

Conflict Studies Research Centre

Russian Series

06/48



Gazprom in Crisis

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October 2006

Defence Academy of the United Kingdom

Gazprom in Crisis

Putin's Quest for State Planning and Russia's Growing Natural Gas Deficit

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Key Points

- * The Russian President, Vladimir Putin, has several times stated his wish for the Russian state to dominate the energy sector so that energy exports can be used for foreign policy purposes - a goal to be achieved through state planning. However, while the world's need for natural gas is growing, Russia's ability to supply this demand is not. Russia has undeniable natural gas reserves, but much has yet to be developed and taken into production.
- * Furthermore, Russia's domestic needs for energy are growing much faster than anticipated by the Kremlin. At present price levels and with existing infrastructure, much of this demand can only be fulfilled through the use of natural gas.
- * In addition, Russia's natural gas transportation network is ageing and insufficient for sustained exports to all potential customers.
- * Even with widespread domestic conversion from natural gas to coal consumption, as envisaged by the Russian government, Russia will find it increasingly difficult to fulfil all its various gas export obligations and opportunities.
- * Energy-rich Russia thus paradoxically faces a natural gas deficit: either sustain a high level of exports, or divert export gas for domestic consumption. Russia can secure an inflow of export revenues but will then have to accept popular discontent at home, or must forego both substantial export revenues and the status accruing to a key supplier of energy to the world.
- * Major European energy firms such as E.ON and BASF understand that natural gas shortages will be increasingly common and work to tie up the Russian gas export monopoly Gazprom with long-term supply contracts.
- * For this reason, expect yet more long-term contracts between major European natural gas importers and Gazprom.

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Gazprom in Crisis

Putin's Quest for State Planning and Russia's Growing Natural Gas Deficit

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Putin and Energy Policy

Russia's president, Vladimir Putin, has never made a secret of his views on energy security, and the policy documents issued by the Kremlin for obvious reasons correspond to his views. Most important among these documents is the latest published Russian energy strategy, approved on 23 May 2003 and confirmed by the Russian government on 28 August 2003.¹ This document concludes that the energy factor is a fundamental element within Russian diplomacy. Russia must use its unique geographical and geopolitical location. In language reminiscent of military strategists, the energy strategy affirms that the state must support the Russian energy companies in the struggle for resources and markets. For this purpose, state planning is of the utmost importance. Thus, the Russian state must have a long-term programme for the development of the export of energy resources.² According to the energy strategy, the goals of the Russian energy policy with regard to foreign countries include the need to strengthen the position of Russia in the global energy market and maximise the efficiency of the export possibilities of the Russian energy sector, and to ensure that Russian companies have equal access to foreign markets, technology and financing.³ The export infrastructure must be sufficiently diversified to allow exports in all directions as well as for use within the domestic market.⁴

For the Russian state to be able to rely on the energy factor in international politics, it needs to ensure state control over the country's energy resources. Putin has for this reason stated that he does not intend to end state control over pipeline transportation, the key factor in Russian oil and natural gas transport. "At the moment I consider that there are no grounds for the state to give up its control over pipeline transportation. But this does not hinder private investment, which will be welcomed," Putin explained on 29 April 2004. He continued that "private investment is possible with continued state control and state ownership of pipeline transport".⁵

Putin's opinion on this matter was well known, as was the fact that he considered natural gas a key strategic commodity. In October 2003 Putin reportedly told visiting German Chancellor Gerhard Schroeder in Yekaterinburg: "The gas pipeline system is the creation of the Soviet Union. We intend to retain state control over the gas transportation system and over Gazprom. We will not divide Gazprom. And the European Commission should not have any illusions. In the gas sector, they will have to deal with the [Russian] state."⁶

But Putin's views on state planning and the importance of the energy policy for Russia's foreign relations went years back, to the time before he became president.

