
There Will Be Gas: Gazprom's Transport Strategy in Europe



Aurélie Bros

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Ifri
27, rue de la Procession
75740 Paris Cedex 15 – FRANCE
Tél. : +33 (0)1 40 61 60 00
Fax : +33 (0)1 40 61 60 60
Email : accueil@ifri.org

Ifri-Bruxelles
Rue Marie-Thérèse, 21
1000 – Bruxelles – BELGIQUE
Tél. : +32 (0)2 238 51 10
Fax : +32 (0)2 238 51 15
Email : bruxelles@ifri.org

Website : ifri.org

Author



Aurélie Bros is a Doctor of Geopolitics/Geography. She studied at the Paris I Panthéon-Sorbonne and at the Russian Academy of Sciences in Moscow. During the three years of her PhD thesis, she worked successively for private companies, European institutions (e.g. European Commission), ministries and research centers throughout Europe, including the Energy Research Institute of the Russian Academy of Sciences (ERI RAS). She is currently a researcher and assistant professor at the Energy Institutes in the Higher School of Economics in Moscow and in the ERI-RAS, and an associate researcher at the Russia/NIS Center, Ifri.

Latest publications

- “The European Union and Russia: Between Pride and Bias”, *Revue Analytique Financière*, April 2015.
- “Gazprom in Europe. A Business Doomed to Fail?” *Russie.Nei.Reports*, No. 18, Paris, July 2014.
- *EU-Russia: Towards a Common Energy Market in 2050?* Yearbook of the Observatoire franco-russe, April 2014.
- “Energy Relations Between Russia and the EU. Is the Liberalization of the Energy Market a Chance or a Threat for Gazprom?” *Revue d'études comparatives Est-Ouest*, Vol 42, 2011.

Executive Summary

The key role played by Ukraine in the transport of Russian gas and the underground gas storage facilities are a legacy of the Soviet era. The collapse of the USSR forced the Russian Federation to formulate its own national energy strategy after the Soviet Republics and satellite states went independent, to readjust it over time and to define new relationships with these countries regarding the gas sector. The collapse also had the effect of complicating gas transport after 1991—a reality that had never been a thorny issue before since Ukraine had been formerly integrated into the territory of the Soviet Union.

From the mid-1990s onwards, Gazprom has repeatedly tried to control gas transit through Ukraine and other infrastructures from the Soviet era. This effort has been double-pronged: the acquisition of shares in the Ukrainian transit sector (100% owned by the Ukrainian state) and the creation of a joint venture in order to exercise indirect control over the network. Neither of these resulted in success. During the 2000s, especially after the 2004 Orange Revolution, most of the arguments between Ukraine and Russia were based on transit contract, supply agreements, gas debts and management of the transit network. Such a situation led Gazprom—with the support of the Russian government—to adopt a more assertive stance toward Ukraine, i.e. cutting off gas flows intended for Ukraine. The two most serious crises of this nature occurred in 2006 and 2009.

Gazprom developed major projects in collaboration with European energy companies to diversify gas supply routes at a time when it anticipated a major increase in European gas demand and the import needs of Russian gas. The Nord Stream pipeline is certainly the best illustration of Gazprom's bypassing policy. From a Russian perspective, transporting gas through the Nord Stream pipeline is much more attractive than Ukraine as Gazprom thereby avoids political tensions, keeps control of the situation and gets 51% of the transportation profit for the same price.

In the context of the deepening Ukrainian-Russian crisis, Alexander Medvedev, Gazprom's deputy CEO, reaffirmed in June 2014 that the company will definitely cease gas transit through Ukrainian territory at the end of 2019—the expiration date of a 10-year transit contract signed in winter 2009 when gas transit through Ukraine was halted for a few weeks. Nevertheless, Alexei Miller, Gazprom's Deputy Chairman, officially rejected this target on the 26th of June. He said there was an order from President Vladimir Putin

to start negotiations with Ukraine on post-2019 transit conditions. This traditional route is currently not entirely replaceable. If Gazprom wants to significantly reduce transit through Ukraine, it has to accelerate the construction of the Turkish Stream and the expansion of the Nord Stream. Gazprom will probably have to prioritize its projects, as it is rather complicated to address everything head-on. One question remains: Will the Turkish Stream be built according to Gazprom's plan and timeline? The ultimate outcome remains uncertain.

Despite stagnating demand, Gazprom does not seem to be ready to deflect attention away from the European market. Gazprom's first objective in Europe consists of increasing or at least maintaining its sales on the wholesale market, just like any other company, while covering the entire gas value chain is its second objective. However, Gazprom has to adapt to the new rules of the game. The depletion of reserves is progressively increasing, while European economies are energy-intensive.

Contents

INTRODUCTION	5
REDUCING TRANSIT THROUGH UKRAINE	7
THE NORD STREAM PIPELINE	14
GAZPROM'S INCREASING DISCOMFORT	23
CONCLUSION.....	33

Introduction

The Russian Federation and the European Union (EU) have been at loggerheads since the start of the Ukrainian crisis in November 2013. This has damaged the EU-Russia Energy Dialogue,¹ which has made it difficult to address major bones of contention in the gas sector. The tensions culminated in the cancellation of the South Stream project on 1 December 2014 by the President of the Russian Federation and its replacement with the Turkish Stream project.² This has rekindled the debate on Gazprom's strategy of bypassing Ukrainian territory—the historic transit route of Russian gas toward Europe—and, more importantly, the future of EU-Russian gas cooperation.

Gas relations between Europe and Russia have been subject to various multi-scalar and polymorphous changes since the 1990s, swinging constantly between cooperation and tension. Three major issues have influenced these changes. First, the collapse of the USSR forced the Russian Federation to formulate its own national energy strategy after the Soviet republics and satellite states went independent, to readjust it over time, and to define new relationships with these countries in relation to the gas sector. In a world where gas is a commodity gaining increasing strategic significance, this resource is used to provide Russia with greater economic security and geopolitical power. A central issue was, and still is, the definition of Gazprom's status in Russian energy strategy and its closeness to the Kremlin³. Secondly, the collapse of the Soviet Union had the effect of

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¹ Dialogue established in 2000 and providing the “overall structure for energy cooperation between the EU and Russia”.

<https://ec.europa.eu/energy/en/topics/international-cooperation/russia>.

² Initially, the South Stream project was intended to consist of four gas pipelines, 930km long, connecting Anapa in Russia to Varna in Bulgaria through the Black Sea, and then Bulgaria to Baumgarten in Austria. The original transport capacity was 31 bcm/year before being extended to 63bcm/year after the Russian-Ukrainian gas crisis of 2009. Gazprom confirmed the cancellation of the project on 9 December 2014. The Turkish Stream is composed of four pipelines with a capacity of 15.75 bcm/y each, i.e. a total of 63 bcm/y. The pipeline route is almost the same, with the exception of the last 250km, which runs southwards to Turkey; www.gazprom.com/press/news/2015/january/article213570/.

³ Gazprom is a state-controlled producer and supplier of natural gas, as well as owner of the gas transmission system. Since its creation, Gazprom has always had a key social role in Russia: delivering gas in Russia below cost until the early 2010s,

complicating gas transport (which had not previously been a thorny issue) because it turned into transit in 1991 as the new independent states gained control of the gas transportation infrastructure within their borders. Thirdly, the progressive enlargement and deepening of the EU to the East has profoundly affected Russia and Gazprom in different ways. The strengthening EU energy policy, which gained key momentum after the 2006 and 2009 gas crises, is gradually leading to a new architecture for the European gas market, and therefore calls into question the business model established during the Cold War and early 2000s, when Gazprom was attempting to move downstream. It also led to the multiplication of uncertainties and tensions on both sides in a context where global changes in gas markets lead to systemic changes.

Over the last few months, Gazprom has attracted particular attention in the West. The last time Russia and Ukraine argued over gas prices, Gazprom turned off gas to Ukraine and Europe, which reinforced its unpleasant reputation as the political weapon of the Kremlin. The exacerbation of tensions has led to wrong interpretations and misperceptions. In such a context, any information seems to be contradictory, and a brief lull can suddenly swing into a red alert. Consequently, it is worth taking a closer look at Gazprom's transport strategy. Why and how is the company reducing transit through Ukraine in a difficult financial, regulatory and market environment? Will Gazprom continue its strategy based on confrontation with European regulations, or will it toe the line? The first part of this paper gives a brief overview of the motivations behind Gazprom's transport strategy. The second part highlights the implementation of this strategy, before the Ukrainian crisis, by analyzing the history and characteristics of the Nord Stream gas pipeline. Since its conception, this pipeline has been largely controversial, but it exemplifies the way Gazprom intended to develop its activities and partnerships in Europe. The third part looks in more detail at major financial, regulatory and market environment problems that further weaken Gazprom.

employing people, supporting sporting and youth events, etc, while also fulfilling
³ Russia's international obligations in gas supplies and optimizing its return on investments thanks to gas exports, especially to Europe. Since 2006, the company has held an export monopoly—i.e. exports via pipelines and in liquefied form (LNG). The monopoly on LNG exports was abolished in 2013.

Reducing Transit through Ukraine

Why does Gazprom want to sideline Ukraine?

