The eastern ‘partnership’ of gas
Gazprom and CNPC strike a deal on gas supplies to China

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The CEOs of Gazprom and China’s CNPC signed a contract concerning Russian gas supplies to China on 21 May 2014 in Shanghai. The contract had been under negotiation for many years and was signed in the presence of the two countries’ presidents. Under this 30-year deal, ultimately 38 billion m³ of natural gas will be exported annually from eastern Siberian fields (Chayandinskoye and Kovyktinskoye) via the Power of Siberia pipeline planned for construction in 2015–2019. The lengthy negotiation process (initial talks regarding this issue began back in the 1990s), the circumstances surrounding the signing of the contract (it was signed only on the second day of Vladimir Putin’s visit to Shanghai, and the Russian president’s personal engagement in the final phase of the talks turned out to be a key element) and information concerning the provisions of the contract (the clause determining the contract price has not been revealed) all indicate that the terms of the compromise are more favourable for China than for Russia. This contract is at present important to Russia mainly for political reasons (it will use the future diversification of gas export routes as an instrument in negotiations with the EU). However, the impact of this instrument seems to be limited since supplies cannot be redirected from Europe to Asia. It is unclear whether the contract will bring the anticipated long-term economic benefits to Gazprom. The gas price is likely to remain at a level of between US$350 and US$390 per 1000 m³. Given the high costs of gas field operation and production and transport infrastructure development, this may mean that supplies will be carried out at the margin of profitability. The Shanghai contract does not conclude the negotiation process since a legally binding agreement on gas pipeline construction has not been signed and not all of the financial aspects of the project have been agreed upon as yet (such as the issue of possible Chinese prepayments for gas supplies).

The history of the talks and the reasons for the long duration of the negotiation process

The signing of the 30-year contract ends the long negotiation process initiated in the 1990s. The negotiations gained momentum in the middle of the first decade of the 21st century. Gazprom and CNPC signed a strategic co-operation agreement in October 2004, and an export protocol envisaging annual gas supplies at 68 billion m³ – via both the eastern route (38 billion m³) and western route (30 billion m³) starting from 2011 – was signed during President Putin’s visit to Beijing in March 2006. In October 2009, Gazprom and CNPC signed a framework agreement setting the basic terms of gas supplies. This agreement set the precise volume and supply commencement date, the quantity of natural gas covered by the take or pay clause, the supply increase schedule, and the value of guaranteed payments and gas delivery point at the border, among other terms. Many of the documents
signed later reiterated provisions which had already been agreed upon, and thus created the pretence of progress in negotiations that was necessary for image-building purposes.1

The lengthy negotiation process was primarily a result of the fact that China's negotiating position had been steadily strengthening. On the one hand, forecasts predicting a rapid increase in demand for natural gas in China coupled with a large but still insufficient domestic output are stimulating China's interest in importing gas from Russia. However, on the other hand, the dynamic changes taking place in regional gas markets (for example, the shale gas revolution in the USA and its impact on forecasts for demand and pricing) were making the Chinese side more and more assertive. Furthermore, the Chinese gas strategy, a key element of which is successive import growth based on the diversification of supply sources (contracts guaranteeing supplies at 85 billion m³ from Central Asia and the construction of new LNG terminals), further strengthened Beijing's position in negotiations with Moscow. Russia's ever stronger determination (especially since Vladimir Putin took power) to sign the publicly announced contract was an additional factor operating to the benefit of CNPC. This made it possible to announce success in the implementation of one of the key guidelines of Russian energy strategy for the gas sector, namely the diversification of export markets.