Indeed, these views formed the key part of the candidate of sciences dissertation in economics that Putin defended in June 1997 when he was still a senior official. The dissertation was written on the topic of “strategic planning of the reproduction of the mineral raw materials base of the region under conditions of the formation of market relationships” at St. Petersburg’s well-known State Mining Institute.⁷ What seems to have been either an abstract or a further development of the dissertation was published in January 1999 as an article on “mineral raw materials in the strategy for development of the Russian economy” in the journal of the institute, his being the lead article in an issue devoted to the fuel and energy complex.⁸

In his dissertation, Putin outlined his belief that state planning must be the key to the management of Russia’s natural resources: “The main result of the dissertational work is that normative methodological recommendations on the creation of a system of strategic planning can be developed, corresponding to and based on the received scientific results. These recommendations will arm the state organs (*organy upravleniya*) at all levels with an instrument with which to realise the strategic goals in developing the mineral raw materials complex.”⁹ “Sustainable development of Russia’s economy in the near term must be based on systematic growth in her developed sectors, and, most of all, on her mineral resource potential,” Putin noted. He continued: “The main reserve, in the near future, to make Russia a great economic power with a high living standard for the majority of the population is maximum support for the fatherland’s processing industry based on the extractive complex.”¹⁰ Putin also concluded that Russian ownership of the country’s mineral resource base was critical to Russia, especially in its role as a great power. Putin noted that the strategic goal of state policy with regard to decisions about domestic and foreign economic policy must be “aimed at furthering the geopolitical interests and maintaining the national security of Russia.”¹¹ Putin did not believe in globalisation or global market forces, at least not at this stage in economic development. State planning must be at the core of Russia’s resource management, he concluded. Russia’s mineral resources will serve as the basis for economic development and as a guarantee for economic security. However, to be simply an exporter of raw materials is not enough. A domestic processing industry must be developed, and this demands the “creation, with full support from the state, of large financial-industrial groups-corporations with an interbranch profile that will be able to compete with Western transnational corporations”.¹² In other words, the state must assist in the formation of large, vertically integrated financial-industrial conglomerates, established in a fusion of the state and private sectors.

State-sponsored foreign investment in Russia’s extractive industries will also be needed, Putin noted, but the Russian state must under no circumstances lose control of the country’s resources. A key demand, in Putin’s words, is to “ensure that national interests are maintained when attracting foreign investment.”¹³ Putin concluded: “Regardless of whose property the natural resources and in particular the mineral resources might be, the state has the right to regulate the process of their development and use, acting in the interests of society as a whole and of individual property owners, whose interests come into conflict with each other, and who need the help of state organs of power to reach compromises when their interests conflict.”¹⁴ Stated differently, the new financial groups will maintain a form of stewardship over Russia’s mineral assets, but this should not be understood as full ownership. The state will have the right to regulate acquisition and use of natural resources, because the state acts in the interests of society as a whole. For the same reason, the federal centre, not the federation subjects, will control the natural resources regardless of where they are located.

Incidentally, Putin’s views on Russian energy security would seem to correspond to his thoughts on global energy security. In February 2006, when Russia had

assumed the presidency of the Group of Eight (G8, consisting of Britain, the United States, Russia, France, Germany, Japan, Italy, and Canada), Putin concluded that “all it takes is for mankind to create a balanced [energy security] potential in order to provide every state with sustainable energy supply, and international cooperation opens all avenues for that”.¹⁵ In other words, energy security is the business of states and the appropriate state organs, not privately owned corporations.

Gazprom

The insistence on state planning and the emphasis on energy security, as expressed by President Putin, have had profound implications for the Russian energy industry. Russia controls vast reserves of oil and in particular natural gas and thus plays, or has the potential to play, a key role in the world's and especially Europe's energy security.¹⁶ With regard to natural gas, the key to Putin's energy policy is OAO Gazprom, a joint stock company with foreign participation but under Russian state control. Gazprom has almost total control over natural gas transport within Russia and controls most gas production. In addition, Gazprom maintains a de facto monopoly of Russian natural gas exports due to the firm's hold over the gas transportation infrastructure - and this monopolistic position is since July 2006 in the process of being enshrined by a law, currently passing through parliament.¹⁷