The key role played by Ukraine in the transport of Russian gas and the underground gas storage (UGS) facilities (about 30 bcm) is a legacy of the Soviet era.⁴ The USSR has always been reluctant to build gas pipelines on any other route. The break-up of the USSR exposed both Gazprom and Russia to two major problems. First, gas delivery points laid down in contracts in agreement with European energy companies remained almost identical after the collapse of the Soviet Union.⁵ Given that these delivery points were located on the national borders of buyers/shippers, it was up to Gazprom to sign transit contracts. From a legal standpoint, Gazprom was responsible for the transmission of natural gas to delivery points, with possible liquidated damages in the case of contractual non-performance. From a strategic standpoint, Gazprom not only took the responsibility for organizing the transit of gas through Europe and the Commonwealth of Independent States (CIS), but also indirectly for organizing the European security of supply (SoS). Second, the USSR had always signed long-term supply contracts (LTSCs) but not long-term transit contracts (LTTCs) because new transit countries had formerly been integrated into the territory of the Soviet Union. The signature of transit contracts rapidly became a thorny issue. The definition of transit differs from one treaty to another, which explains why there is no real international consensus and no universally accepted transit tariff methodology.

The tension between sovereignty (the Ukrainian vision) and freedom of transit (the Russian vision)—confirmed by the Energy Charter Treaty signed in 1994—is generally observable.⁶ Some treaties emphasize the first aspect and others the second, while none of them have been ratified by all of the countries; hence the difficulty of reaching an overall agreement. Furthermore, gas sales during Soviet times were used to generate different kinds of rents:

⁴ UGS allows seasonal swings in supplies. It is still one of the key elements of the discussions between the EU, Russia and Ukraine.

⁵ Delivery points are located at the border. As there were only a few delivery points in Europe, gas was often delivered at one delivery point for various consuming markets on the border between West and East. This did not necessarily mean that buyers paid the same price for gas.

⁶ K. Yafimava, *The Transit Dimension of EU Energy Security: Russian gas transit across Ukraine, Belarus, and Moldova*, Oxford: Oxford Institute for Energy Studies, 2011.

converting the rent into social subsidies in the USSR, exchanging the rent for non-commercial concessions in satellite states (i.e. political price of gas), and acquiring rent in a monetary form in Western Europe. Gazprom tried to partly maintain such a division in the aftermath of the breakup of the Soviet Union. The company was obviously interested in stopping the sale of gas at a political price in Eastern countries that had joined the EU or were about to join the EU. However, from a Russian perspective, the transport dimension of the SoS largely justified the maintenance of this form of rent in a few former Soviet Union (FSU) states, such as Ukraine and Belarus – two transit countries consuming and importing high volumes of gas, with weak economies and accustomed to buying gas at a lower price in exchange for major political concessions. Accordingly, Gazprom entered into the habit of negotiating gas prices in parallel with the price of gas transit, and bargaining for relatively cheap gas in return for relatively cheap transit.

Figure 1: Diagram of LTTCs in view of the localization of delivery points



Source: Aurélie Bros (2015) (based on Katja Yafimava, 2011).

From the mid-1990s onwards, Gazprom has repeatedly tried to control gas transit through Ukraine and other infrastructures from the Soviet era. This attempt came in two variations: the acquisition of shares in the Ukrainian transit sector (100% owned by the Ukrainian state) and the creation of a joint venture in order to exercise indirect control over the network. Neither of these resulted in success. The multiplication of non-payment on the Russian domestic markets was added to fairly low gas prices, putting significant pressure on Gazprom, which claimed non-payment by Ukraine dating back to the late 1990s. Gazprom also observed an increase in unauthorized gas offtakes from the transit pipeline in Ukraine, reaching 8.7 bcm in 2000 alone.⁷ During the 2000s, especially after the 2004 Orange Revolution, most of the arguments between Ukraine and Russia were based on transit contract, supply agreements, gas debts and management of the transit network. Such a situation led Gazprom—with the support of the Russian government—to adopt a more

⁷ *Ibid.* p. 390.

assertive stance toward Ukraine, i.e. cutting off gas flows intended for Ukraine. The two most serious crises of this nature occurred in 2006 and 2009.⁸

Decreasing transit flows and multiplication of new export routes

Whereas Russian exports to Europe have increased, from the 2000s onwards (with the exception of 2014), gas transit through Ukraine has notably decreased, especially in 2013-2014. This is the result of Russia's bypassing policy: circumventing "sensitive" territories in order to avoid any problems during the transit of gas; not giving too much weight to a transit country, and reducing spending on transit fees. According to calculations by the Institute of Energy Economics at the University of Cologne, transit through Ukraine represented 60-70% of the total amount of Russian gas exported to Europe in 2009-2011, before decreasing to 50-60% in 2012-2013 and dropping to about 40% in 2013-2014.⁹ In 2014, transit amounted to 44 bcm (57 bcm if volumes to Turkey crossing from Bulgaria are added), while it peaked to over 120 bcm in 2005 (Turkey included).

Gazprom developed major projects in collaboration with European energy companies to diversify gas supply routes at a time when it anticipated a major increase in European gas demand and the import needs of Russian gas. This started in 1999 with the Yamal gas pipeline (33 bcm/y) connecting the Urengoy gas field in western Siberia with Germany, and crossing Belarus and Poland; the Blue Stream pipeline (16 bcm/y) in 2005 linking Beregovaya in Russia to Durusu in Turkey, and the Nord Stream pipeline (55 bcm/y) linking Viborg in Russia to Greifswald in Germany through the Baltic Sea. The South Stream, Nord Stream 3 and 4 projects and the possible expansion of Yamal-Europe were intended to be Gazprom's last major attempt to bypass Ukraine. The combination of Gazprom's historic pipeline export capacity to Europe and the proposed capacities would reach almost 400 bcm/y, but, as shown in the graph below, this increase in transport capacity is primarily a means of rerouting capacities.

It was possible to finance all those projects as long as profit was high, since the netback pricing in continental Europe is essentially based on the market value of gas in inter-fuel competition (crude oil in this case), from which the cost of transport services and overheads are deduced. Even if price indexations are now partly

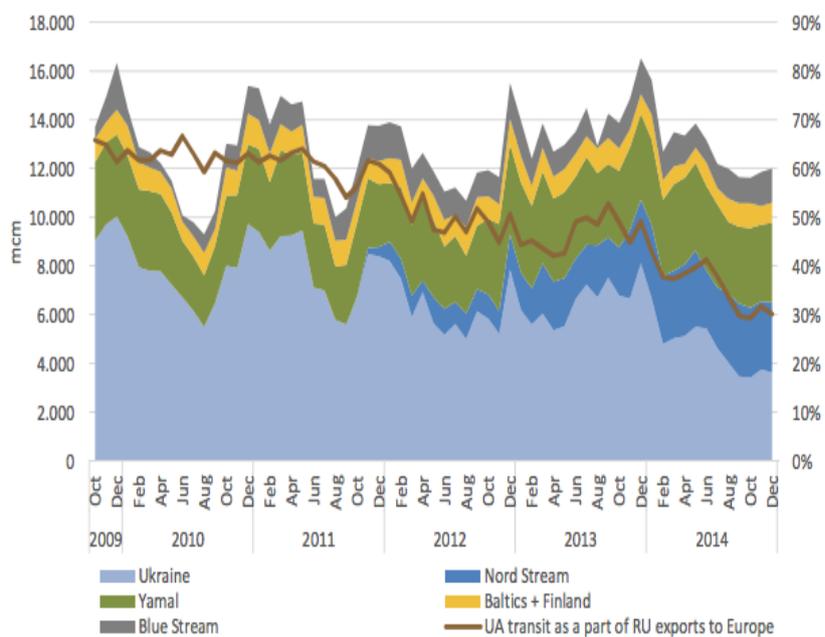
⁸ Disputes between Ukraine and Russia over natural gas started in the 1990s, but were without major consequences for the EU. They did not result in interruptions or shortfalls in gas supplies. All of the crises that occurred in the first part of the 1990s were due to non-payments or late payments.

⁹ M. Martinez; M. Paletar; H. Hecking, *The 2014 Ukrainian Crisis: Europe's Increased Security Position*, Energiewirtschaftliches Institut an der Universität zu Köln, 2015.

coupled to spot gas after renegotiations, continental gas prices are not totally delinked to crude prices.

Analysis of the routings of gas pipelines developed between the early 2000s and the 2014 Russian-Ukrainian crisis shows that Gazprom preferred to avoid the transit of gas destined for the EU market through non-EU member states (MSs) that are highly dependent on Russian gas imports. These include Ukraine (for reasons previously mentioned), Belarus and Turkey. The Nord Stream and South Stream gas pipelines reflect the structural dilemma that any energy company active in the transport sector of oil and/or gas has to face: building a direct pipeline circumventing transit (e.g. Nord Stream crossing the Baltic Sea) or building a transit pipeline crossing a number of territories (e.g. South Stream crossing southwestern Europe).

Figure 2: Russian pipeline exports to Europe and Turkey by route, 2009-2014 (total exports in mcm/month)



Source: M. Martinez; M. Paletar; H. Hecking (2015). *The 2014 Ukrainian Crisis: Europe's Increased Security Position*, *Energiewirtschaftliches Institut an der Universität zu Köln*.