1 In 1994, CNPC and the Russian Ministry of Energy signed a memorandum envisaging the construction of a Russian gas pipeline running to China. The Eastern Siberian Kovyktinskoye gas field was to serve as the raw material base for this pipeline. In June 1997, an agreement under which it was planned to sign a 30-year contract for supplies of 25 billion m³ of gas was signed during Prime Minister Chernomyrdin’s visit to Beijing. Since Gazprom did not own any gas fields in Eastern Siberia at the time (Gazprom took over the Kovyktinskoye field, which had been owned by TNK-BP, in 2011), it was decided in 1998 to consider in the negotiation process the scenario under which supplies would be carried out via the planned Altai gas pipeline, which was to run from Russian gas fields in Western Siberia to Xinjiang (a north-western province of China). J. Henderson, S. Pirani (ed.), ‘The Russian Gas Matrix: How Markets are Driving Change’, Oxford University Press 2014, pages 217-220. Gazovoye piar-meropriyatiye, http://www.ng.ru/economics/2013-09-06/4_gazprom.html (accessed on: 16 May 2014).

The supply volume and the raw material base

It was announced in March 20132 that Gazprom and CNPC had provisionally agreed that the volume of gas supplies from the Eastern Siberian fields would ultimately reach 38 billion m³ annually. According to sources who have close links to the negotiators, Gazprom will be obliged to supply a total of around 82 billion m³ of gas during the first five years, i.e. around 16.4 billion m³ annually (based on estimates from Vneshtorgbank3, the maximum level of supplies will be achieved in 2024). However, representatives of Gazprom and CNPC have not yet officially confirmed this information. In turn, Gazprom’s CEO announced after the contract had been signed that the total contractual supply volume is 1.032 trillion m³, and supplies are planned to commence in 2018 (the parties have reserved the right to unilaterally delay the implementation of the contract by two years4).

The raw material base for Russian supplies to China will be formed by two production centres: the Irkutsk centre (the Kovyktinskoye field with gas deposits at 1.5 trillion m³ and ultimate annual output at 35 billion m³) and the Yakutia centre (the Chayandinskoye field with

2 Larger supplies were planned at an earlier stage of the negotiations. In September 2009, the parties entered into a framework agreement setting the basic terms of gas supply (68 billion m³ annually), which was supplemented one year later when an expanded version of the basic terms of supplies was signed (legally binding document). This volume of supplies would be possible to achieve, if two gas export routes were used: the eastern (38 billion m³) and the western (30 billion m³ exporting gas to China from the Russian gas fields located in Western Siberia).


gas deposits at 1.2 trillion m$^3$ and ultimate annual output at 25 billion m$^3$). According to an announcement made by the Federal Agency for the Use of Natural Resources in 2010, the Chayandinskoye field was planned to be put into operation in 2016. It was stated in March 2014 that the launch of gas production would be postponed: it would commence at the Chayandinskoye field no earlier than 2019 and at Kovyktinskoye field no earlier than 2024. One day after the contract was signed, the CEO of Gazprom ordered work to be carried out in order for the Chayandinskoye gas field to begin production towards the end of 2018.

The promised acceleration of preparations does not guarantee that Gazprom will fulfill its contractual obligations to the full extent in the first years of the contract’s implementation. Given the fact that the initial production launch date designated for the Chayandinskoye gas field has been shifted from 2017 to 2019, the output of 16.1 billion m$^3$ that was envisaged in 2018 is likely to be reached no sooner than 2020, and could not be further increased to 25 billion m$^3$ until 2024 or 2025. In the case of the Kovyktinskoye field, the output in the initial period (2024) will reach around 3.4 billion m$^3$ and could be increased in the best case scenario up to 30 billion m$^3$ after no less than fifteen years of the field’s operation. Furthermore, the development of new sites will require substantial investments: around US$13.5 billion in the case of the Chayandinskoye field and around US$11-15 billion in the case of the Kovyktinskoye field.

It cannot be ruled out that in order to comply with its contractual obligations Gazprom would have to employ other Eastern Siberian gas fields (for example, the Chikan gas field located close to Kovyktka or the gas fields in Krasnoyarsk Krai – however, this would require additional transport infrastructure to be built to connect them to the Kovyktinskoye field) or the fields located in Sakhalin (it is possible to supply up to 30 billion m$^3$ of gas via the Sakhalin – Khabarovsk – Vladivostok pipeline).