Gazprom is the largest gas producing company in the world, according to its own estimate responsible for about 20 per cent of world gas production and employing nearly three hundred thousand people either directly or through its numerous subsidiaries. The firm exports natural gas to a large number of countries, including Germany, France, Belgium, Italy, Britain, Austria, Switzerland, Netherlands, Turkey, Hungary, Czech Republic, Slovakia, Poland, Finland, Bulgaria, Romania, Serbia, Montenegro, Slovenia, Croatia, Greece, Bosnia and Herzegovina, Macedonia, Ukraine, Belarus, Moldova, Lithuania, Latvia and Estonia. Gazprom is a vertically integrated monopolist. Although organised as a joint-stock company and despite having some limited foreign ownership (in particular the German firm E.ON Ruhrgas AG, a part of E.ON Energie AG, which owns 6.5 per cent of Gazprom), Gazprom in many ways operates as a government agency.¹⁸ The firm combines commercial and regulatory functions and retains tight control over information flows within the gas sector, which impedes transparency within the sector as a whole. Gazprom suffers from large-scale inefficiency and decreased labour productivity.¹⁹ Substantial reform will be needed to reverse this trend.

Putin has chosen not to initiate a thorough reform of Gazprom. Instead he has taken steps to increase his control over the firm. In May 2001, Putin replaced the chairman of the management committee (president or CEO) of Gazprom, Rem Vyakhirev, with an old friend, Aleksei Miller. This appointment, and Miller's subsequent management reshuffle, brought Gazprom in line with Putin and his administration.²⁰ German Gref, Minister of Economic Development and Trade, had from June 2000 onwards proposed a reform plan for Gazprom. This plan, occasionally (most recently in 2002) changed in details, would fundamentally have divided Gazprom into several independent entities for production, distribution and sales. However, Putin on 26 December 2002 stopped this attempt to reform the Gazprom monopoly by pointing out that the firm was an important strategic resource that should not be divided.²¹ On 17 February 2003, Putin gave a speech at a reception commemorating the 10th anniversary of the founding of Gazprom: “Gazprom, as a strategically important company, should be kept, and has been kept, as a single organism.” Putin continued: “Gazprom is a powerful political and economic lever of influence over the rest of the world.”²²

Gazprom has made substantial investments in Europe, in particular German, gas companies (and such companies have in their turn invested in Gazprom). However, unfortunately for Russia, Gazprom does not, it seems, have the capital for the necessary investments in anticipation of future domestic operations, that is, exploration, gas-field development, and infrastructure. This is needed to meet both domestic as well as anticipated foreign demand.²³ Russia remains dependent on gas for domestic use, for households and in industry, and as a legacy of the Soviet period, Gazprom is not allowed to charge more than a fraction of the value of the gas consumed. The price of domestic gas is for political and practical reasons still determined by what people can afford to pay, not what the gas would cost on the international market. Indeed, the energy strategy indicates that energy resources will be earmarked for socially important consumers and strategic objects,²⁴ euphemisms for cash-strapped domestic consumers and, among others, the military. This is a key problem for Gazprom, since Russia consumes the major share of the gas it produces.²⁵ Domestic prices are far too low to cover more than present production costs and do not allow investments in exploration, gas-field development, and domestic infrastructure. Should this situation continue, Russia could not use its gas supplies as a “lever of influence” even if Putin or his successor wished to do so. Gazprom has worked on a mechanism to open up a free market of natural gas for industrial consumers, while retaining fixed prices for, among others, municipal infrastructure and ordinary consumers. This limited liberalisation could take place from 2007.²⁶

