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**Turkish Stream: What
Strategy for Europe?**

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Summary

On December 1, 2014 Russian President Vladimir Putin surprised the energy world by announcing, during a state visit to Turkey, the demise of the long-planned South Stream pipeline project and the launch of a new project to evacuate Russian gas to Turkey and South-East Europe bypassing Ukraine: Turkish Stream. Since 2007 South Stream has represented a key element of the discussions concerning the EU security of gas supply and the overall EU-Russia relations. For this reason, the unexpected demise of South Stream and the quick rise of Turkish Stream need to be carefully evaluated both under the economic and geopolitical perspectives. This paper will first provide an overview of the Russian gas export strategy to Europe in order to entrench the current discussion on the major long-term trends concerning the issue. On the basis of this analysis the paper will then discuss the future prospects of Turkish Stream, arguing that the EU could seize this new reality to launch the formation of a fluid, reliable and interconnected South-Eastern European regional gas hub.

Keywords: Turkish Stream, South Stream, Energy Security, Gas Markets, EU Energy Union

JEL Classification: Q40, Q42, Q48,

This paper represents the eight outcome of the FEEM research project “The rise of Turkey and the new Mediterranean. Challenges and opportunities for energy cooperation in a region in transition”. This project analyses how energy could represent a major tool to strengthen the economic, political and social integration in the enlarged Euro-Mediterranean region. The project focuses particularly on Turkey, a country considered as crucial for both the EU energy security and for the regional balance of power in the aftermath of the so-called “Arab Spring”.

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Introduction

On December 1, 2014 Russian President Vladimir Putin surprised the energy world by announcing, during a state visit to Turkey, the demise of the long-planned South Stream pipeline project and the launch of a new project to evacuate Russian gas to Turkey and South-East Europe bypassing Ukraine: Turkish Stream.

Considering the enormous regulatory difficulties encountered by the South Stream project, Putin's decision cannot be defined as a bolt from the blue. However, it is certainly true that no one would have expected such a rapid U-turn. Probably not even the stakeholders of the project themselves, since they have taken notice of the demise of the project directly from the press while they were preparing the operations for the laying of the offshore pipe in the Black Sea.

Since 2007 South Stream has represented a key element of the discussions concerning the EU security of gas supply and the overall EU-Russia relations. For this reason, the unexpected demise of South Stream and the quick rise of Turkish Stream need to be carefully evaluated both under the economic and geopolitical perspectives.

This paper will face this challenging issue, with the specific aim to explore a new strategy of the EU *vis-à-vis* this complex situation. Before entering the key issue of the shift from South Stream to Turkish Stream, and the related EU strategy, the paper will first present an overview of the Russian gas export strategy to Europe in order to entrench the current discussion on the major long-term trends concerning the issue.

The Russian gas export strategy to Europe: an overview

Although small volumes of Russian gas had been exported to Poland since the late 1940s, the idea of large-scale imports of Russian gas into Western Europe appeared to be, at the time, both unfeasible and imprudent¹. In fact, after the Second World War the focus of Russian gas production was rapidly moving from the Urals, North Caucasus and Ukraine to Siberia, which would require additional transportation amounting to

¹ For a comprehensive analysis of Russian gas market and its relations with Europe, please refer to: Hafner M. and Tagliapietra S. (2013), *The Globalization of Natural Gas Markets. New Challenges and Opportunities for Europe*, Claeys&Casteels, Deventer.

several thousand kilometers (km). This transport problem was resolved by the Siberian gas development of the 1970s and 1980s based on the super-giant fields discovered at Medvezhe, Urengoy and Yamburg. With multiple strings of large-diameter pipeline being built from Siberia to Ukraine, it required only a relatively short extension for one or two pipelines to reach Europe².

FIGURE 1
Gas routes from Siberia to Europe via Ukraine

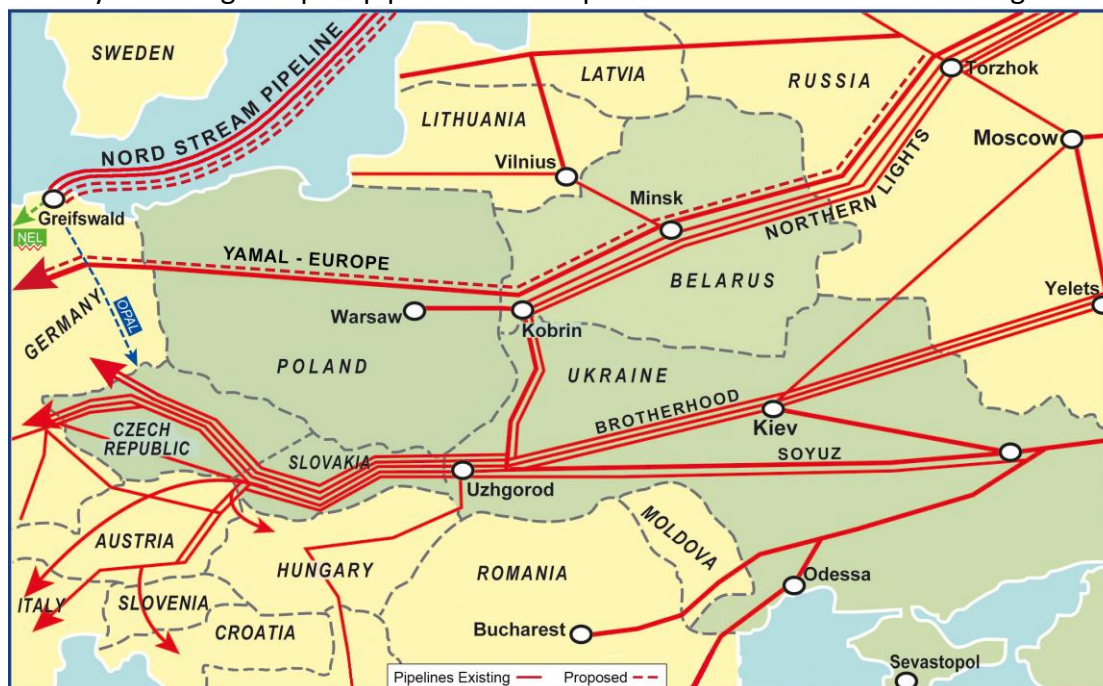


Source: Jonathan Stern (2005).

² STERN J. (2005), *The Future of Russian Gas and Gazprom*, Oxford University Press, Oxford.

This complex pipeline network, which still today represents the basic structure of Russian gas export to Europe, is basically structured on two key axes: the Brotherhood Pipeline and the Northern Lights Pipeline.

FIGURE 2
Key Russian gas export pipelines to Europe: Brotherhood and Northern Lights



Source: Oxford Institute for Energy Studies.

-The Brotherhood Pipeline

The Urengoy–Pomary–Uzhgorod Pipeline, also known as Brotherhood Pipeline, is Russia's largest gas transportation route. Operational since 1967, the 4,500 km-long pipeline has created the first transcontinental gas transportation system from Western Siberia to Western Europe, with a capacity of 100 billion cubic metres (bcm) of gas per year. The pipeline transits Ukraine and runs to Slovakia, where it separates in two directions, one bringing gas to the consumers in Czech republic, Germany, France and Switzerland, and the other intended for Austria, Italy, Hungary and several countries of former Yugoslavia.