In June 2014, Alexander Medvedev, Gazprom's deputy CEO, reaffirmed that the company would definitely cease gas transit through Ukrainian territory at the end of 2019—the expiration date of a 10 year transit contract signed in winter 2009 when gas transit through Ukraine was stopped for a few weeks.¹⁰ Disputes between Russia and Ukraine over gas pricing and debt have multiplied over the last few years, and the wider conflict over the annexation of the

¹⁰ "Gazprom: Gas Transit Through Ukraine to End After 2019, Come What May", Interfax-Ukraine, 9 June 2015, <<http://en.interfax.com.ua/news/economic/270971.html>>.

Black Sea peninsula of Crimea in March 2014 has exacerbated tensions. Nevertheless, Alexei Miller, Gazprom's Deputy Chairman, officially refused this target on 26 June 2015. He said there was an order from President Vladimir Putin to start negotiations with Ukraine on post-2019 transit conditions.¹¹

Supplying the European Market¹²

Gazprom's first objective in Europe consists of increasing or at least maintaining its sales on the wholesale market, just like any other company. This includes, *inter alia*, the call for the use of gas in key sectors where demand could hypothetically grow thanks to technological advances in the coming years (e.g. development of vehicle fleets running on natural gas) in order to create niches. Covering the entire gas value chain is its second objective.

For some years now, the new shaping of the single European energy market has opened up new opportunities for Gazprom and its wholly owned subsidiaries active on the European market. Liberalization, and the Third Energy Package¹³ in particular, has permitted greater penetration of European midstream and downstream activities (a benefit not always enjoyed by EU energy companies in Russia). It has also offered Gazprom an opportunity to learn from the market, while reconsidering the assessment of its own profitability. A few segments of the gas value chain have attracted the attention of the company and its subsidiaries. Over the last few years, they have reinforced their position on the transport network. They have also been developing their activities in the storage sector, which is important for SoS reasons and optimization of supplies. Gazprom's interest in transport and storage can be further explained by the position of the company in Russia. Gazprom has a monopoly on the gas storage business and transport, two sectors where it has acquired experience and know-how. Naturally, Gazprom is investing in sectors that it is familiar with.

¹¹ "Russia Backs Down From Abandoning Gas Transit Through Ukraine", *Reuters*, 29 June 2015, <www.reuters.com/article/2015/06/26/russia-gazprom-ukraine-idUSL8N0ZC3AG20150626>.

¹² For details, see A. Bros, "Gazprom in Europe. A Business Doomed to Fail?", *Ifri, Russie.Nei.Reports*, No 18, July 2014, <www.ifri.org/fr/publications/enotes/russieneireports/gazprom-europe-business-doomed-fail>.

¹³ This was adopted in July 2009 and became in law in March 2011. It includes a Gas Directive and an Electricity Directive, which have to be transposed into national law, and three regulations. Regarding the gas sector, Directive 2009/73/EC, Regulation (EC) No 713/2009, and Regulation (EC) No 715/2009 are particularly significant. They can be summarized into six main measures: the unbundling of networks, the independence of national regulators, the effective functioning of the retail market and consumer protection, the establishment of network codes, the development of long-term planning of trans-European energy networks, the creation of the Agency for the Cooperation of Energy Regulators, and of the European Network of Transmission System Operators for Gas.

The geography of Gazprom's investments, whilst taking into account geological criteria, is no mere coincidence; it follows a pattern particular to the company. Since the 1990s, it has started to engage in a kind of territorial breakdown so as to identify the potential and challenges of each part of European territory; e.g. producing countries (such as the UK and Netherlands), historic partners (i.e. Austria, Germany, France and Italy), landlocked countries with difficult access to new supplies (e.g. Czech Republic, Hungary, Slovakia), etc. Gazprom is particularly interested in a corridor crossing European territory diagonally from the UK to Turkey, while concentrating principally on Gazprom's activities, subsidiaries and joint ventures. This corridor includes mature markets in the north with a well-developed trading system and decreasing indigenous reserves. For example, in January 2014, the Dutch Minister of Economic Affairs imposed a production cap on the Groningen field (the largest natural gas field in Europe) from 2014 until 2016 for safety reasons, which has led to a decrease in production, accentuated by a drop in production in small fields.¹⁴ Interconnections in this part of the corridor are developed, especially in the UK, the Netherlands and Belgium, as demonstrated by coupling of their relevant pricing benchmark.¹⁵ Interconnections will multiply in the future, mainly due to European security legislation that requires the construction of additional pipelines with neighboring markets to cope with the eventual loss of a major source of supply (i.e. N-1¹⁶). Given that loss of major supply does not occur frequently, this is intended to add capacities available for gas flows between national markets, while increasing competition. This is also a region where spot purchases might increase, and it is not impossible that this ratio might significantly increase in the coming years. Theoretically, spot prices are set as a result of the supply and demand equilibrium, but have certain inherent risks such as price distortions, which arise for different reasons. This may happen when one supplier gains increasing market power. For example, Norway, one of the main suppliers of the UK, exerts a significant influence on the National Balancing Point (NBP) gas market, which serves as the major European price index. Due to the flexibility of its export network, Norway can "choose to arbitrage UK against Continental Europe or reduce production".¹⁷ EU downstream is, even today, dominated by large incumbent companies that are also the buyers. Therefore, price distortions can also occur if a wholesale buyer that controls a large volume of gas through long-term contracts acquires

¹⁴ <www.government.nl/news/2014/01/17/natural-gas-production-reduced-and-funds-earmarked-for-groningen.html>.

No specific annual production caps have been set beyond 2016. However, the production of the Groningen gas field is expected to decline naturally in any case.

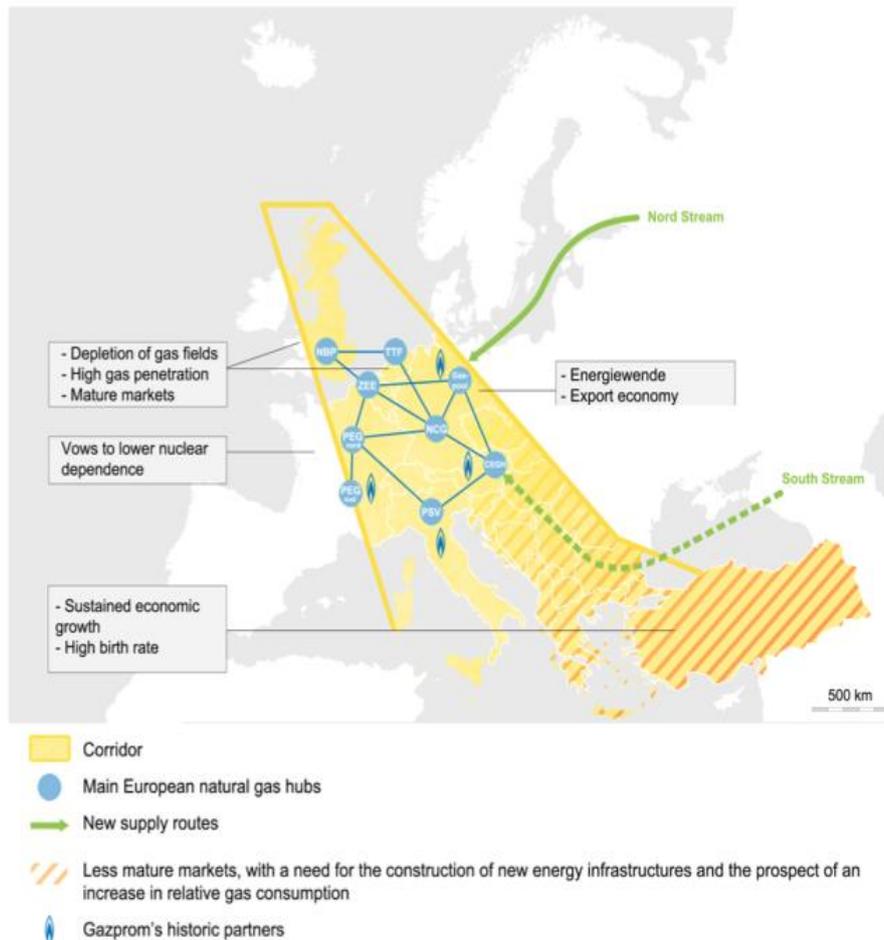
¹⁵ International Energy Agency. *Gas Medium-Term Market Report 2015*, Paris, 2015.

¹⁶ The N-1 formula "describes the ability of the technical capacity of the gas infrastructure to satisfy total gas demand in the event of disruption of the single largest gas supply infrastructure, during a day of exceptionally high gas demand occurring with a statistical probability of once every 20 years". Regulation No 994/2010 concerning measures to safeguard security of gas supply.

¹⁷ T. Bros, *After the US Shale Gas Revolution*, Paris, Editions Technip, 2012, p. 165.

an overly significant weight. Gazprom is seeking to become a major player in the trading sector by improving its position on hubs, especially in northern Europe, where markets are more mature. The southern part of the corridor consists of less mature markets, but the prospect of a relative increase in gas consumption and the need to construct new energy infrastructures offer interesting opportunities for the company.

Figure 3: Gazprom's corridor¹⁸



Source: Aurélie Bros (2015).