In addition, the export infrastructure remains a bottleneck for Gazprom and the entire gas industry. The existing transport and distribution networks are in urgent need of investment. Over 70 per cent of Russia’s high-pressure gas pipelines were commissioned before 1985, the average age of the Gazprom trunk pipelines being 22 years, and an estimated 14 per cent of the pipelines are beyond their anticipated lifespans, causing substantial losses in transportation as well as increased power consumption. In addition, worn out equipment prevents the system from working above 90 per cent of its original capacity. In 2002, the throughput capacity of the Gazprom gas transportation system was 60 billion cubic metres (bcm) of natural gas below projected capacity. Gazprom has embarked upon a modernisation programme scheduled for 2002-2006, among other improvements increasing the internal pressure throughout the entire gas transportation system.²⁷ The actual outcome of this of course remains to be seen when, and if, the programme is fully implemented. According to some estimates, Gazprom will by 2008 not be able to pump all extracted gas due to the limited capacity of the firm’s pipelines.²⁸

The January 2006 Russia-Ukraine Natural Gas Dispute

The dependence of most of Europe on Russian natural gas supplies became obvious to all during the Russia-Ukraine natural gas dispute in early January 2006.

In late December 2005, Gazprom made it clear to its Ukrainian counterpart, the Ukrainian state-owned company NAK Naftogaz Ukrainy, that it would no longer supply Ukraine with natural gas at subsidised prices well below those on the international market. When Naftogaz Ukrainy refused to sign a contract at the higher price, Gazprom threatened to discontinue supplies on 1 January 2006. The ostensibly commercial dispute then turned political as President Putin, on national television on 31 December 2005, ordered Gazprom to continue selling subsidised gas to Ukraine until the end of March as long as Ukraine agreed to pay market prices from April onwards, a compromise first suggested by one of the Ukrainian negotiators. Putin gave Ukraine until midnight to accept his terms. However, Ukraine’s President, Viktor Yushchenko, declined to go along with Putin’s

compromise offer, calling the proposal “economic pressure” - so on 1 January 2006, Gazprom cut the supplies intended for Ukraine, reducing the flow of gas into Ukraine by 20 per cent. Naftogaz Ukrainy on 1 January stated that it had faxed a draft contract to Russia shortly after 11 pm on the previous day, agreeing to the terms laid out by Putin. However, Gazprom on the same day indicated that the faxed reply had fallen short of demands. On 2 January 2006, the loss in pressure due to the disruption in supplies caused shortages further downstream in the European pipeline system. Hungary, Austria and Slovakia reported a drop in pressure at a time of peak winter demand for natural gas. Aleksandr Medvedev, the director of OOO Gazexport, the export arm of Gazprom, explained the drop in pressure by saying that Ukraine already on the first day of disruption had siphoned off 100 million cubic metres intended for export to Western Europe. However, on the same day (2 January), Gazprom agreed to restore gas deliveries close to normal levels to compensate for the gas that Ukraine was siphoning, and on the following day, full gas deliveries were resumed.²⁹

That first Gazprom’s and then Putin’s demands consisted of “economic pressure” cannot be disputed. Gas exports to most European countries, including Ukraine, certainly take place in a seller’s market. Analysts are divided, however, on whether these demands also should be termed political pressure. The key issue was after all quite simple: should Ukraine pay market prices or continue to enjoy subsidised prices - for no other reason except that Ukraine had done so in the past? Those who prefer a slightly more sinister - but still economic - explanation might suggest that Gazprom’s underlying strategic objective to acquire infrastructural assets in Ukraine no doubt also influenced the dispute, although in the end Ukraine did not give up any. However, many observers attempted to portray the Russia-Ukraine gas dispute as a political struggle between presidents Putin and Yushchenko. While political antipathies almost certainly aggravated the crisis, the dispute had far more to do with economics than with foreign policy. Putin himself later (on 6 July 2006) concluded that the “hysteria” created in the European and North American media about Russia’s energy policy was “an attempt to pressurise Russia... Someone wanted to force us to continue selling gas at knockdown prices. [This practice] is over and done with.”³⁰ And for sure, it was not only with regard to Ukraine that Gazprom had insisted on a move to market prices for Russian gas. Most gas-importing former Soviet republics were already paying market prices, or prices close to market prices, for Russian gas deliveries. Even Belarus, a country formally united to Russia in a two-state union, was long under heavy pressure to accept market prices for its Russian gas imports and in March 2006 had to face a Gazprom ultimatum to accept market prices in 2007, or sell Gazprom a fifty per cent stake in AO Beltransgaz, the state-owned operator of Belarus’ gas pipelines.³¹ In the case of Belarus, there was no reason for Russia to resort to political pressures. But there were sound economic reasons to demand market prices for the natural gas deliveries - because increased gas revenues had, by then, become a necessity for Gazprom.