The Soviet plans to build the Brotherhood Pipeline were considered as a major geopolitical threat by the United States (US), and for this reason the project was strongly opposed by the Reagan administration. America's Western European allies, however, refused to bow to US pressure to boycott the pipeline, insisting that contracts already signed between the Soviets and European companies needed to be honored. This led to several European companies being sanctioned by the US government. The efforts by the US pressure to prevent the construction of the pipeline constituted one of the most severe transatlantic crises of the Cold War.

-The Northern Lights Pipeline

The Northern Lights Pipeline also represents a key transit route for Russian gas to Europe. The 7,400 km-long pipeline system, with a capacity of 51 bcm per year, was built between the 1960s and the 1980s. Construction of the Vuktyl-Ukhta-Gryazovets-Torzhok section started in 1967 and was completed in 1969. By 1974, the pipeline had been extended to Minsk. The second main trunk line was added during the 1970s. Originally, gas was supplied by the Vukhtyl field but later the pipeline was extended in order to connect with the Urengoy gas field.

Ukraine: from key pillar to key problem of Russian gas export strategy

Until the break-up of the Soviet Union in 1991, all gas export to Western Europe happened across the Ukraine-Slovak border as crossing Poland and in particular the German Democratic Republic (GDR) was by the Soviets considered politically not sufficiently reliable.

After the break-up of the Soviet Union, Ukraine continued to represent the main route for Russian gas exports to Europe due to the fact that all existing pipeline infrastructure was crossing Ukraine, and as Ukraine's storage capacities on its western border were particularly valuable to Russia.

For several decades Ukraine represented a reliable transit platform for Russian gas exports to Europe. However, in the aftermath of the independence of the two countries, gas conflicts between Russia and Ukraine started to emerge. As Pirani, Stern

and Yafimava (2009) underline, these conflicts occurred as transit usually became a part of the price dispute on the Russian gas price for the Ukrainian domestic market.

Post-Soviet economic slump in both Russia and Ukraine during the 1990s highlighted the interdependence of the two countries. On the one side, European gas sales were a crucial source of reliable income in hard times for Russia, and the relations with Ukraine were thus crucially important to ensure the reliability of the gas exports to Europe. On the other side, Ukraine was heavily dependent on Russian gas and had no way of replacing it as a fuel source.

As a result of this interdependence, the 1990s were characterized by large-scale gas deliveries to Ukraine at very low prices (which probably did not even cover cost of delivery) and at the same time the accumulation of Ukrainian debts to Russia linked to domestic non-payments. The resulting disputes lead Gazprom to cut off supplies to Ukraine on several occasions during the 1990s. As no separation between the transit gas network and the domestic gas network exists in Ukraine, Ukrainian customers usually served themselves from the transit volumes which Russia called theft of gas through the transit system. Russia regularly pressured Ukraine to make political and/or economic concessions in exchange of erasing the accumulating gas debt. But as the Ukrainian non-payment issue was structural, as soon as a gas debt had been erased, it started again to accumulate. Russia also pressured Ukraine to exchange equity in the transit network and storage capacity for gas debts, but Ukraine never gave in on this point³.

As since the beginning of the 2000s world oil prices started to rise steadily, therefore increasing also European gas prices, the differential between European prices and those charged to the Commonwealth of Independent States (CIS) widened sharply. Gazprom called for CIS prices to be raised to the level of European netback while all countries struggled to increase domestic gas pricing. The Russian government influence was responsible for the netback principle to be applied unevenly. Countries

³ For a comprehensive analysis of these issues please refer to: Pirani S., Stern J. and Yafimava K. (2009), "The Russo-Ukrainian Gas Dispute of January 2009: A Comprehensive Assessment", Oxford Institute for Energy Studies, Oxford.

that agreed to share ownership of their pipeline system with Russia (e.g. Belarus and Armenia) were able to negotiate much longer timetables for import price increases. On the other hand, Gazprom was allowed to raise prices more rapidly in countries whose governments showed a hostile attitude towards Moscow (e.g. Georgia and Ukraine).

But it was not until January 2006, one year after the Orange revolution had taken place in Ukraine which resulted in a strongly pro-Western and anti-Russian Government, that the first major Ukraine-Russia gas crises erupted in January 2006. Following disagreement on prices, Russia cut off supplies to Ukraine for three days, Ukraine diverted volumes destined to Europe, and as a consequence supply to some Central European countries fell briefly, but supplies were never cut off completely on that occasion. Due to the pro-European government in Kiev, the EU was fully supporting Ukraine and strongly blaming Russia for the crisis.

The second major gas crises between Russia, Ukraine and Europe of January 2009 became a very high profile event. As a result of this crisis, the transit of Russian gas through Ukraine was completely cut for two weeks, which resulted in humanitarian crises in several Central and Eastern European countries that were strongly dependent on Russian gas supplies across Ukraine. This dispute has resulted in long-term economic consequences and affected the reputation of Russia as a reliable supplier and of Ukraine as a reliable transit country⁴.

The Russian quest to diversify its gas transit routes away from Ukraine

The policy responses to these gas crises were different in Europe, Ukraine and Russia.

The EU's response, particularly to the major crises of 2006 and 2009, was to strengthen the internal market, to foster gas flows and gas sources diversification (including building LNG receiving terminals in Central and South-East Europe, pursuing the Southern Corridor to evacuate new Caspian and Middle Eastern gas supplies to

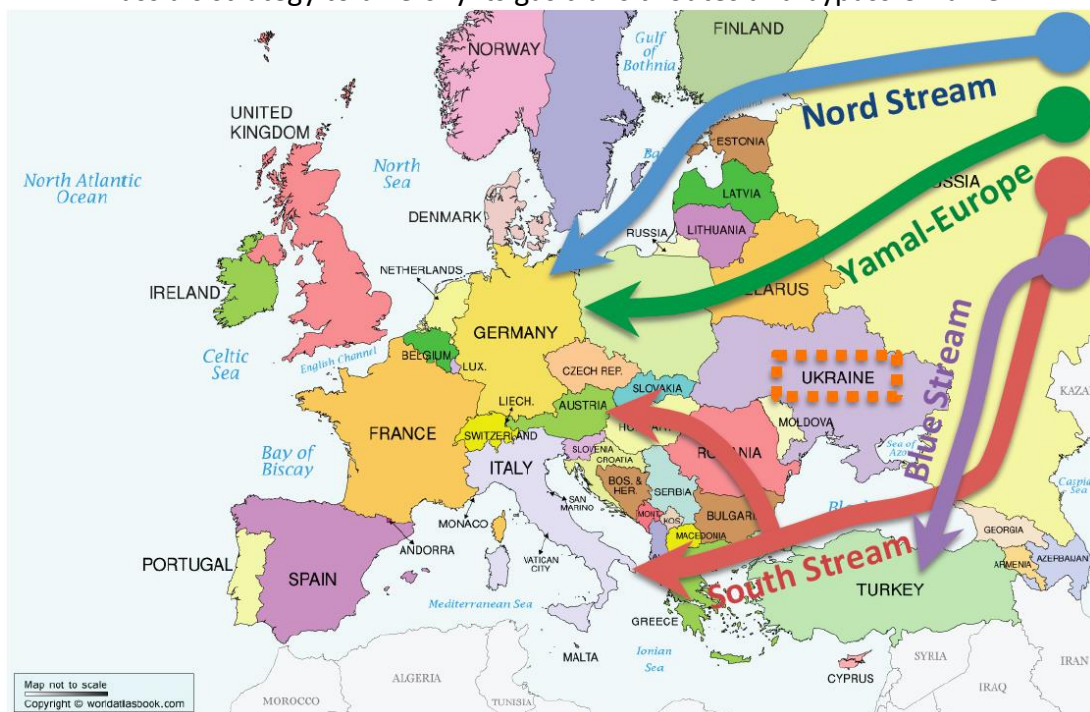
⁴ For a detailed discussion of these two natural gas crises refer to: Stern J. (2006), "The Russian-Ukrainian Gas Crisis of January 2006", Oxford Institute for Energy Studies, Oxford; and to: Pirani S., Stern J. and Yafimava K. (2009), op. cit.