### The supply price

The price of Russian gas supplied to China was one of the key problems in the long-lasting negotiations. China wanted the contract price to be based on the price applicable at the US Henry Hub (traditionally, the prices at this gas hub are among the world’s lowest; the average annual gas price there in 2013 was US$135 per 1000 m$^3$ as compared to US$390 per 1000 m$^3$ on European spot markets). In turn, Gazprom insisted on adopting a formula based on the JCC (Japanese Crude Cocktail) index, where the average gas price in 2013 ranged between US$524 and US$582 per 1000 m$^3$. It was announced during the negotiation round held in June 2013 that the price formula would not be linked to Henry Hub. In turn, it could be concluded from declarations made in September 2013 by Sergey Kupriyanov, Gazprom’s spokesman, that the parties would adopt an ‘innovative’ formula based on LNG prices, which are linked to oil prices, and in effect a final gas price at around US$346 per 1000 m$^3$ had been set.

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When the contract was signed, Gazprom’s CEO announced that the price formula was covered by trade secret and added that the total value of the 30-year contract was US$400 billion. Other members of the company’s managerial staff further revealed that the gas price was linked to LNG and Diesel oil prices. In turn, President Putin announced that the price formula was constructed in a similar manner as the formulas used in Gazprom’s contracts with most European customers (linked to the prices of oil and the basket of petroleum products). Meanwhile, the media reported that the base price oscillated between US$350 and US$390 per 1000 m³.

The information revealed and the context of the negotiation process indicate that the price formula adopted will be more beneficial to China.

Although no precise statement concerning the price formula adopted in the contract has been issued, it can still be concluded, considering the information revealed and the context of the negotiation process, that the price formula adopted will bring more economic benefits to the Chinese side. A price ranging between US$350 and US$390 per 1000 m³ (a comparison of the announced contract value of US$400 billion and the total contracted supply volume at 1.032 trillion m³ gives an average price equal to US$387 per 1000 m³) would be, given the present situation on the Asian gas market, nearly 50% lower than the price of gas imported by China from Qatar (around US$680 per 1000 m³ in 2013). This price would be similar to the prices set in Gazprom’s contracts with European customers (the average price in 2013 was US$380 per 1000 m³) and in CNPC’s contracts with Turkmenistan (around US$360 per 1000 m³).

A gas price at this level could mean that Gazprom would have to carry out supplies to China below the break-even point. The company’s representatives have pointed out that supplies from the Chayandinskoye field can remain profitable as long as the gas price is not lower than US$400 per 1000 m³ on the Russian-Chinese border. Considering the expected fiscal preferences promised by the Russian side the implementation of this project could be barely profitable to Gazprom (on the first day of his visit to Shanghai, President Putin announced that Russia was ready to reduce to zero the rate of the mineral resources extraction tax (NDPI) for the gas fields which would serve as the raw material base for supplies to China, and this would bring down the break-even point to US$370–380 per 1000 m³). The cost-effectiveness of this project became even more dubious after the statement issued by Vladimir Putin on 4 June 2014 during a meeting of the presidential Commission for Strategic Development of the Fuel and Energy Sector and Environmental Security: the Russian president instructed the government to consider recapitalisation.

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9 Gennady Timchenko admitted that the price set under the contract between CNPC and Gazprom was lower than the prices set under Gazprom’s contracts with European customers but still advantageous to both parties. In turn, the Minister for Energy Alexander Novak announced at the international economic forum in Saint Petersburg that the price was close to US$350 per 1000 m³. ‘Kontrakt s Kitayem povliyayet na tseny na gaz dlia Evropy – Miller’, http://www.oilcapital.ru/export/243153.html (accessed on: 25 May 2014); ‘Tsena gazovogo kontrakta mezhd”u Gazpromom CNPC nizhe evropeyskoy, no vzaimovygod-naya, schitayet Timchenko’, http://www.oilcapital.ru/export/242927.html (accessed on: 24 May 2014).