¹⁸ The largest European gas consumers in 2014 were concentrated in this corridor: Belgium: 14.7 bcm; France: 35.9 bcm; Germany: 70.9 bcm; Italy: 56.8 bcm; Netherlands: 32.1 bcm; Turkey: 48.6 bcm; UK: 66.7 bcm.

The Nord Stream Pipeline

A direct connection to the European market

The project in a nutshell

In the early 1990s, the Soviet-British joint venture Sovgazco viewed the UK as a possible export market in a context of liberalization in the UK. The idea was quickly abandoned before reemerging in 1997, when Gazprom, Fortum Oil and Gas Oy established a Finnish-Russian consortium, North Transgas Oy. The objective was to explore the possibility of transporting Russian gas to Europe. The political and economic landscape was very different at that time (e.g. calm EU-Russia energy relations, better economic health of Europe, and a gradual switch from oil and coal to gas, particularly for electricity production). Gazprom also observed the first signs of the imminent depletion of European gas fields. The project took a new turn in September 2005 when the German BASF, via its subsidiary Wintershall Holding GmbH (24.5%) and E.ON Ruhrgas (24.5%), signed an agreement with Gazprom (51%) for the construction of a pipeline running through the Baltic Sea from Vyborg in Russia to Greifswald in Germany (with spur lines to Finland and Sweden), along a distance of 1224 km and with a total capacity of 55 bcm/y. Over time, the consortium took on a progressively more European character. The Dutch N.V. Nederlandse Gasunie joined the consortium in 2008 with a 9% stake, as E.ON Ruhrgas GmbH and Wintershall Holding GmbH both ceded 4.5% of their stake. In exchange, Gazprom acquired 9% in the BBL pipeline (pipeline linking the UK to the Netherlands, with a capacity of 20 bcm/y). In 2010, the French GDF Suez SA¹⁹ joined Nord Stream AG with a 9% stake. Once again, E.ON Ruhrgas GmbH and Wintershall Holding GmbH both ceded 4.5% of their stake.

The EU started to officially demonstrate its interest in the project in 2000. The project was included in the Trans-European Network for Energy guidelines.²⁰ This status was confirmed in 2006, when the European Commission granted the label of “project of European interest”. From a European perspective, this project was a

¹⁹ GDF Suez changed its name to ENGIE in April 2015.

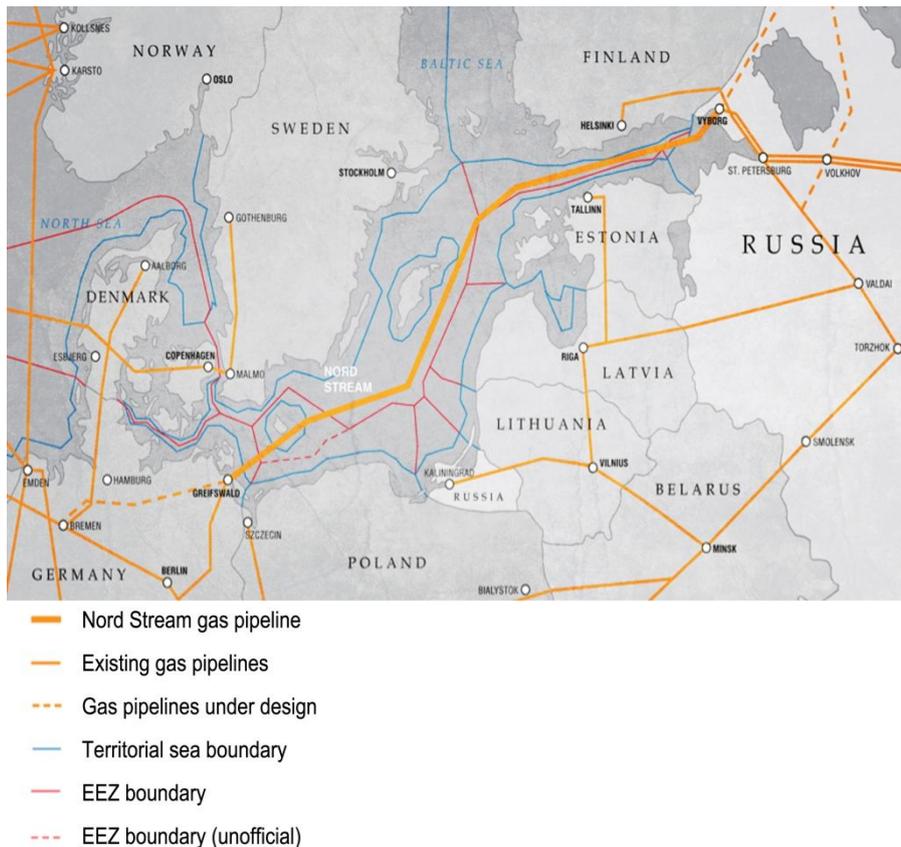
²⁰ Projects eligible for European assistance must satisfy certain minimum conditions before gaining support from the Commission (e.g. strengthening of territorial cohesion as some European regions are still too isolated, ensuring security and diversification of energy supplies, etc).

means to open a new transportation route while reinforcing the SoS. Despite this, the Nord Stream divided Europeans. First, the German-Russian nature of the project has met with a lot of criticism and conjured up memories of the Russian-German ententes of the past.²¹ The famous *Männerfreundschaft* (male friendship) between former Chancellor Gerhard Schröder and Russian President Vladimir Putin, which played a role during part of the negotiations, largely strengthened this impression. Secondly, for many Central European countries and Baltic states, the pipeline was considered a waste of money²² and a means of increasing Russia's footprint in the Baltic region. For example, the construction of the service platform for the maintenance and service of the pipeline, in the Swedish economic zone 90 km to the northeast of Gotland Island, was a thorny issue. It was feared that Russia could use this platform for espionage activities. Thirdly, this pipeline will circumvent part of EU territory. Indeed, the pipeline crosses the Economic Exclusive Zones of Russia (96 km), Finland (369 km), Sweden (482 km), Denmark (37 km) and Germany (33 km), while bypassing the Baltic states and Poland and reinforcing their marginalization directly in the aftermath of the 2004 enlargement.

²¹ A. Petersen, "The Molotov-Ribbentrop Pipeline", *The Wall Street Journal*, 9 November 2009, <www.wsj.com/articles/SB10001424052748703567204574499150087261242>.

²² "Nord Stream 'a waste of money', says Poland", EurActiv, 31 August 2011, <www.euractiv.com/energy/nord-stream-waste-money-poland/article-188727>.

Figure 4: Routing the Nord Stream pipeline through the Baltic Sea



Source : www.gazprom.com/about/production/projects/pipelines/nord-stream/.

Expanding and interconnecting the network

It is often stated that the Nord Stream had to circumvent Ukraine—a fact that cannot be dismissed. However, if one takes a closer look at the Nord Stream, one can see that one of the major objectives of the pipeline, from a Russian perspective, is to reinforce the position of Gazprom in the northern part of the corridor (as mentioned in part one above). In order to do this, Gazprom is acting in a wide range of ways.

First, the consortium is linking Gazprom to former monopoly companies (i.e. E.ON, GDF-Suez and Gasunie) and to a subsidiary of BASF, a company that has also shown interest in Russian gas. Except for the Dutch Gasunie, this consortium represents a straight continuation of the historical partnership linking the USSR, then Russia to French and German companies, mainly because of a convergence of interests and a tradition of cooperation to some extent.

Second, thanks to the construction of the two strings crossing the Baltic Sea, Gazprom gained direct access to Germany, one of its most important markets in Europe, while this EU member state also

strengthened its SoS. The construction of the two pipelines OPAL²³ and NEL²⁴ on German territory—added to the presence of developed network interconnections in this part of Europe—allows Gazprom to supply the German market and also other foreign markets such as the Czech Republic, France, Belgium and the Netherlands. From a German perspective, the Nord Stream pipeline has a major advantage. Because of the central position of the country in Europe and its cross-border infrastructure, the Nord Stream pipeline reinforces the position of Germany as a natural gas transit hub. Important flows of gas from Russia and Norway are crossing German territory before reaching other European markets.

Another crucial issue is the extension of the Nord Stream project. For Gazprom, this could be the opportunity to strengthen its footprint in the northwestern part of Europe, especially in the UK. It is obvious that Gazprom is interested in supplying this market, which has a high penetration of natural gas and is facing the progressive depletion of its indigenous fields. In March 2013, Nord Stream AG published the Project Information Document (PID) on the hypothetical Nord Stream extension. The consortium was, at that time, envisaging the opportunity of constructing an extension of the existing twin natural gas pipelines through the Baltic Sea, i.e. Nord Stream 3. According to the PID, Nord Stream 3 would expand Nord Stream 1 and 2 and cross the Baltic Sea to Germany. The Dutch infrastructures would be upgraded to allow the transit of Russian gas through Dutch territory via the Bunde-Den Helder pipeline system²⁵. This pipeline system supplies gas from the North Sea to Germany, but it is underused.²⁶

Gazprom's interest was in supplying the Dutch market, but its main priority was using the country's huge infrastructure system. The Netherlands has one of the largest gas pipeline systems in Europe, i.e. about 15,000 km of pipelines connected to Germany, Belgium, France and the UK.²⁷ From a Dutch perspective, the progressive depletion of the Groningen gas field is worryingly diminishing the country's strategic position. The Netherlands could greatly benefit from the extension of the Nord Stream. First, this would lead to the relative modernization of a few pipelines. Second, underused pipeline could be used to let Russian gas flow to the UK. Third, the country would reinforce its position as a gas hub for northwestern Europe (i.e. the Nord Stream bringing gas from Russia, LNG import terminal near

²³ The OPAL (*Ostsee Pipeline Anbindungsleitung*) pipeline has an annual maximal capacity of 35 bcm/y and runs southward to the German-Czech border, i.e. from Greiswald to Olbernhau (close to the Czech border), and connects Nord Stream to the STEGAL pipeline and the JAGAL pipeline, which is itself connected to Yamal-Europe.