Europe via Turkey, and to pursue climate change policies (energy efficiency, renewables, clean coal with carbon capture and storage technologies, nuclear).

Ukraine's response to the crises was to develop strategies aimed at reducing dependence on imported gas by limiting the share of gas in the fuel mix, by implementing energy saving measures and by increasing own gas production. However, all these policies (implemented since the 1990s) failed due to political and economic weaknesses.

Russia's response to the crises was first to push for ownership of the Ukrainian transit system by a consortium involving Ukrainian, Russian and European gas companies. As it became increasingly clear that this option was not acceptable for Ukraine, Russia launched a strategy of diversification of its gas transit routes to Europe away from Ukraine.

FIGURE 4
Russia's strategy to diversify its gas transit routes and bypass Ukraine



Source: Authors' elaboration.

Phase I: the Yamal-Europe Pipeline

The Yamal-Europe Pipeline, launched in 1994, represented the first phase of the Russian strategy to diversify its gas transit routes away from Ukraine.

FIGURE 5
The Yamal-Europe Pipeline



Source: Gazprom.

In the midst of the previously illustrated Russian-Ukrainian gas disputes emerged in the early 1990s, Russia looked at Belarus as an advantageous alternative to Ukraine as a transit platform. The Belarus-Polish corridor rapidly emerged as a viable option to ensure the reliability of Russian gas exports to Europe and for this reason the Yamal-Europe Pipeline, designed to run across Russia, Belarus and Poland to reach Germany, was quickly conceptualized and built. Considering the significance of the pipeline for the European security of gas supply, the EU treated the pipeline as a priority Trans-European Networks (TEN) investment project⁵. The pipeline's construction began in 1994 close to the German and Polish borders, and first sections of the pipeline were brought online as early as in 1996. The Belarusian part was commenced in 1997. After

⁵ For a comprehensive discussion of the emergence of Belarus as gas transit for Russian gas, please refer to: Balmaceda M. (2006), *Belarus: Oil, Gas, Transit Pipelines and Russian Foreign Energy Policy*, GMB Publishing, London.

the installation of the last compressor station in 2006, the Yamal-Europe Pipeline reached its full capacity of 33 bcm per year⁶.

Phase II: Blue Stream

The second phase of the Russian diversification strategy was represented by the construction of Blue Stream, a 1,200 km-long pipeline designed to deliver Russian gas to Turkey through the Black Sea instead of passing through Ukraine, Romania and Bulgaria. A second aim of Blue Stream was to flood the Turkish gas market, and therefore to render a pipeline from the Caspian Basin to Europe commercially unviable. Launched in 1997, the pipeline became operational in 2003 with a capacity of 16 bcm per year expandable to 32 bcm per year. Gas volumes transported via the pipeline have been rising over the years, from 7.5 bcm in 2006 to 13.7 bcm in 2013, but remain below full capacity, although Gazprom periodically utilizes this spare capacity to pump additional gas to Turkey when supplies from Iran are disrupted⁷.

FIGURE 6
Blue Stream



Source: Oil and Gas Journal.

⁶ <http://www.gazpromexport.ru/en/projects/transportation/>

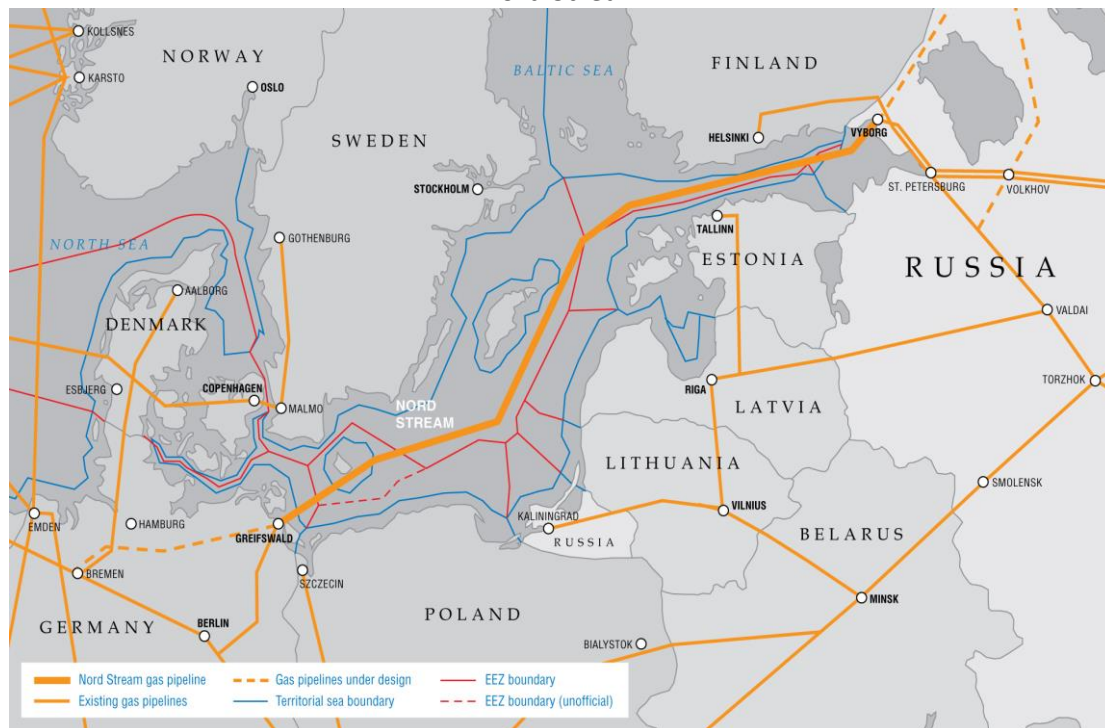
⁷ <http://www.gazprom.com/about/production/projects/pipelines/blue-stream/>

Russia and Turkey discussed in the past a potential "Blue Stream-2" project that would extend the pipeline to Israel via the Mediterranean Sea, but this project has been shelved as Israel proceeds with the development the gas reserves recently discovered off its own coast.