10 Its long duration and Russia’s determination to strike the deal, one proof of which was President Putin’s personal engagement in the final phase of the talks conducted at the time of his official visit to Shanghai.

11 However, this would be an overly simplified calculation, which fails to take into account possible changes in the values of other parameters forming part of the undisclosed price formula.

12 Deputy Prime Minister Arkady Dvorkovich expressed the government’s initial approval of the preferences being granted during the behind-the-scenes talks in Shanghai. ‘Rosnefti tesno v Rossii’, Vedomosti, 23 May 2014. However, the Minister for Economic Development, Alexey Ulyukayev, suggested in his statement that the Ministry of Finance would have to conduct a financial analysis of this; http://www.oilcapital.ru/export/242885.html (accessed on: 26 May 2014).
ing Gazprom due to the expenses it would have to incur in connection with the implementation of the contract signed with CNPC\textsuperscript{12}.

**The supply route, the transport infrastructure and the construction costs**

At the beginning of the negotiation process, the parties were considering two basic variants for the transport of Russian gas: (1) via the western route – from Western Siberia to the north-western regions of China and (2) the so-called eastern variant – from the Eastern Siberian fields to the north-eastern regions of China. The latter variant was finally chosen in March 2013 as part of the memorandum signed by CNPC and Gazprom. Gazprom is planning to build a new pipeline, the Power of Siberia\textsuperscript{14}, for this purpose. This gas pipeline will be approximately 4000 km long and will consist of two sections: (1) Yakutia – Khabarovsky – Vladivostok (around 3200 km) and a branch running to China from Blagoveshchensk, (2) Irkutsk Oblast – Yakutia (around 800 km). The new pipeline’s planned capacity is 61 billion m$^3$ annually\textsuperscript{15}. The gas pipeline’s location will partly overlap with the route of the East Siberia – Pacific Ocean (ESPO) oil pipeline. It is planned to be put into operation in late 2018/early 2019. Although Gazprom made the final investment decision concerning the construction of the Power of Siberia pipeline in October 2012, signing the contract with CNPC was the necessary precondition to make the implementation of this investment possible. According to initial estimates, the pipeline’s construction cost will reach US$25 billion, i.e. almost half of the expenses planned as part of the Eastern Gas Programme\textsuperscript{16}. Gazprom’s investment programme for 2014 does not take the Power of Siberia into account\textsuperscript{17}, and its engagement in other expensive infrastructural projects (South Stream, the LNG terminal construction in Vladivostok and investments in gas assets in Western Europe) may make it even more difficult to generate funds for the implementation of the Eastern Gas Programme. However, the company’s determination and political support from Vladimir Putin himself will be decisive for the launch of this new Russian flagship investment. Part of the cost (US$20–25 billion) will be incurred by the Chinese side as part of the prepayment for gas supplies. Still, neither the detailed conditions of this prepayment nor its precise allocation have been agreed as yet, a fact confirmed by Gazprom’s CEO\textsuperscript{18}. Another stimulating factor is the interest expressed by pipeline manufacturers. One proof of this is the fact that the tender for the supply of pipeline components for the new gas pipeline, which was announced by Gazprom in June 2013, has already been settled.


\textsuperscript{13} The pipeline’s name was chosen as a result of an open contest in December 2012.

\textsuperscript{14} Although it has been suggested over the past few months that it could be increased to 65 billion m$^3$ (statement by the Russian Minister for Energy, Alexander Novak, in October 2013) and even to 68 billion m$^3$; http://energo-news.ru/archives/113566 (accessed on: 12 May 2014).

\textsuperscript{15} Given the fact that supplies are expected to commence within four or five years, Gazprom will have to invest in infrastructure on average around US$11.2–14 billion annually.

OMK, ChTPZ and Severstal, all owned by Yuri Kovalchuk, an influential member of the Russian business elite, won the tender 19.