²⁴ The NEL (*Norddeutsche Erdgasleitung*) pipeline has an annual maximal capacity of 20 bcm/y and runs westward toward the border with the Netherlands, i.e. from Greiswald to Achim, and is connected to the Rehden Hamburg gas pipeline.

²⁵ <www.naturalgaseurope.com/a-possible-nord-stream-expansion>

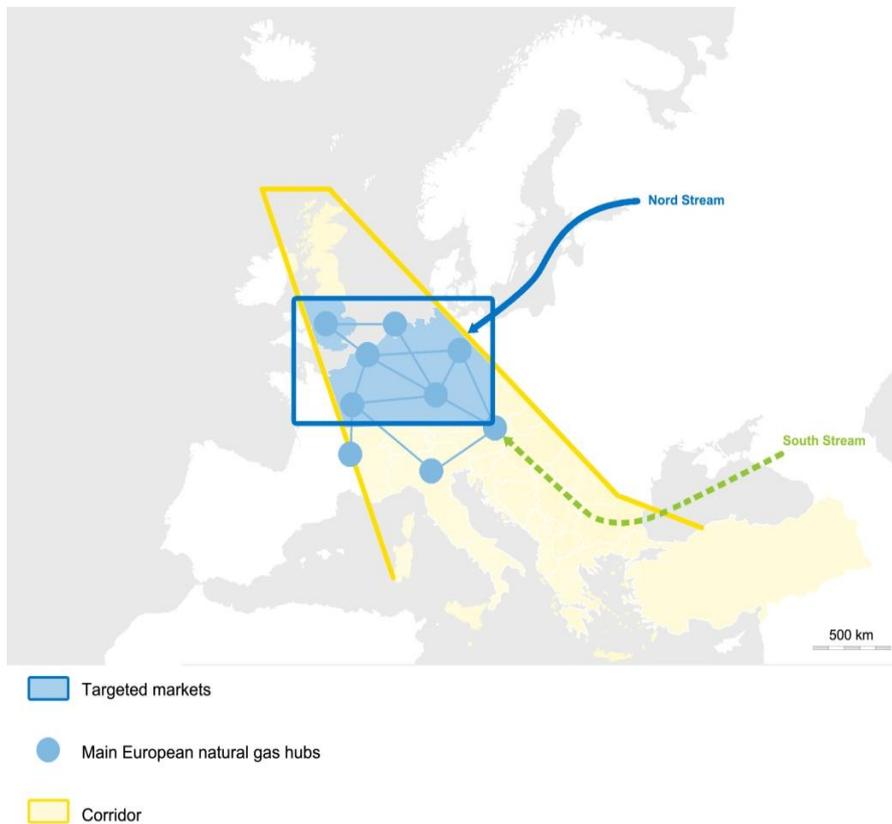
²⁶ Nord Stream AG, Nord Stream Extension, Project Information Document (PID), Zug, March 2013.

²⁷ International Energy Agency, *Oil & Gas Security, Netherlands*, Paris, 2012.

Rotterdam, the BBL linking the Netherlands to the UK and allowing gas flows in two directions, and a link with Norway).

The acquisition of 9% of the BBL by Gazprom, while Gasunie acquired 9% in the Nord Stream consortium, does not come as a surprise, as Gazprom has wanted to supply the UK for many years. The Nord Stream 3 project is a means towards the construction of the Nord Stream 4 (i.e. 40 bcm/y). At the time of the submission of the PID, two pipelines linked the European continent to the UK: the BBL with a capacity of about 16 bcm (Netherlands/UK) and the Zeebrugge-Bacton Interconnector²⁸ with a capacity of about 25.5 bcm (Belgium/UK). Gazprom could supply the UK by using the BBL and the Interconnector, but there would not be enough capacity available for Gazprom and other competitors. Nord Stream 4 would have been an option.

Figure 5: The Nord Stream project within the corridor



Source: Aurélie Bros (2015)

Assessing security of supply at reasonable cost

The construction of the first pipeline was completed in June 2011, while transport began in mid-November 2011. Construction of the second pipeline began in October 2012. The price of transit was

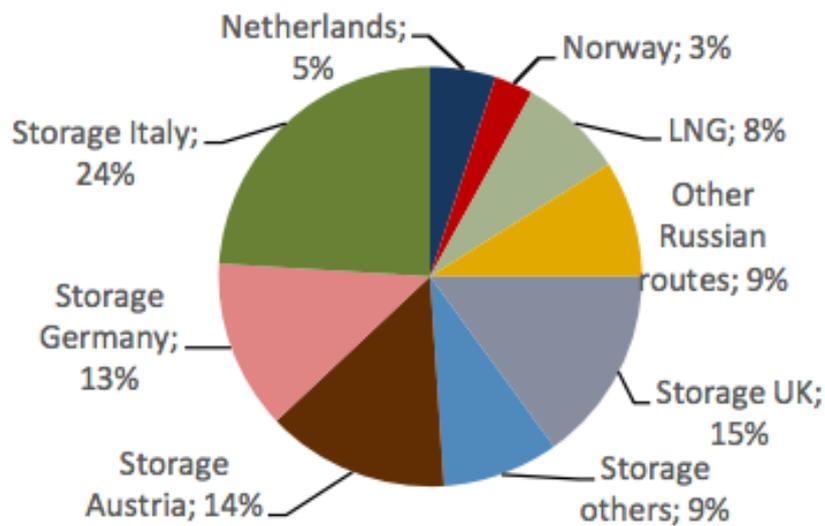
²⁸ Gazprom owns a 10% stake in this pipeline.

estimated at 2.9\$/1000cm/100km (excluding fuel cost) in 2012.²⁹ Fuel costs are lower than in Ukraine for the simple reason that the compressors are new. According to calculations carried out by Thierry Bros, Senior European Gas Analyst, the cost of transportation via the Nord Stream, in total, is about 39\$/1000 cm. This is on a par with the Ukrainian transit option, if we consider that the gas cost is 400\$/1000 cm with a fuel use of 1%. From a Russian perspective, transporting gas through the Nord Stream pipeline is much more attractive than Ukraine as Gazprom avoids political tensions, keeps control of the situation, and gets 51% of the transportation profit for the same price.

As regards European security of supply, the Nord Stream pipeline increases the latter in the case of interruptions of Russian gas flows transiting Ukraine, but not in the case of total disruption of Russian flows—a situation that has not yet occurred. From a European perspective, extensive storage withdrawals as well as increased LNG imports remain the best way to secure gas supply in many EU member states. Even if EU security of supply has much improved since 2009, up to 75% of the non-delivered gas during the 2009 gas crisis (about 5 bcm in Europe and 2 bcm in Ukraine, according to the IEA) were replaced with storage.

²⁹ T. Bros, *After the US Shale Gas Revolution*, Paris, Editions Technip, 2012, p.165.

Figure 6: Compensation supplies to EU during the 2009 Ukrainian disruption (as % of non-delivered gas, i.e. 5 bcm)



Source: IEA (2014a).

Developing new gas fields and supplying the European market

In 1988, the Soviet Union discovered the Shtokman field, a giant gas field in the Barents Sea, estimated at about 3.9 trillion cubic meters of natural gas and 56 million tones of gas condensate.³⁰ This was far too large to supply merely northwest Russia. It was necessary to find a lucrative export opportunity to make the exploration and production profitable, due to the complex and costly development of the field.