Phase III: Nord Stream

Phase III was represented by the conceptualization and realization of Nord Stream, a pipeline designed to evacuate Russian gas directly to Germany bypassing transit countries, notably Ukraine. Considering the importance of the project for the European security of gas supply, in December 2000 the EU assigned to the project the TEN status, which was confirmed once again in 2006⁸.

FIGURE 7
Nord Stream



Source: Gazprom.

⁸ <http://www.gazprom.com/about/production/projects/pipelines/nord-stream/>

The construction of the first line of the infrastructure began in April 2010, and was completed in June 2011. Transportation of gas through Line 1 began in November 2011. Construction of Line 2, which runs parallel to Line 1, began in May 2011 and it was completed in April 2012. Gas transport through the Line 2 began in October 2012. Each line has a transport capacity of roughly 27.5 bcm of gas per year. Together, these two lines crossing the Baltic Sea thus have a capacity of 55 bcm per year: almost half of Russian gas exports into the EU⁹. However, only half of this capacity can presently be utilized due to the fact that EU's Third Energy Package regulations do not allow the OPAL pipeline (connecting Nord Stream to European markets) to work at full capacity.

In the beginning of 2012, Gazprom asked Nord Stream AG¹⁰ to conduct a feasibility study on the possible construction of a third and fourth string of Nord Stream. This study was completed in October 2012 and concluded that the construction of Phase III & IV was possible from a technical, permitting and financing point of view. Following the signature of a Letter of Intent between Gazprom and Gasunie in April 2013, and an agreement on cooperation between Gazprom and GDF Suez in June 2013, there have been discussions on a fourth string of Nord Stream possibly reaching the UK, but this projects have not been developed yet.

Phase IV: South Stream

After having enhanced the reliability of its gas export routes to North-Western Europe and Turkey with the Yamal-Europe Pipeline, Nord Stream and Blue Stream, Russia decided in 2006 (after the first major gas crisis with Ukraine) to finalize its diversification strategy by securing the Southern and Eastern European markets with a new pipeline: South Stream.

The South Stream project consisted of a 900 km-long offshore pipeline across the Black Sea (with the related onshore sections), made up of four strings with a combined capacity of 63 bcm per year, two-thirds of which would have accommodated re-

⁹ <https://www.nord-stream.com/the-project/pipeline/>

¹⁰ The international consortium operating the pipeline, composed by OAO Gazprom, Wintershall Holding GmbH, E.ON SE, N.V. Nederlandse Gasunie and GDF SUEZ.

directed gas transiting through Ukraine and one-third of which would have been available for additional gas. Gazprom retained 50% equity in the project with Eni at 20% and Wintershall and EDF each having 15%.

FIGURE 8
 South Stream: the original pipeline route options



Source: Gazprom.

A feasibility study completed at the end of 2011 considered numerous pipeline routes through the Black Sea, as well as landfall options and the general route of the overall pipeline was finally disclosed in early 2012. At the end, the designed offshore route was the one running from Anapa (on the Russian Black Sea coast) to Varna (in Bulgaria) in water depths of up to 2,250 metres.

In December 2012 Gazprom and the other three stakeholders of the project announced the final investment decision (FID) for building the first string of South Stream (for a capacity of 15.5 bcm per year), with the idea of soon advancing also the other three strings in order to complete the project by 2020.

South Stream represented a crucial element of the Russian gas export strategy not only as far as the diversification of transit routes was concerned, but also because the project represented a way for Gazprom to limit the potential competition from gas

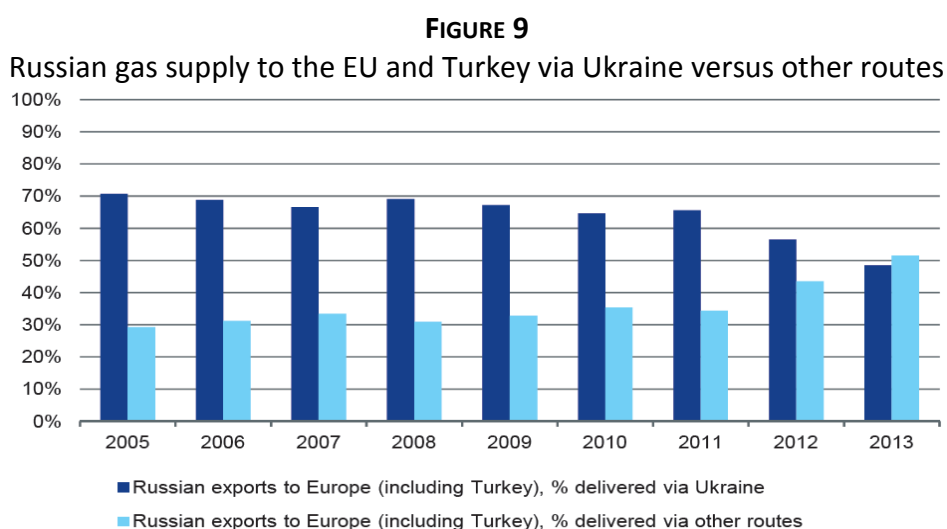
coming from Central Asia and the Caspian basin to Europe via Turkey, as foreseen by the Southern Gas Corridor concept strongly backed by the EU with the aim to diversify its gas supply portfolio away from Russia particularly after the Russian-Ukrainian-European gas crises of 2006 and 2009.

After the demise of South Stream announced by President Vladimir Putin on December 1, 2014 Gazprom signed an agreement with Eni, EDF and Wintershall to acquire their 50% stake in the South Stream consortium, finally detaining 100% of its shares¹¹.

The Russian quest for gas transit diversification: a quick assessment

In order to present the results of this long-lasting Russian gas transit diversification strategy, it might be sufficient to recall just a few numbers.

As estimated by IHS CERA (2014), as recently as the mid-1990s more than 90% of Russian gas supplies to the EU and Turkey was delivered via Ukraine's trunk pipelines. The 1997 commissioning of the Yamal-Europe pipeline and the subsequent launch of the Blue Stream pipeline in 2003 reduced Russia's reliance on Ukrainian transit to about 70% by 2006-07. With the start-up of the Nord Stream pipeline in late 2011, this reliance was further reduced to approximately 50% in 2013¹².



Source: IHS CERA (2014)

¹¹ <http://www.south-stream-offshore.com/>

¹² IHS CERA (2014), "Ukraine Crisis - What It Means for Europe's Gas Supply", Special Report.

With the South Stream project launched in 2007, Russia targeted to "close the ring" of its diversification strategy, by completely cutting out Ukraine from its gas transit routes towards the EU and Turkey by 2020.

However, as is known, things went differently and South Stream has been demised and replaced by the newly proposed Turkish Stream. The next section will propose an analysis of this major shift in the Russian strategy, with the ultimate aim to better understand what might be a potential strategy of the EU *vis-à-vis* this new reality.