The Effects of the Russian Winter

While the Russia-Ukraine gas dispute grabbed headlines throughout the world, an arguably more important series of events later in January 2006 went largely unnoticed except in energy industry publications.

On 18 January 2006, Gazprom warned Bosnia and Herzegovina that gas deliveries to the country’s fully state-owned gas transportation monopoly BH-Gas would be cut by 25 per cent. On the same day, Gazprom also notified Serbia’s natural gas

company, JP Srbijagas, that gas deliveries (Gazprom exported between 10 and 12 million cubic metres of natural gas to Serbia daily in winter through a pipeline from neighbouring Hungary) would be cut by 25 per cent as well. It soon became clear that natural gas supplies to Croatia's INA-Naftaplin were cut too, on 18 January by 6.5 per cent (Croatia imported some 40 per cent of its gas from Russia, with remaining gas coming from domestic sources). The reason stated for the cuts was domestic Russian demand due to extremely cold winter weather, with temperatures averaging minus 30 degrees Celsius.³²

The following day (19 January), the Italian oil and gas company ENI S.p.A. announced that it had been informed that the supply of natural gas from Russia would be 12.2 per cent below requested volumes in the 24 hours to 0500 GMT on 20 January (Italy imports about 32-36 per cent of its natural gas from Russia).³³ Again the reason was the increased Russian domestic demand due to the cold weather.³⁴

Meanwhile, Russian gas supplies to at least Bosnia and Herzegovina remained down by 25 per cent, while supplies to Croatia had been cut further, now by 11.36 per cent.³⁵

On 23 January, Romania's Economy Ministry announced that it had registered a 10 to 15 per cent decline in Gazprom's gas supplies coming via the two pipelines through Ukraine (Romania imports some 40 per cent of its annual consumption of around 18 bcm of gas from Russia). Again the cold weather was blamed.³⁶

There were also shortfalls in gas deliveries elsewhere. Poland's Minister of Economy, Piotr Woźniak, who himself has a background in the gas industry, on 23 January complained that Gazprom's deliveries to Poland had first started to lag behind on 8 January and on 21 January the shortfall had reached as much as 34 per cent of the contracted total. The figures then increased further, Woźniak stated, to 38 per cent, which amounted to 9 per cent of Poland's daily consumption.³⁷

On the following day (24 January), Italian ENI announced that it expected its gas supplies from Russia to drop 8 per cent, which represented about 1.5 per cent of national consumption. Hungary too reported shortfalls in its gas supplies from Russia.³⁸

Gazprom explained the latest series of cuts as due to Ukraine still siphoning off gas.³⁹

On 22 January, a series of explosions, eventually attributed to insurgents or terrorists, severed Russia's main and reserve natural gas pipelines and one of the main electricity transmission lines, the Kavkasioni, to Georgia, causing shortages of electricity in Georgia and of natural gas in both Georgia and Armenia. Russian technicians rushed to repair the severed lines, but the sabotage caused disruptions for several days. Georgian President Mikheil Saakashvili took advantage of the crisis by accusing Russia of deliberately cutting supplies to his country, in winter, for political reasons.⁴⁰ Be that as it may, it was soon evident that Gazprom was not the only one at fault for the ensuing Georgian energy crisis. On 26 January, a Georgian domestic power line broke down, reportedly leaving about three million people without electricity. Then, at about the same time, a gas-powered unit of the main Tbilisi power station shut down because of malfunctions, leaving most of the capital's 1.5 million inhabitants without heating. The power station remained off-line even when Russian gas supplies were restored.⁴¹