From the early 1990s onwards, investment management in exploration and production in Russia underwent structural changes as Gazprom invested much less in the development of new gas fields, up to the mid-2000s. The company inherited gas fields that had been developed several decades previously and were progressively running short (e.g. giant gas fields in western Siberia, which supplied the European market). From 1992-1993, the reserve replacement ratio began to decline worryingly, while production remained at the same level.³¹ Europe began to fear supply problems and sporadic interruptions that would threaten its SoS. Owing to this worrying situation, the likely rise of natural gas demand in Europe over the next

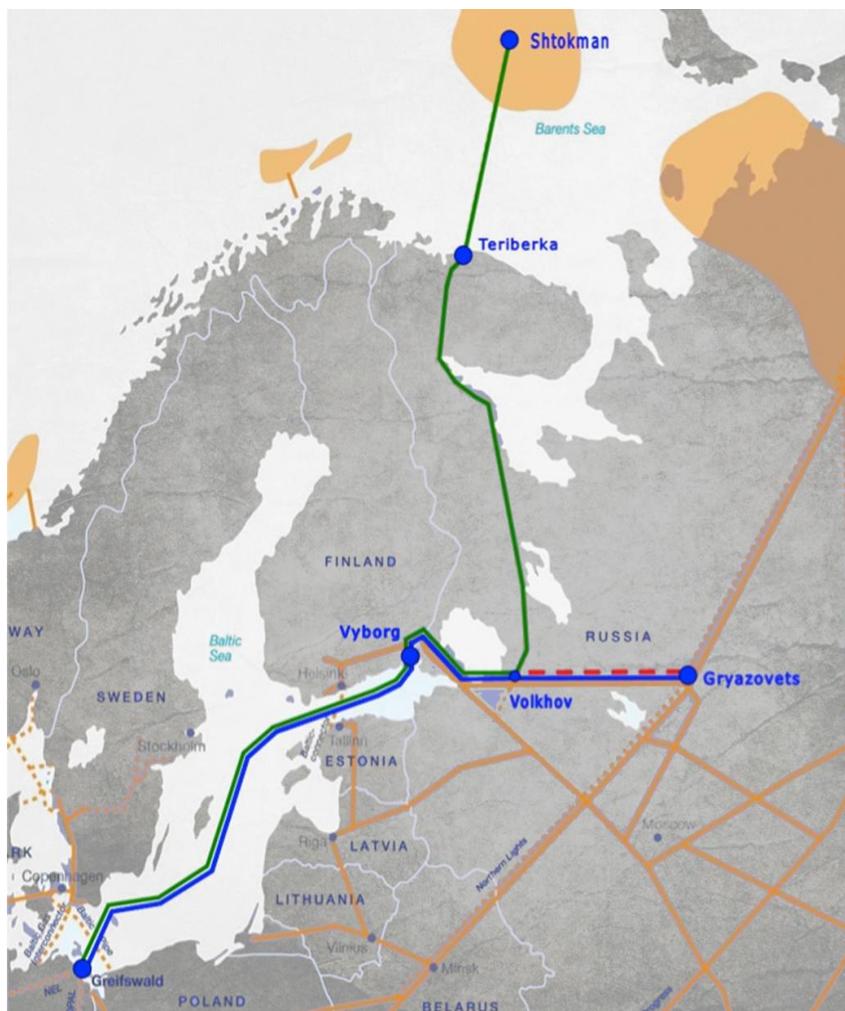
³⁰ T. Mitrova, "Russian LNG: The Long Road to Export", Paris, Ifri, *Russie.Nei.Reports*, No 16, December 2013, <www.ifri.org/fr/publications/enotes/russieneivisions/russieneireports/russian-Ing-long-road-export>.

³¹ International Energy Agency, *Optimising Russian Natural Gas, Reform and Climate Policy*, Paris, IEA, 2006.

decade, and a decline in domestic production and technological progress from the 1990s onwards, Gazprom decided that the Shtokman field would first supply the European market via the Teriberka-Volkhov gas pipeline, which is connected to the Nord Stream pipeline.

As the Nord Stream pipeline would have been operational before the exploration of the gas field, it was planned to connect Nord Stream to the Russian Unified Gas Supply System. Subsequently, after production had begun, the new pipeline linking the Shtokman field to Vyborg would have supplied Europe. The field would also have supplied the USA via LNG cargos. Deliveries through pipeline were initially planned for the beginning of 2013, and LNG exports would have started in 2014.

Figure 7: Connecting the Shtokman field to the European market



Source: <www.eegas.com/hs20091104e.htm>.

Gazprom got involved in the exploration of the Shtokman gas field in 1995, during a period when the Russian company was trying to attract foreign companies, such as the French Total. For Gazprom, the exploration and development of the field was very important, as the company lagged behind in this area of the gas business (i.e. exploration in deep water in extreme conditions, and LNG production). Furthermore, cooperation with international energy companies would reduce the technical backwardness of the Russian company, especially in large-scale LNG projects. In 2007, Gazprom signed an agreement with Total and the Norwegian Statoil (StatoilHydro at that time) to develop the first phase of Shtokman, leading to the creation of Shtokman Development AG (Gazprom 51%, Total 25%, Statoil 24%). However, the evolution of the global gas market (e.g. the shale-gas breakthrough in North America), along with internal problems such as disagreements between the project partners concerning the split between LNG and pipeline supplies, led to constant postponements of the project. It became obvious that Gazprom would not supply the USA. If the company had supplied the European market through LNG, Gazprom would have created additional competition for its supplies through pipelines. Consequently, this option was out of the question for the Russian company. Nevertheless, the repeated postponement of the project is not exclusively a consequence of the changes taking place in North America. The high costs of implementation and the lack of tax incentives have played a major role, while the change of the Mineral Extraction Tax for gas was also unhelpful.³² The Russian government turned a deaf ear to Shtokman shareholders, who had asked for a reduction in tax and the abolition of export duties on pipeline gas, while granting certain exemptions for the import of equipment. In April 2012, a few exemptions were granted for offshore projects, but Shtokman did not make the list, while Yamal LNG—a project conducted by Novatek—did. Because of serious difficulties among shareholders in redefining a new strategy, the project agreement expired in 2012, and Total returned its 25% stake to Gazprom in June 2015.

Reserves remain where they are and the potential of the gas field is the same. The project will go forward when market dynamics in the energy sector change and allow an acceptable return on investment. In 2013, Tatiana Mitrova, head of Oil & Gas Department at the Energy Institute of the Russian Academy of Sciences, commented that *“a realistic date for commissioning the field would not be before 2022-2025. (...) In the new Energy Strategy it is not foreseen before 2030 even in the most optimistic scenario”*. In the meantime, the Bovanenkoe gas field will supply Europe.

³² The hydrocarbon sector is highly taxed in Russia, especially the oil sector, which is the main revenue provider. Taxes in the oil and gas sector can be divided into three major groups: the Mineral Extraction Tax (MET), the export tax and the corporate tax. The MET (introduced in 2002) is one of the main tax burdens on Russian oil and gas companies. It siphons a significant part of the income of companies off to the Russian state budget.

Gazprom's Increasing Discomfort

Increasingly complicated EU legislation: booking entry-exit points on the Eastern corridor

Transporting gas through Ukraine is problematic from a Russian perspective but, more generally, accessing transport capacities along the Eastern corridor is progressively becoming more complex owing to EU legislation.

In Europe, wholesale markets should be structured as entry-exit zones (EEZs).³³ The entry-exit system can be defined as the option to split reservation capacity into entry capacity and exit capacity, and to book them separately. This allows the transport of gas through zones instead of along a contractual path, as previously.³⁴ This means that a shipper has the right to inject a specific volume of gas into the grid at any entry point, and withdraw a specific volume of gas from the grid at any exit point. Gas can be brought into the system at cross-border entry points (e.g. pipelines or LNG terminals) or at an entry point from domestic production, and can be extracted at cross-border exits or at exit points to distribution networks. Historically, Gazprom had always delivered its gas at the flange (i.e. transporting gas to the delivery point located as stated in the contract).

This new system is something of a headache for the Russians, who contracted long-term supplied contracts with precise delivery points well before the emergence of the Entry-Exit Model. Another thorny issue was the sunset clause, which would have obliged buyers to make their best efforts to stop buying gas at border flanges. Such a clause would have led to renegotiations of long-term supply contracts (LTSCs). The Russians and Europeans have discussed the subject at length. It was decided to amend the clause into a best-effort clause.

This new way of doing business will have an impact on existing contracts, particularly if only hub-to-hub systems will exist in

³³ Regulation No 715/2009 stipulates the introduction of the entry-exit tariff system.

³⁴ KEMA; European Commission, in collaboration with COWI Belgium. *Study on Entry-Exit Regimes in Gas, Part A: Implementation of Entry-Exit Systems*, Belgium, 2013, p.102, <http://ec.europa.eu/energy/gas_electricity/studies/doc/gas/201307-entry-exit-regimes-in-gas-parta.pdf>.

the not-too-distant future. In this case, both LTSCs and long-term transport contracts (LTTCs) should be renegotiated in order to bring them into line with the new system and clarify a number of uncertainties. This means that the current structure of contracts should be changed. This would expose Gazprom to various legal risks and possible arbitration procedures—a point that was emphasized by Russian experts during the Gas Advisory Council summit in April 2012.³⁵ It might be a tricky situation for Gazprom, which would have to transport gas from the border flange to a market hub—an issue that was not been included in previous contracts. After negotiations between European and Russians, a compromise was reached. The EU obtained confirmation from a number of national regulatory agencies that no national provisions exist that indicate a move of delivery points in existing gas contracts signed before the emergence of the Entry-Exit System from the flange to the virtual trading point (VTP). Concretely, that means that delivery points in existing long-term gas supply and purchase agreements are preserved, but contracts concluded on the basis of commercial hub services have to be transferred to the VTP. Generally, these contracts are shorter. In both cases, Gazprom should book capacities to supply gas buyers. For example, contracts signed with German companies provide that gas should generally be physically delivered either at Greifswald (Germany) or at Velké Kapusany (Slovakia), while contracts signed with Austrian companies provide that gas should generally be physically delivered at Baumgarten. This arrangement will remain. However, if one refers to the new laws, it is foreseen that Gazprom has to book the exit capacities and the counterpart/buyer has to book the entry capacities in order to make a shipper-to-shipper deal at the flange, which could be realized in some cases via the platform PRISMA.³⁶ In short and medium-term contracts concluded on the basis of commercial hub services, Gazprom will also have to book exit-points as well as transit capacities for the transport of gas, and also have to book an entry point to get access to the VTP. There are two ways to get access to the VTP. Either Gazprom registers itself at the VTP and has to pay for it or the company can use a subsidiary which is a member of a balancing group.³⁷