The fall of South Stream and the rise of Turkish Stream

It is well possible to argue that the demise of South Stream was due to two mutually supporting factors: regulation and geopolitics.

In December 2013 the European Commission (EC) stated that South Stream was in violation of the Third Energy Package (TEP) and would not be allowed to operate unless it were brought into alignment with EU regulation. The TEP mandated «regulated third party access (TPA) to pipeline capacity based on published tariffs (or their methodologies) approved by national regulatory authorities (NRAs) as well as unbundling of transmission assets and certification of transmission system operators (TSOs) – unless an exemption from these rules is granted by an NRA and approved by the European Commission (EC).»¹³

Considering that Article 36 of the TEP allows new major infrastructure projects to be exempted from various provisions of the TEP itself (such as TPA, tariffs and unbundling) if certain conditions are fulfilled (such as enhance competition in supply and security of supply, not invested unless exempted), Gazprom could well have requested to the EC an exemption for South Stream.

However, given its negative experience with OPAL, «Gazprom did not apply for an exemption for South Stream but based the project solely on a set of intergovernmental agreements (IGAs) signed with host countries. The EC deemed these agreements in

¹³ Stern J., Pirani S. and Yafimava K. (2015), "Does the cancellation of South Stream signal a fundamental reorientation of Russian gas export policy?", Oxford Institute for Energy Studies, Oxford, p. 3.

breach of the TEP and called for their re-negotiation or renunciation, otherwise threatening infringement procedures against member states concerned.»¹⁴

This evolution put the EU member states that signed the IGAs on South Stream in a very difficult position, with both Russia and the EC threatening penalties for the renouncement (in the case of Russia) or the retaining (in the case of the EC) of the agreements.

The EU member state clearly more exposed to this dilemma, due to its geographically primary importance in the project, was Bulgaria. The country, almost entirely dependent on Russian gas, was always strongly supportive of South Stream. However, after the EC launched in June 2014 two infringement procedures against it (one concerning the TEP incompatibility of the project, the other concerning the compatibility with EU public procurement rules of the pipeline), Bulgaria officially suspended the preparatory operations for the construction of the pipe on its territory in August 2014.

This decision was, of course, underpinned by the rapid evolution of the overall geopolitical context following the Ukraine crisis and the Crimean annexation. In fact, after these events the EU-Russia relations rapidly deteriorated and Brussels increased its pressure on Sofia to stop cooperation with Russia on South Stream. However, notwithstanding this official position, pipes were reported to continue to arrive at the Varna harbor¹⁵, demonstrating a sort of "wait-and-see" approach of Bulgaria.

The approach of the country finally changed in November 2014, when Boyko Metodiev Borissov (who had uneasy relations with Russia in the past) returned at the government and decided to follow the EU guidelines and withdraw its support for South Stream¹⁶. For Russia this was "the straw that breaks the camel's back", and for this reason Bulgaria received from Russia all the blame for the demise of the project.

¹⁴ Ibidem, p. 4.

¹⁵ <http://www.euractiv.com/sections/energy/bulgaria-says-it-has-frozen-south-stream-pipes-keep-arriving-307893>

¹⁶ In order to avoid fines for the termination of South Stream, Bulgaria decided a month later to issue construction permissions for its onshore part. However, Russia said it has no financial claims on its South Stream partners and insists the project was scrapped for good.

This position was made particularly clear by Gazprom CEO Alexei Miller himself, when he declared: «Bulgaria did not give a construction permit to build South Stream neither onshore, nor in its territorial waters and economic zone. This doesn't concern the Third Energy Package, and the European Commission is not the one to blame in this particular situation. It is the Bulgarian government that did not provide us with the construction permits.»¹⁷

In a nutshell, this was the increasingly complex regulatory and geopolitical landscape that ultimately led to the demise of South Stream announced by Russian President Putin in Ankara on December 1, 2014 with the following words: «Taking into account the European Commission's position, which is not contributing to the realization of this project, (...) taking into account the fact that we still have not received Bulgaria's permission, we think that Russia is unable to continue realization of this project in such conditions. (...) we think that the European Commission's position was non-constructive. It is not that the European Commission has not helped in realization of this project, we can see that the obstacles are being created in its implementation. So, if Europe does not want to implement it, it means that it will not be realized.»¹⁸

Turkish Stream: what is all about?

President Putin continued his declarations by proposing a new way forward: «We are ready to build another pipeline system to meet the growing needs of the Turkish economy and, if deemed viable, to create an additional gas hub for the consumers in Southern Europe on the territory of Turkey on the border with Greece.»¹⁹

After this declaration, Gazprom CEO specified that Russia's plan was to construct a new pipeline under the Black Sea to Turkey with the same capacity of South Stream (63 bcm per year), to supply 14 bcm per year to Turkey and the rest to be used for a gas hub on the border with Greece. He also declared that primary aim of the pipeline was to completely eliminate Ukraine from Russia's gas transit to Europe.

¹⁷ <http://www.euractiv.com/sections/energy/russia-confirms-decision-abandon-south-stream-final-310712>

¹⁸ <http://sputniknews.com/business/20141201/1015368062.html>

¹⁹ *Ibidem*.

The pipeline was set to start at the Russkaya pumping station on the Russian coast of the Black Sea, which was supposed to be also the starting point of South Stream. Miller also said that an agreement on the pipeline was previously reached with Turkey and the sides already signed a Memorandum of Understanding (MoU)²⁰. Turkish Stream, as it would have been successively named, was then already taking shape.

After two months of discussions between the Russian and Turkish counterparts on the potential routes of the new pipeline, Gazprom CEO and Turkish Minister for Energy and Natural Resources Taner Yildiz presented on February 7, 2015 the latest route of Turkish Stream.

FIGURE 10
Turkish Stream



Source: Gazprom (official map based on the Russian view of Ukraine's boundaries).

The pipeline would run for 660 km from the Russkaya pumping station on the Russian coast of the Black Sea along the old route of South Stream up to the Bulgarian

²⁰ Energy Intelligence (2014), "Russia Cancels South Stream Project, Plans to Redirect Volumes to Turkey", December 2.

exclusive economic zone, after which a new 250 km route would dip southwest and run through the Turkish zone to the Turkish coast, near the village of Kiyikoy. According to Gazprom, the gas delivery point for Turkish consumers would be in Luleburgaz, while a connection between Turkey and Greece is planned in Ipsala. After the 910 km in the offshore Black Sea, the pipeline would thus run for additional 180 km on the onshore Turkish territory²¹.

Works on the first stretch of Turkish Stream from Russia could start at any time, on the basis of the material already made available for South Stream: in fact, pipes have already been delivered and pipe-laying vessels have already been booked. In the meantime of these operations, the new subsea stretch in Turkish waters could be surveyed in order to save time and rapidly advance the overall infrastructure.

By doing so, the initial 14 bcm per year targeting the Turkish market might start to flow immediately after the completion of this first string, estimated by Gazprom by December 2016, which correspond to the volume of gas that Turkey currently imports from Russia through Ukraine.

