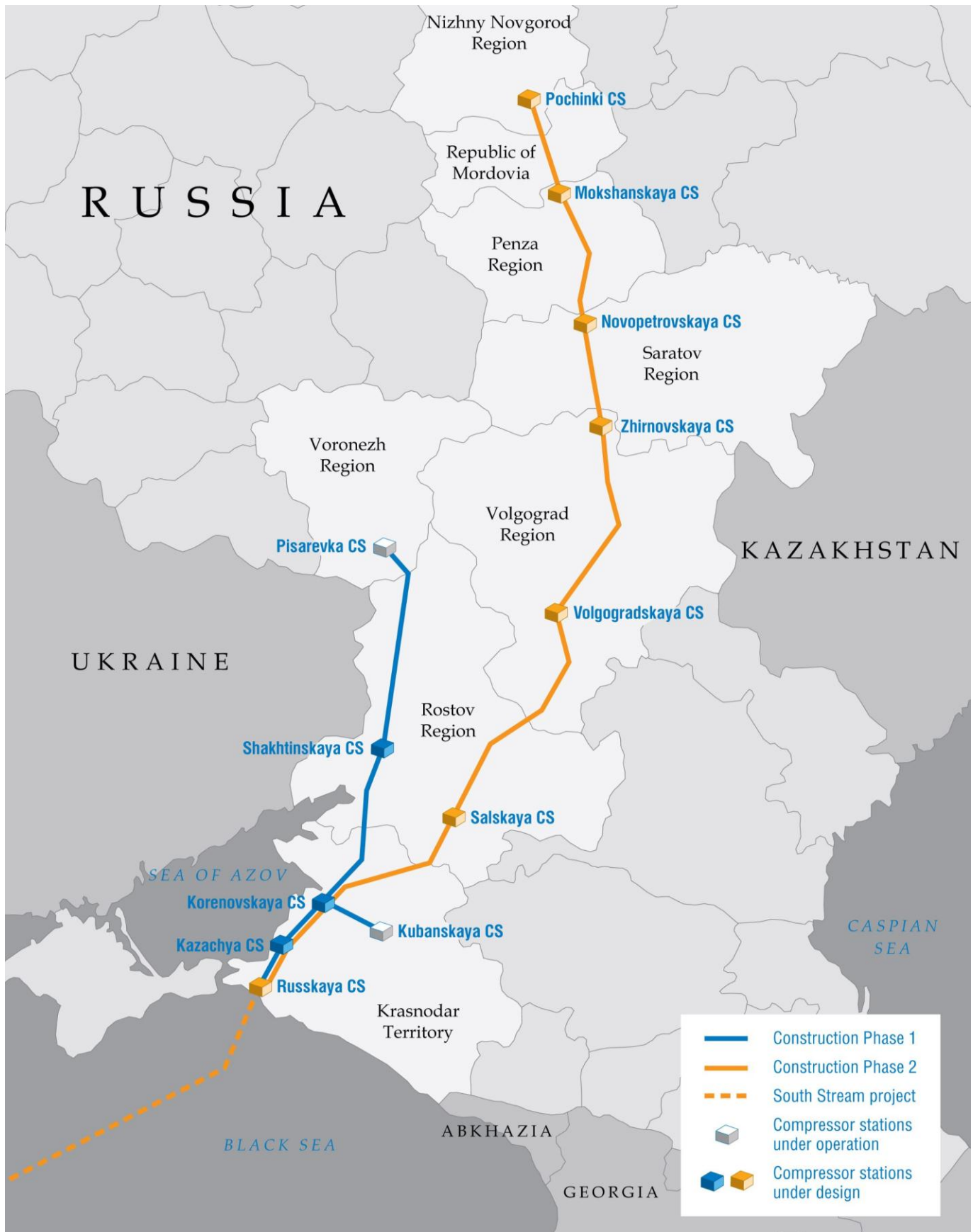
Source: Gazprom.com

Fig.2. New gas pipeline connecting Gryazovets and Pochinki



Source: Gazprom.com

Fig.3. Gazprom’s Southern Corridor in Russia – Western and Eastern Routes



Source: Gazprom.com

Fig. 4. Blue Stream and the proposed offshore section of South Stream



Source: Gazprom.com



Fig. 5. The planned route of South Stream, prior to its cancellation



Source: Gazprom.com

### Disclaimer

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EGF Gazprom Monitor  
Published by European Geopolitical Forum SPRL  
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