On 27 January, Turkey reported a drop in supplies from Gazprom's pipeline through Ukraine, Moldova, Romania, and Bulgaria. However, in Turkey's case, further deliveries from Gazprom were possible through the Blue Stream pipeline which runs under the Black Sea.⁴² As late as 13 February, Italy reported that it still suffered periodic shortfalls in Russian gas deliveries.⁴³

While these reductions in gas supplies were temporary in nature and of comparatively short duration, they came at a time when the weather was cold not only in Russia but in the affected import countries as well, where consumers and gas-dependent industries simply had to ride out the gas shortages while they lasted. And while it would seem likely that the difficulties with the Ukrainian gas transit had affected the already unfavourable supply situation (Ukraine has since admitted that it at times indeed did siphon off gas),⁴⁴ the fact remained that Gazprom had not been able to honour its contractual obligations. Moreover, Gazprom on several occasions admitted that it was the severe Russian winter, not the difficulties with Ukraine, that had caused the firm to cut its exports.

Gazprom in Crisis

The cold winter had shown that not only was Russian domestic demand larger than anticipated, production was not large enough to sustain all export opportunities. In addition, as was highlighted by the situation with regard to Georgia, both domestic and export gas infrastructure suffered from age and neglect.

Gazprom is, in fact, a company in crisis. The firm suffers from inefficient management but even more from a deepening decline in gas production. While Russia has vast reserves of natural gas, the exploitation of these deposits will take huge investments. All new gas fields are located in the far north and east of Russia, in conditions of extremely harsh environments and far from both transportation infrastructure and markets, domestic as well as foreign. Offshore fields in the far north will be particularly demanding to put into operation. To develop these fields will take an entirely new infrastructure, and the harsh climate will ensure that such infrastructure will be both costly and technically difficult to build. At present, Gazprom has not mastered the technology to develop the new fields, especially the offshore fields, for which the firm will have to rely on foreign partners. It would also seem very unlikely that Gazprom has the capital to do so - at least under current operating conditions. Gazprom has not only until recently been subsidising a handful of former Soviet republics, the firm still remains obligated to provide the Russian population with subsidised gas.

And there is a lack of capital investment. Although Gazprom has instituted a series of five-year Reconstruction Programmes for the period from 1991 to 2006, the International Energy Agency (IEA) has concluded that for the last fifteen years Gazprom has consistently failed actually to invest a major share of the funds allocated to investments in these programmes. According to the IEA's figures, of the 35 billion roubles allocated to investments in 1991-1995, only 23 per cent were actually invested. Likewise, of the 98 billion roubles allocated to investments in 1996-2001, no more than 29 per cent were really invested. In the current period, 2002-2006, Gazprom had as of 2005 invested only 80 per cent of the 237 billion roubles allocated to investments - which would seem to indicate that while Gazprom has substantial funds, these may still not be as large as the firm would need (further funds were eventually allocated in 2006).⁴⁵

The lack of investment has caused other problems. The IEA has also concluded that at least 30 bcm of natural gas - the equivalent of a fifth of Russian exports to Europe - are wasted due to a lack of enhanced technology and energy efficiency. Most losses derive from ageing transportation infrastructure which causes losses due to leaks in compressor and trunk pipelines (estimated at 6.2 bcm in 2004) as well as in the gas distribution systems (estimated at 5.3 bcm in 2004). Then there are losses from gas combustion at compressors (estimated at 41 bcm in 2004) and through gas flaring at the production fields (officially estimated at 15 bcm in 2004 but in reality expected to be far higher, perhaps as much as 60 bcm). While not all these losses could easily be prevented, certainly a better use of investments - and more of them - would substantially decrease present losses.⁴⁶ Gazprom acknowledges that further investments in the trunk pipelines would allow savings of up to 10 bcm per year. Gas flaring presents a special problem, as many oil companies are interested in making better use of the natural gas which is currently being flared at their production sites but are prevented from doing so due to a lack of Gazprom transportation infrastructure.⁴⁷