The remaining 49 bcm per year would be available on the border with Greece for purchase by European customers after other three legs are built. The timing of this second phase is far more uncertain than the first one, also considering the need of reviewing or signing new long-term contracts between Gazprom and its European customers (at least the new delivery points need to be agreed by the Parties) and building pipeline connections across the Balkans to evacuate the gas from the Turkish-Greek border to the core European gas markets.

A crucial issue is the one of the financing of Turkish Stream. In fact, many observers claimed that the Russian decision to demise South Stream might be related to the financial constraints being faced by Russia due to low oil prices and Western sanctions. At an accurate perspective this seems not to be the case, at least for two reasons.

²¹ Energy Intelligence (2015), "Gazprom Agrees Turk Stream Land Route", February 12.

The first reason is that Gazprom had already spent USD 9.4 billion over the last three years on South Stream and upgrading the domestic Russian pipelines that would have supplied it²². With Turkish Stream this capital can be recouped, while without Turkish Stream it would just be lost.

The second reason is that Russia does have a long-term vision of its future and does have the capability of financing projects considered as strategically important for the country, even in the midst of an unfavorable financial situation like the current one. A textbook case of this trend is represented by Blue Stream: this pipeline project was rapidly advanced right after the Russian financial crisis of 1998, when the country even defaulted on its debt due to falling international oil prices (down to 11 USD per barrel). Such a quick development was not even due to an urgent need for the pipeline in the short term (Blue Stream would have lately run under-capacity for many years), but to Gazprom's desire to secure the Turkish gas market in the long-term by physically linking Russia and Turkey and by halting the potential competition of Caspian and Middle Eastern gas suppliers, which at the time were proposing for the first time the idea to deliver their gas to Turkey and consequently to Europe.

In sum, it is well possible to argue that Turkish Stream represents an element of continuity in the long-lasting Russian strategy of diversifying its gas transit routes to the EU and Turkey away from Ukraine, and for this reason -on the basis of the historical precedents previously illustrated- it is possible to expect this project to quickly advance.

However, Turkish Stream will represent only the first part of the overall infrastructure to evacuate Russian gas to Europe. In fact, on the contrary of the South Stream project where gas was to be delivered directly to the various European receiving countries (Bulgaria, Serbia, Hungary, Slovenia, Austria and Italy), with the Turkish Stream project gas will be delivered at the Turkish-European border and from that point onwards, it will be up to Europe to decide how to evacuate the gas to final consuming countries.

²² <http://www.bloomberg.com/news/articles/2014-12-01/putin-halts-south-stream-gas-pipeline-after-pressure-from-eu>

With his statement of December 1, 2014 President Putin made it clear that with the new pipeline Russia targets the creation of a new gas hub at the Turkish-Greek border, also with the underlying intention to punish Bulgaria over its approach on South Stream. However, this initial decision seems to be not "carved in stone", considering that during a visit to Hungary on February 17, 2015 President Putin suggested that Bulgaria could become part of the project again, for instance being linked to the pipeline via Greece, also in order to serve as transit route to Serbia, Hungary and Austria²³ as in the case of South Stream. This U-turn of President Putin on Bulgaria came after the EC asked Russia to reconsider Bulgaria for implementing the project. This request was stimulated by Bulgarian Prime Minister Borissov himself, who asked in January 2015 the EC Vice President Maroš Šefčovič to lobby Russia for re-launching the South Stream project after having realized that his country was potentially on the verge of an energy catastrophe without good relations with Russia²⁴. Just for the record, the previous Borissov government had to resign in May 2013 precisely because of boisterous protests following hiked electricity prices.

Turkish Stream: what strategy for Europe?

In the new framework of Turkish Stream the role of Europe will be far more important than the one envisaged in the South Stream project. In fact, a strong coordination between European gas companies, transmission system operators (TSOs), energy regulators, EU financial institutions and the EC will be crucial to ensure the realization of the necessary infrastructure to deliver Russian gas from the Turkish-Greek border to the various Southern and Eastern European markets.

With this regard, many are the options that might be taken into consideration, among which: i) Trans-Adriatic Pipeline; ii) Ionian-Adriatic Pipeline; iii) Nabucco West; iv) East-Ring Pipeline; v) Greece-Macedonia-Serbia-Hungary-Austria Pipeline.

²³ <http://www.euractiv.com/sections/energy/putin-we-havent-given-south-stream-project-312224>

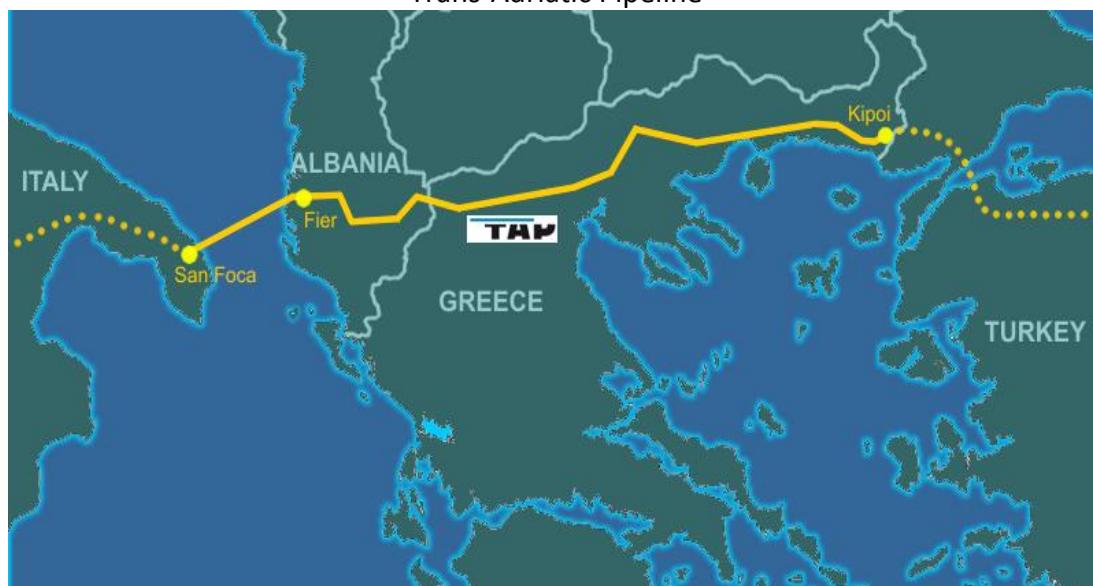
²⁴ <http://www.euractiv.com/sections/energy/borissov-warns-bulgarias-energy-projects-catastrophe-311192>

i) Trans-Adriatic Pipeline (TAP)

TAP is an 800 km-long projected gas pipeline designed in the framework of the Southern Gas Corridor to connect Greece and Italy through Albania and the Adriatic Sea. Key aim of TAP is to link European markets to the Trans-Anatolian Pipeline (TANAP), the projected pipeline that will evacuate Azeri gas to Turkey. TAP is planned to start in Greece near Kipoi (on the Turkish-Greek border), cross Albania and the Adriatic Sea and come ashore in Italy near San Foca. The length of Greece section will be 465 km. The length of the offshore pipeline section will be 115 km at a maximum depth of 820 metres.