From Gazprom's perspective, this system presents major disadvantages. First, the company has to pay fairly high IT costs, which was not the case in shipper-to-shipper contracts. Second, the reservation of entry-exit capacities will require an adaptation of the way of doing business, and this will generate additional costs. To this must be added the multiplication of tasks involved in transporting and

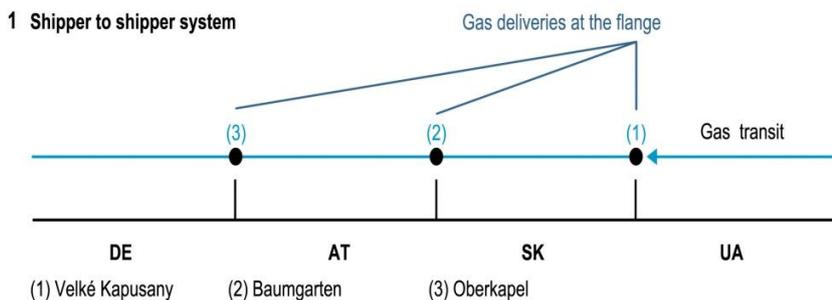
³⁵ W. Boltz; A. Konoplyanik, Presentation to 3rd EU-Russia Gas Advisory Council meeting, Vienna, 25 April 2012, <www.konoplyanik.ru/speeches/120425-GAC-6_Boltz_Konoplyanik.pdf>.

³⁶ PRISMA is a European gas pipeline capacity platform set up in April 2013. It provides shippers with the opportunity to book primary capacities from interconnection points of the adjacent Entry-Exit System of participating countries. For more details: <www.prisma-capacity.eu/web/start/>.

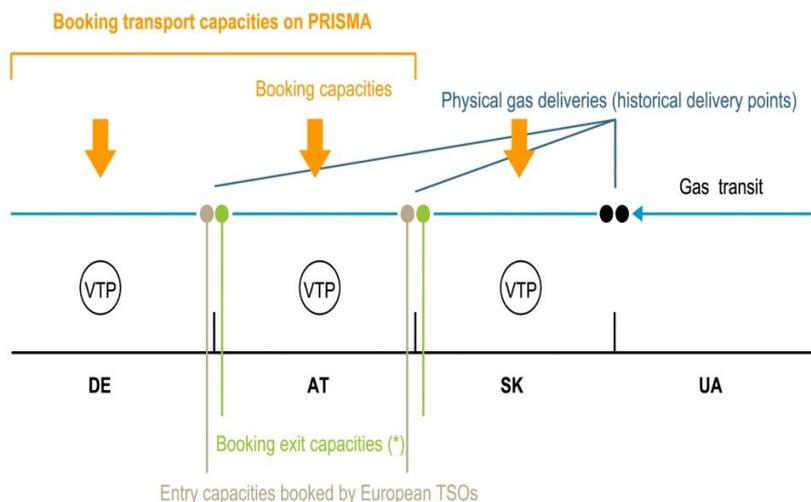
³⁷ However, the balance group system is not applicable for all markets. For example, this is possible in Austria.

delivering gas to customers. Finally, registration at the virtual trading point or the creation of a balancing group also generates extra cost. Nevertheless, Gazprom has to reconsider its business methodology. Adaptation will come at a cost, but failure to adapt will cost more, especially if the Russian company does not completely ditch transit through Ukraine after 2019.

Figure 8: Booking capacity rights at entry and exit points

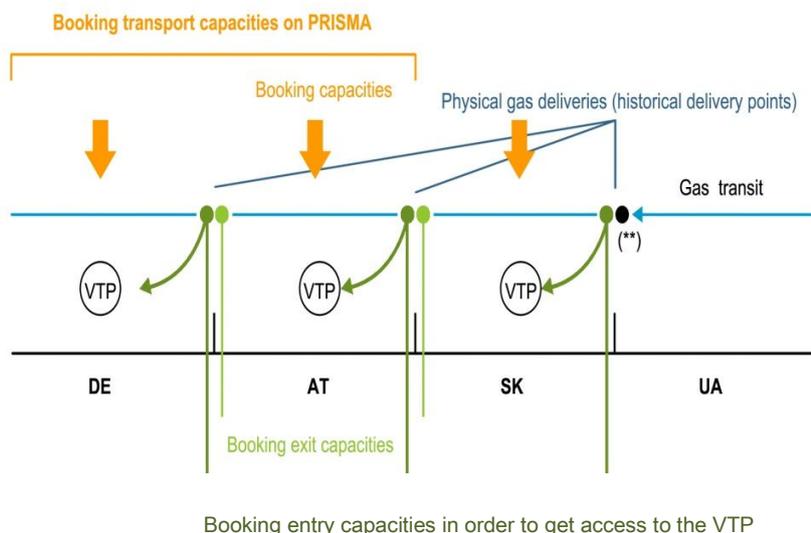


2 Long-term supply contracts (until 2025/2030)



(*) Two possibilities: A. Entry-Exit points are bundled but one should sign two contracts
B. No bundling

3 Short-term / medium-term contracts (concluded on the basis of commercial hubs services)



Source: Aurélie Bros (2015).

From South Stream to Turkish Stream

The South Stream pipeline was a complex project, which had to bypass Ukraine while reinforcing European SoS, especially in the Balkan region³⁸ where energy security is weak, and also increasing Gazprom's market shares in Europe. From a political perspective, this pipeline was a means to contain European influence in this region by reinforcing Russian energy diplomacy. Gazprom became accustomed to signing bilateral intergovernmental agreements in which it was often mentioned that the project was an "*object of national importance and has a strategic goal*", inasmuch as the company tried to circumvent EU energy policy. The South Stream pipeline would also bring Russia the certainty of not being excluded from a new corridor, as the European part of the pipeline would approximately have followed the main part of the routing of the Southern Gas Corridor³⁹ developed by the EU.

The main threat to the completion of the project remained EU legislation. The South Stream project was conceptualized before the adoption of the Third Energy Package. Thus it did not entirely comply with EU legislation, and the chances of a successful outcome to the project were fairly remote. It seemed to be very difficult—almost impossible—to build the pipeline under the Third Energy Package, but, at the same time, it could not be built outside of the framework of the package. For example, the European Commission (EC) identified numerous problems with intergovernmental agreements that were not compliant with the Gas Regulation—e.g. unbundling, non-discriminatory third-party access (TPA) and tariff regulation. In this regard, the EC asked the consortium to renegotiate or abandon the IGAs in December 2013. Concerning TPA, exemptions may be requested for major gas infrastructures such as interconnectors (Article 36). The consortium had not applied for an exemption in order to build the pipeline outside of the Third Energy Package, and did not even try to negotiate, knowing that the TPA would have made the pipeline economically unviable. Furthermore, the project has not been included in the Projects of Common Interest (PCI) list, although Gazprom applied. Consequently, the project could not benefit from the favorable PCI regulatory framework within the Third Energy Package. Due to political tensions, it became impossible to find an agreement between the EU and Gazprom. The project was blocked before being abandoned in 2014.

The Turkish Stream project is intended to withdraw any influence by Ukraine on the transit of Russian gas by rerouting gas exports and delivering the latter at the Greek-Turkish border, where a physical hub should be created. However, there is currently no hub

³⁸ In 2012 the Republic of Srpska signed an agreement with Gazprom on the construction of a connection to the South Stream, with a maximum capacity of 1.5 bcm/y.

³⁹ The corridor should allow the EU to gain access to Central Asian gas fields and eventually Iraqi fields. The European flagship project was the Nabucco pipeline.

and no infrastructure linking Greece to Central and Southeastern Europe, especially Baumgarten – the Austrian delivery point. Many EU member states, such as Hungary, Serbia and Greece, support this project. Transporting the gas on the European continent from the Greek-Turkish border to Baumgarten in Austria would be through the Tesla pipeline—a hypothetical viable option.⁴⁰ Negotiations are currently continuing.

The economic viability of the project remains questionable at a time when gas prices are lower, demand is stagnating in Europe, and Ukraine is carrying out energy reform, with the EU and financial institutions providing funding for the modernization of the Ukrainian transmission network. In the meantime, the Russian state is facing increasing demands for financial support from Russian companies (Gazprom included) due to Western sanctions, which limit access to domestic and foreign credit. The Russian government will thus prioritize its assistance – a situation that can turn against Gazprom, which has to make strategic choices. Last but not least, the negotiations between Turks and Russians are problematic. Despite the 10.25% discount allowed in March 2015,⁴¹ the proposed IGA does not appear to comply with Turkish expectations, and delays have occurred. The current military intervention in Syria, too, might affect negotiations on energy issues and the strategic gas deal.