Most key investment needs are thus to be found in Gazprom's production infrastructure and in the domestic trunk gas pipelines. However, investments far more often go to export pipelines than to a reconstruction of the Russian transportation network.⁴⁸

For sure, Gazprom has over the last four years more than tripled its investments. Annually, the investment volume consists of about \$10-11 billion.⁴⁹ Gazprom President Miller has indicated that at present, the first priority of investments is in transportation. In addition, Gazprom finds transportation infrastructure more capital-intensive than production infrastructure.⁵⁰ Even so, it would appear that when Miller speaks of transportation infrastructure, it is export pipelines that he has in mind, not domestic infrastructure. While Gazprom in 2005, for instance, increased its investment volume by more than 40 per cent to \$10.8 billion - a very considerable share of this was earmarked for the North European Gas Pipeline, projected to run across the Baltic Sea.⁵¹

A further investment problem concerns Central Asia, from which Gazprom expects to import much natural gas to be used for further exports to Europe. There is a fundamental lack of information on investments in the gas production and transportation infrastructure of the Central Asian states.⁵² This lack of reliable information might indeed be equally troublesome to the Gazprom management as to the European importer.

The various worries about Russia's ability to honour all contracted obligations were exacerbated on 21 March 2006, when President Putin on the first day of his visit to China signed a joint declaration with his Chinese counterpart on energy co-operation and announced a number of agreements on energy supplies and joint ventures with the Chinese National Petroleum Corporation (CNPC), including one by Gazprom. A member of Putin's delegation later elaborated to the media: a natural gas pipeline would be built from Russia to China, to be commissioned in 2011 at the cost of \$10 billion. In addition, Gazprom had agreed with its Chinese partners on a price formula for gas deliveries. Putin himself told the press that the first stage of the project was the construction of a new gas pipeline, named Altai, from West Siberia to China's western border. This route had been chosen because deliveries from West Siberia seemed "easier to carry out and faster". In a second stage, another gas pipeline would be built from East Siberia. Exports from each project would total 30-40 bcm per year.⁵³ Gazprom President Miller later explained that annual exports would total 68 bcm, with a projected throughput capacity for the western route of 30 bcm per year.⁵⁴ As for Putin, he later suggested that in ten to

fifteen years, no less than 30 per cent of Russian energy exports would go to Asia – an ambition which Russian experts believe will be hard to realise.⁵⁵

Putin's trip to China naturally raised yet more concerns among Gazprom's European customers. On 24 May 2006, Gazprom's deputy CEO Alexander Ananenko in an attempt to alleviate worries said that Gazprom's production was only limited by the market's capacity and actual demand for gas at justified prices. Ananenko stated that Gazprom's reserves of 29.1 trillion cubic metres guaranteed stable long-term supplies of Russian gas. He also pointed out that the current balance of reserves allows Gazprom to produce up to 900 bcm annually (a somewhat optimistic remark; in June 2006 Gazprom CEO Miller explained that he expected Gazprom's real production potential to be "more than 600 bcm").⁵⁶ Gazprom is indeed increasing its gas production capacities, Ananenko concluded, and is replacing reserves with significant investments.⁵⁷

Gazprom also continues to explore possibilities to find additional export gas abroad. In addition to the firm's traditional suppliers in Central Asia, Gazprom in early 2006 was in the process of negotiating an agreement with Algeria's Sonatrach, a major supplier of natural gas to European customers and experienced in exports of liquefied natural gas (LNG). Algeria is the second-largest natural gas exporter to Europe after Russia.⁵⁸

Conversion to Coal

However, within days of Ananenko's 24 May 2006 press conference, Russia's Institute of Natural Monopolies Research (IPEM) according to news reports concluded that by 2010, domestic Russian gas consumption would have risen by 24 bcm. Since gas exports would remain unchanged or - more likely - increase, the rise in domestic consumption might lead to a failure to meet export obligations. IPEM concluded that short of the construction of dozens of new nuclear power plants, the resulting gas shortage could best be resolved by converting the domestic energy sector and industry to coal. This would make it possible to release up to 26 or perhaps even 50 bcm of gas for export by 2010 and even more by 2020. However, quite apart from the environmental concerns of an increased use of coal (which the institute did not find too disturbing since modern coal-burning technology would reduce emissions), such a conversion would be hampered by a lack of railways for increased coal transport and by taxation and pricing issues, which currently make gas cheaper than coal.⁵⁹