The initial capacity of the pipeline (already destined to Azeri gas) will be 10 bcm per year, but it will be expandable up to 20 bcm per year. TAP is owned and actively supported by British Petroleum, SOCAR, Statoil, Fluxys, Enagas and Axpo. The pipeline laying operations are scheduled to start in 2016 and the pipeline is expected to become operational in 2019 with the delivery of 10 bcm per year of Azeri gas to Italy.

FIGURE 11
Trans-Adriatic Pipeline



Source: TAP.

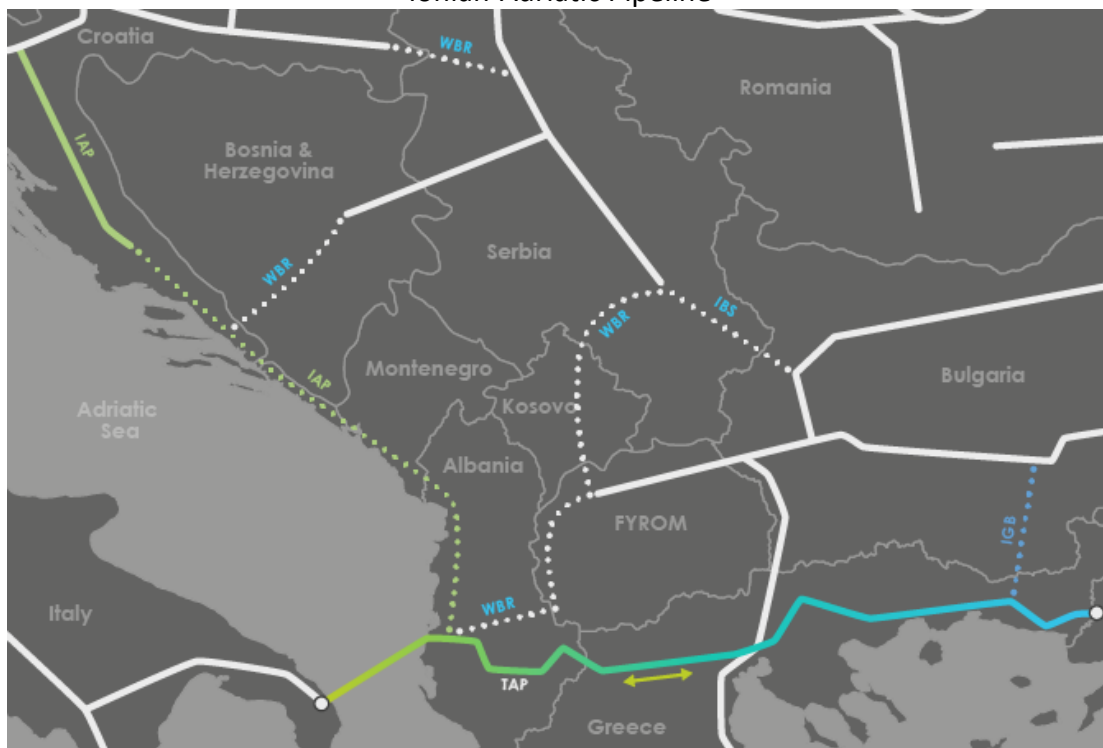
Considering the already planned expandability of the pipeline, 10 bcm per year of Turkish Stream gas could well reach the Italian market via TAP after 2019. This

possibility is feasible as the operators of TAP would likely be willing to welcome Russian gas on their pipe also to enhance the profitability of the infrastructure.

ii) Ionian-Adriatic Pipeline (IAP)

IAP is a 500 km-long projected gas pipeline designed to connect TAP (from a tie-in point in Fier, Albania) to Montenegro, Bosnia and Herzegovina and Croatia with a capacity of 5 bcm per year. The project, promoted by the Croatian TSO Plinacro, Bosnian-Herzegovinian gas company BH-Gas, Slovenian Geoplin Plinovodi and the energy ministries of Albania and Montenegro, was launched in 2007 with a ministerial declaration in the framework of the Energy Community.

FIGURE 12
Ionian-Adriatic Pipeline



Source: TAP.

In 2011 IAP and TAP signed a MoU to cooperate on the alignment of the two projects. This cooperation was further reinforced in 2013, when the governments of Albania, Bosnia and Herzegovina, Croatia and Montenegro signed a MoU in support of both

pipelines²⁵. Considering the small dimension of the project and its high potential impact on the interested countries, IAP might be considered as a good option, in tandem with TAP, to reinforce the gasification of the Balkans also with Turkish Stream gas.

iii) Nabucco West

A second, complementary, solution to evacuate part of Turkish Stream gas to European costumers might be to revive the Nabucco West pipeline project. This project was born in 2012, when the Nabucco consortium (at the time composed by Austrian OMV, Turkish BOTAS, Bulgarian BEH, Romanian Transgaz and Hungarian MOL) tried to reinvent itself after the failure of the original Nabucco pipeline project due to the "coup de grace" received by the entrance of TANAP into the Southern Gas Corridor race in December 2011. Nabucco West was designed to carry the TANAP 10 bcm per year destined to Europe from the Turkish-European border to Austria via Bulgaria, Romania and Hungary, with a capacity expandable to 31 bcm per year.

FIGURE 13
Nabucco West



Source: Nabucco West.

²⁵ <http://www.tap-ag.com/the-pipeline/the-big-picture/strategic-partnerships>

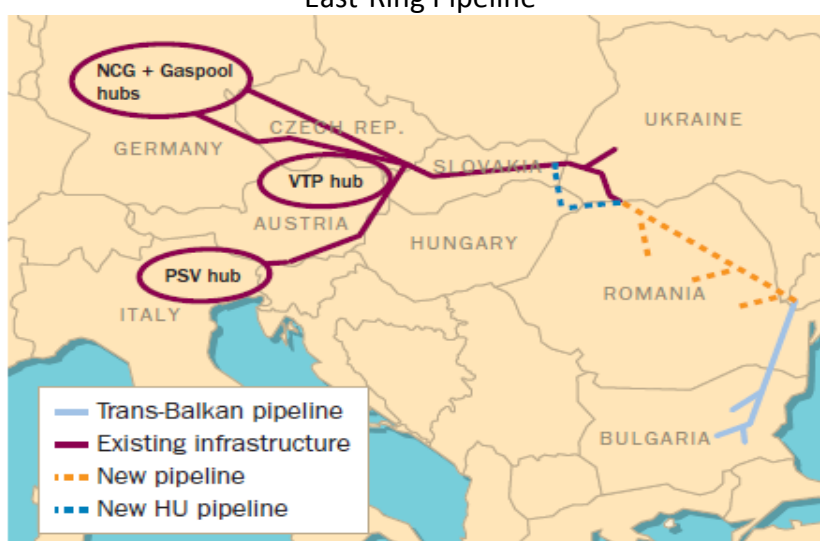
The project, again supported by the EU, ultimately failed like its predecessor as the Shah Deniz consortium selected in June 2013 the TAP project to provide the missing link between TANAP and the European market²⁶.