The deal is overshadowed by rivalry in the Russian gas sector

The fact that the contract has been concluded will strongly affect the domestic rivalry between Russian firms operating in the gas sector. Ensuring access to the Power of Siberia gas pipeline apart from Gazprom to the so-called independent gas producers was discussed following a motion from Rosneft and the Irkutsk Oil Company during a meeting of the governmental commission for the fuel and energy sector on 25 February 2014 20. Igor Sechin, the CEO of Rosneft, who is also the secretary of the presidential Commission for Strategic Development of the Fuel and Energy Sector and Environmental Security, made an official proposal at the commission’s meeting on 4 June 2014 21 for granting them the right to export their output from gas fields in Eastern Siberia and the Far East using the pipeline system.

Rosneft stands a great chance of succeeding with its plans. Not only did Vladimir Putin not oppose Igor Sechin’s proposal during the discussion (he had until then emphasised on numerous occasions in public that Gazprom had to retain the monopoly on gas exports via the pipeline system) but he also expressed his approval for the need to set equal ‘rules of the game’ for all market players. Furthermore, the Russian Minister for Energy had already announced on an earlier occasion that up to 25 billion m³ of gas the new pipeline could potentially be supplied by Russian ‘independent gas producers’, including around 18–20 billion m³ by Rosneft alone. Still, Rosneft’s possible success would primarily be down to the ever stronger position of Igor Sechin among the Russian political and business elite. One example of Rosneft’s successful lobbying (in tandem with Novatek) was the act limiting Gazprom’s export monopoly adopted in November 2013 (the so-called independent producers were granted the right to export gas in liquefied form). Furthermore, Rosneft has announced its intention to intensify its activity in the gas sector and has been successively taking over further assets from Russian gas firms. Its total gas reserves in the Eastern Siberian region include around 1 trillion m³ of gas (first of all, the Yurubchensko- -Tokhomskoye field – 387 billion m³ of gas – and the Srednebotuobinskoye field – 115 billion m³, the latter of which will be jointly operated by Rosneft and CNPC). It cannot be ruled out that, if Gazprom is unable to supply a sufficient amount of gas in the initial period of the contract’s implementation, supplies from the gas fields controlled by Rosneft will help it fulfil its contractual obligations (technically, this is possible; however, since some fields are located quite far away from the planned route of the Power of Siberia, for example, Rosneft’s Yurubchensko-Tokhomskoye field, this will entail significant expenses). A factor which further strengthens the position of so-called independent gas producers are the results of their bilateral co-operation with China seen thus far: the rapid development of Rosneft’s co-operation with CNPC and Sinopec in the oil sector and the effects of co-operation between Novatek and CNPC in the gas sector (the Chinese company holds a 20% stake in the Yamal-LNG

19 The detailed terms of the prepayment are now being discussed as part of consultations. ‘Gazprom pristupit k stroitelstvu gazoprovoda Sila Sibiri v noyabre’, http://www.vedomosti.ru/companies/news/14256191/gazpromu-malo-trub (accessed on: 12 May 2014).
project, which has been implemented by Novatek in tandem with France’s Total). The growing position of Gennady Timchenko, who was recently nominated head of the Russian-Chinese business council and was presented by President Putin himself during his last visit to Shanghai as the most important person in Russia in charge of co-operation with China, may also have a strong impact.

Gazprom’s prospects on the Chinese gas market

The launch of Russian gas supplies to China fits in with the long-term trend characterised by the regular increase in gas demand on the Chinese market. According to data published in the World Energy Outlook 2013, the gas consumption level in China will grow from 132 billion m³ in 2011 to 529 billion m³ in 2035. China’s import potential will also grow on a regular basis: from 55.6 billion m³ in 2013 to 212 billion m³ in 2035.