⁴⁰ A. Sokolov, “Prodleniye ‘Turetskovo potoka’ v Yevrope obsudyat osen’yu”, [The Renewal of ‘Turkish Stream’ to Be Discussed in Autumn], *Vedomosti*, 18 August 2015,

<www.vedomosti.ru/business/articles/2015/08/19/605369-balkanskije-strani-osenyu-hotyat-dogovoritsya-o-prodlenii-turetskogo-potoka-v-evrope>.

⁴¹ <www.euractiv.com/sections/energy/political-concerns-mar-turkish-stream-project-312815>

Quarrel over third-party access (TPA) in Germany

As previously mentioned, the Nord Stream pipeline is connected to the German pipelines OPAL and NEL. It should be recalled that the Nord Stream pipeline has an annual maximal capacity of 55 bcm/y, which corresponds to the combination of OPAL and NEL capacities. The first is connected to JAGAL, a pipeline connected to Yamal-Europe, and STEGAL, a pipeline connected to the corridor developed during Soviet times and running through Slovakia and the Czech Republic. NEL connects Greifswald to the Rehden-Hamburg pipeline, which is connected to the underground storage of Rehden and the MIDAL pipeline. The Gazelle pipeline is the extension of NEL on Czech territory to Germany, at Waidhaus.

Figure 9: Pipelines interconnection



Source: <<https://www.nel-gastransport.de/en/our-network/>>.

The Nord Stream pipeline project has been developed over a long period, and market rules have changed significantly between its conceptualization and the present day. Gazprom originally hoped to get exclusive access to Nord Stream, and the OPAL and NEL pipelines. However, the adoption of the Third Energy Package changed the rules of the game (e.g. TPA and unbundling). A TPA exemption has been granted to the Nord Stream pipeline. In 2009, the *Bundesnetzagentur* (German Federal Network Agency) exempted

OPAL from TAP for the period of 22 years from startup, while applications for an exemption from TPA for NEL were rejected.⁴² As a consequence, Gazprom could use 100% of the capacity of the OPAL pipeline, while the NEL pipeline would be operated under the general rules of the Third Energy Package, with the option for Gazprom to contract capacities in open season. Following analysis of the anti-monopoly legislation, the EC denied the request for OPAL TPA exemption in 2012. This decision may prove to be Gazprom's undoing, since it would presumably limit Nord Stream's output. On the other hand, if the exemption is accepted, Gazprom will increase gas flows through the Nord Stream and use the full capacity of OPAL to supply Germany and neighboring countries, while reducing the transit of gas through Ukraine. To solve the problem, the *Bundesnetzagentur* suggested giving Gazprom 50% of the capacity of the OPAL pipeline; the 50% of capacities remaining should have been sold on PRISMA in March 2014. The EC should have validated the decision around 18 March 2014. However, due to the situation in Ukraine, this move has been regularly postponed.⁴³ On the Russian side, all this has reinforced the feeling that EU competition law aims to block Gazprom's activities in Europe and reduce Russian gas exports to Europe. Between 7 and 10 September 2015, Gazprom sold gas to Europe through auction (1.23 bcm of the 3.2 bcm of the gas auctioned)⁴⁴ at the St Petersburg International Mercantile Exchange (SPIMEX) for deliveries to Europe (delivery point at Greifswald) – an experiment that seems to be a compromise with the EC (a sort of gas release program). In Europe, spot prices are often seen as more transparent and competitive. Nonetheless, this price maneuver is above all a Russian attempt to attract buyers in a highly competitive market. Once again, Gazprom has to adapt.

The questioning of the decision taken by the German Federal Network Agency on the exemption of OPAL by the European Commission is one illustration that over the years the EC has grown in importance. The latter must *inter alia* ensure compliance with the rules of competition policy structured on a dual basis, both legal and economic. The legal basis consists of a set of rules for determining legal and illegal practices of economic actors. The economic basis consists of the protection of consumers and economic efficiency, and not the respect of rules *per se*.

⁴² The entire press release published by the *Bundesnetzagentur* can be found at: www.bundesnetzagentur.de/SharedDocs/Downloads/EN/BNetzA/PressSection/PressReleases/2009/090225OPALPipelineId15650pdf.pdf;jsessionid=095188D7A1AD2DC275D6385244130980?__blob=publicationFile&v=3.

⁴³ "Opal Exemption Process Halted", *Natural Gas Europe*, 23 December 2014, www.naturalgaseurope.com/opal-exemption-process-suspended.

⁴⁴ www.gazpromexport.ru/en/presscenter/press/1689/.

Gazprom is fighting back in an erratic way

As the EC suspended the procedure of examining the exemption for the OPAL gas pipeline, which has been capped at 50%, Gazprom abandoned the Nord Stream 3 and 4 project in December 2014, giving the impression that it has resigned itself to not supplying the UK. EU regulation would have made any expansion of the Nord Stream network highly problematic, and negotiations would have been tricky in the present context.

The shareholders agreement signed with the German BASF and E.ON, the Austrian OMV, the French ENGIE and the Dutch Shell on 4 September 2015 is a game changer.⁴⁵ This agreement is of a strategic nature, since the companies have agreed to build two new Nord Stream gas pipelines (55 bcm/y) under the Baltic Sea to Germany by the end of 2019. The project will be implemented by the New European Pipeline AG joint venture (Gazprom 51%, E.ON, Shell, OMV and BASF 10% each, and ENGIE%). On the same day, OMV and Gazprom signed an agreement on the terms and conditions of a possible asset swap. This will allow the Austrian company to develop upstream activities on Russian territory (Block 4A and 5A of the Achimov deposit).⁴⁶ It is very unlikely that the EC will back the expansion of the Nord Stream, even if some European companies are providing a great deal of support. The signature of an agreement of strategic cooperation with Shell in June 2015 has already expanded the portfolio of Gazprom's joint projects, especially in the LNG area—where the Russian company is still lagging behind. More generally, Russian companies on the verge of exporting LNG have been seriously hampered by Western sanctions limiting access to capital and technology.

Since summer 2015, Gazprom has been showing its determination to defend its market share in Europe and to reinforce cooperation with its historical economic partners. The possible “resurrection” of the BASF-Gazprom swap asset is the latest illustration.⁴⁷ In 2013, Gazprom signed an agreement to swap assets with Wintershall Holding. Through this asset swap, Gazprom was supposed to take over 100% of Wingas, the formerly jointly run natural gas trading and storage business, as well as 50% of Wintershall Noordzee BV. In exchange, Wintershall received 25% plus one share in blocks IV and V in the Achimov formation of the Urengoi field in western Siberia. The asset swap would allow Gazprom to become more active in the storage business and natural gas trading, another business sector the company is interested in. Rehden offers important storage capacities (about 4.2 bcm), one of the largest in Western Europe. The capacity of Jemgum is smaller

⁴⁵ A memorandum of understanding had already been signed on 18 June 2015, <www.gazprom.com/press/news/2015/september/article245837/?from=mail>.

⁴⁶ <www.gazprom.com/press/news/2015/september/article245862/?from=mail>.

⁴⁷ <www.reuters.com/article/2015/09/04/basf-se-gazprom-gas-swap-idUSL5N11A09720150904>.

(about 1 bcm) but would offer Gazprom the opportunity to operate in Belgium and the Netherlands. This agreement was scrapped in December 2014—a sign that penetration of the European gas value chain was not the main priority.⁴⁸

⁴⁸ J. Henderson, "Russia's Changing Gas Relationship with Europe", *Russian Analytical Digest*, No. 163, February 2015.

Conclusion

The impossibility of managing the Ukrainian network through the creation of a consortium strongly encouraged Gazprom to accelerate the construction of new pipelines that sideline Ukraine. The 2009 Ukrainian-Russian gas crisis was a major security incident that fostered diversification by both Russia and the EU. However, the traditional route through Ukraine is currently not entirely replaceable. If Gazprom wants to significantly reduce transit through Ukraine, it must accelerate construction of Turkish Stream and expansion of Nord Stream. This would require close cooperation with EU energy companies, but above all with the EC. The progressive integration of the European Union, added to the implementation of EU energy policy, encouraged Russia to establish political dialogue with European institutions during the 2000s and 2010s in the framework of the strategic EU-Russia energy dialogue. The partners recognized the need for closer cooperation in order to overcome impasses at all stages and in all areas of the energy dialogue. Nevertheless, EU-Russia gas cooperation has diminished, especially in recent months, mainly for political reasons in the context of the Ukrainian crisis. Besides, Gazprom will probably have to prioritize its projects, as it is quite complicated to address everything head-on. One question remains. Will the Turkish Stream be built according to Gazprom's plan and timeline? The ultimate outcome remains uncertain.

Despite stagnating demand, Gazprom does not seem to be ready to deflect attention away from the European market. The depletion of reserves is progressively increasing, while European economies are energy-intensive and Europe's import requirement is set to gradually rise. In addition, technical difficulties have been recently encountered, such as the sharp cut in production at Groningen. Less Dutch gas means less flexibility in Western Europe, which could be offset by Russian gas. It remains to be decided if Europeans will accept this. A top priority of the European Energy Union, established by the EC in February 2015, is diversification of the EU energy mix and reinforcement of the EU's energy security through a substantial decrease in fossil-fuel imports.