Considering the strong backing that the project had in the past from the EU and considering the interests of both Russia and the EU to provide a reliable gas supply to Central and South-Eastern European countries, Nabucco West might well be revived from the Turkish Stream project.

iv) East-Ring Pipeline

Another option to evacuate Turkish Stream gas from the Turkish-Greek border to Southern and Eastern European countries might be to develop the East-Ring Pipeline concept. In this framework, it would not be necessary to construct a new pipeline running from Bulgaria to Austria as in the case of Nabucco West. It would be sufficient to construct a pipeline connection across Romania and Hungary from the existing Trans-Balkan Pipeline (that since 1987 delivers Russian gas to Turkey via Ukraine, Romania and Bulgaria), to be operated in reverse flow, to the existing main Russia-Europe East-West gas corridor pipelines in Slovakia.

FIGURE 14
East-Ring Pipeline

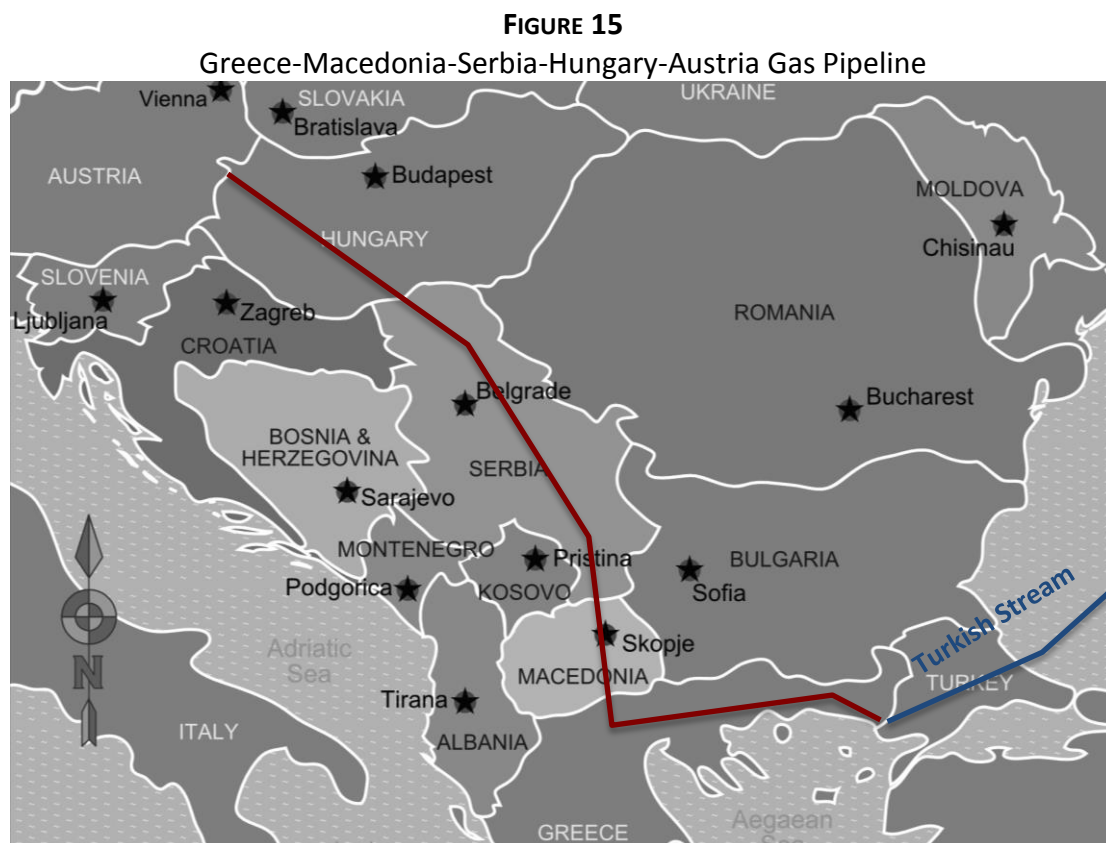


Source: Eustream.

²⁶ Reuters (2013), "Shah Deniz consortium chooses TAP to carry Azeri gas to Europe", June 28.

v) Greece-Macedonia-Serbia-Hungary-Austria Pipeline

Albeit both President Putin and Gazprom CEO Miller pointed out that it would be up to Europe to construct the infrastructure to evacuate Turkish Stream gas from the Turkish-Greek border to Europe's consuming countries, Russia might well decide to advance its own infrastructure. In particular, a pipeline connecting Greece and Austria via Macedonia, Serbia and Hungary is being evaluated by Russia²⁷. This solution would, of course, reinforce Russia's political relations in the region. Both Serbia and Hungary have already express their endorsement to the project, also if it appears to be technically and financially challenging²⁸.



Source: own elaboration.

²⁷ <http://www.reuters.com/article/2015/02/24/us-russia-gas-europe-idUSKBNOLS25620150224>

²⁸ <https://euobserver.com/economic/127877>

The need for a "Regional Grand Strategy"

Various are thus the options to deliver Turkish Stream gas to European costumers in Southern and Eastern Europe. Under the current circumstances a regional approach would be much more effective than a micro approach focalized on single projects.

In other words, Europe could seize the new reality created by the launch of Turkish Stream to launch the formation of a South-Eastern European regional gas hub. In addition to Russian and Azeri gas, also other gas from the Middle East (e.g. Iraq, Iran), the Caspian Basin (e.g. Turkmenistan) and the Eastern Mediterranean (e.g. Israel, Cyprus, Lebanon) might reach Turkey and South-East Europe in the medium term.

This regional gas hub might not only consist in a network of various pipelines, but also in a network of storage facilities to be developed in various countries in the region. For instance, a country that in the region might provide a great contribution in terms of gas storage is Romania, due to its high number of depleted gas fields.

A proper interconnection among South-Eastern European countries and with the rest of Europe is a precondition to a well-functioning European gas market and to addressing European gas security of supply.

The development of this South-Eastern European regional gas hub should be left to market players such as gas companies and TSOs. Up to them is to decide which projects are more commercially viable and financially sound.

However, the EU institutions do have an important role to play in this game, in particular as far as the implementation of a sound regulatory framework and the promotion of dedicated public finance mechanisms are concerned.

For this reason, the EC might play a crucial role as coordinator and facilitator between gas companies, TSOs, energy regulators and European financial institutions, such as the European Investment Bank (EIB) and the European Bank for Reconstruction and Development (EBRD), which might be interested -in line with their mandates- to support the financing of a regional gas infrastructure system crucially important for the

energy security and economic competitiveness of the overall South-Eastern European region.

Such a coordinated, regional, approach might well have the potential to transform Turkish Stream into a unique opportunity to create a fluid, reliable and interconnected South-Eastern European regional gas hub based on Russian but also Caspian, Middle Eastern and Eastern Mediterranean supplies.

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