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My own calculations based on: World Energy Outlook 2013

However, considering China’s growing domestic production, import deals struck with Central Asian countries (another contract was signed with Turkmenistan in September 2013 under which supplies were increased to 65 billion m³ annually) and the rapid development of regasification terminals to be used for importing LNG, it is rather unlikely that China will be interested in the implementation of other pipeline projects with Russia, apart from the eastern one, within the nearest decade. This means that Gazprom’s declarations that level of its exports to the Chinese gas market will be comparable to that on the European market appear unrealistic at this moment. Firstly, the contracted supply volume (38 billion m³) is not comparable to its exports to the European market (161.5 billion m³ in 2013, including Turkey). The Chinese market could become more significant for Russia, if Russian LNG projects are implemented (additional exports of around 41 billion m³ of gas in the optimal version, and around 80 billion m³ in the most optimistic version). However, this would require a rapid pace of work to be set and investment guarantees to be obtained in order to enable the achievement of maximum production capacity, and this seems rather unlikely at this moment. Secondly, Russia may find it difficult to gain the position it expects in the gas markets of China or other Asian countries. While Russia has earned a well-established position in Europe as a gas supplier as a result of decades of co-operation in the gas sector, in the case of the Chinese market (or other Asian markets) it will have to fight for its expected status and face bitter competition with such major liquefied gas exporters as Qatar, Australia, Malaysia and Indonesia, and probably also with the USA in the next few years.

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The Chinese gas market will not pose a real alternative to Gazprom’s supplies to Europe.


23 Nine terminals currently operate in China. Their total potential is around 46 billion m³. Four more terminals, with a total capacity of around 16.5 billion m³, are planned to be put into operation in 2014–2015.

24 On the occasion of signing the contract, President Putin announced that talks on building a gas pipeline running along the western route from Altai to Xinjiang would be resumed.

25 This has been promised on numerous occasions by Gazprom’s CEO, Alexey Miller.
The meaning of the contract for Russia

The deal is at present important for Russia primarily for political reasons. Firstly, it signifies the realisation of its strategic goal, which has been declared for many years, namely the diversification of gas export markets. Secondly, given the mounting challenges on the European market (regulatory challenges posed primarily by the packages which have liberalised the EU gas market; possible negative consequences from anti-trust proceedings; and the expected intensification of EU member states’ efforts to lessen their dependence on Russian gas supplies), Russia will try to capitalise on this contract to strengthen its position in talks with the EU. The 30-year contract with CNPC will certainly be used as an argument in response to the criticism of long-term contracts heard more and more frequently in Western Europe.

However, the political impact of this contract will in actuality be minimal. The launch of gas exports to the Chinese market using the pipeline system will not represent any comparable alternative to the European market – not only due to the disparities in the volumes of gas sold, but primarily due to the impossibility of redirecting gas supplies as part of the pipeline system from Europe to Asia. In any case, the low price of Russian gas supplies to China could be used by European customers to insist on further price reductions from Gazprom. However, it is difficult to predict the long-term economic impact of this contract. The difficulty arises first of all due to the lack of full data concerning the price formula and the uncertainty as to whether CNPC will increase its engagement in the Russian upstream sector.

According to media reports accompanying the final negotiation rounds, the Chinese side made its consent to sign the contract dependent on being granted favourable conditions for investing in the Russian gas fields (in early April this year, Russians offered the Chinese side during another round of negotiations the possibility to invest in the following fields in Yakutia: Verkhnevilyuchanskoye – 139.6 billion m³ of gas reserves, Srednetyungskoye – 102.7 billion m³, Sobolokh-Nedzhelinskoye – 156.2 billion m³ and Tas-Yuryakhskoye – 64.03 billion m³). The terms under which CNPC would be ready to make prepayments to Gazprom in order to enable the financing of these costly investments have not been agreed as of yet.

The deal, albeit being a further step towards intensification of Russian-Chinese economic co-operation, does in practice accentuate the asymmetric nature of this co-operation, consistently turning the Russian ‘partner’ into an ‘energy vassal’ of China.
The Eastern Siberian and Far Eastern gas fields and infrastructure

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