The Russian energy strategy of 2003 points out in no uncertain terms that Russia will need to rely on the hydrocarbon resources (and in particular natural gas) of the Central Asian republics within the Commonwealth of Independent States (CIS). This would allow Russia not only to avoid the need for immediate capital investment, but also to conserve resources that represent the strategic interests of Russia.⁶⁰ Russia also hopes to acquire and re-export gas from the CIS countries to Europe.

Russia derives a large share (in 2002, 43 per cent)⁶¹ of its electrical energy from gas-fired generators. Russia therefore hopes to increase the export of gas by substituting coal (Russia's coal reserves are expected to last far longer than its natural gas reserves) for domestic energy production. Power station coal consumption has been projected to increase by 1.5 to 2 times in the period up to 2020.⁶² Another way of looking at the issue is that more coal is needed to ensure energy security if goals for increased natural gas and nuclear production are not met.⁶³

President Putin and his advisors within the presidential administration were aware of the problem. To assist Gazprom in meeting its export obligations, the administration developed a fuel strategy for Russian electricity generation. The emphasis would not be on decreasing the growing deficit in natural gas. Instead the needs of domestic consumers would have to be handled by converting power plants to coal and heating oil. This would lead to higher electricity prices but ensure that Gazprom could save sufficient natural gas to meet its export obligations.⁶⁴

There are already 27 electric power stations in European Russia that could be made to run on either natural gas or coal. IPEM has argued that by converting them to exclusive coal use, by 2020 this would save about 27 bcm of natural gas. Additional savings could be achieved through the use of modern technology.⁶⁵ However, it remains doubtful whether even these savings would be sufficient to reduce the growing gas deficit.

Worries within the Russian Government

The Russian government has acknowledged the fact that there are problems within Gazprom. On 2 June 2006, in yet another attempt to calm concerns over the possible shortage of natural gas, Russia's first deputy prime minister Dmitry Medvedev, who is also the chairman of Gazprom's board of directors, first pointed out that there is no gas shortage, then admitted that while he was in favour of preserving state control over the country's key strategic companies, he had noticed problems. "The state is not the most effective owner but must be present in certain companies which are of critical importance for the state's security," he said. "The state's presence in Gazprom is of critical importance. The state should not leave Gazprom now or in the next ten to fifteen to twenty years."⁶⁶

However, Medvedev's reassurances did not allay all worries. In the summer of 2006, further concerns were voiced within the Swiss investment bank UBS. In a report, the bankers concluded that even if Gazprom meets its plans to produce 560 bcm of natural gas in 2010 and to deliver supplies from independent producers to the volume of 165 bcm and 70 bcm from Central Asia, respectively, the growth of demand for natural gas in Russia of, in their estimate, 2.5 per cent per year would still bring "very great" prospects for a crisis in fulfilling Gazprom's contractual obligations to the European countries and on the domestic market. In addition, the bankers foresaw the possibility of a "certain decline" in the level of production of 560 bcm between 2010 and 2015. Even to sustain production at this level would require large-scale investments in geological exploration and infrastructure at natural gas fields, and such investments were not taking place. Production is indeed falling at Gazprom's three largest fields, and production at the Zapolyarnoye field, which has been responsible for production growth in the last five years, is expected to remain level. The UBS did not expect that the great gas reserves of the Shtokman and Yamal fields would be put into production soon enough to influence the level of production up to 2015.⁶⁷

UBS was of course not the only one to notice the lack of capital investment and the growth in domestic consumption. In late 2005, the wholly-owned Gazprom affiliate OOO NIlgazekonomika (Natural Gas Economy Research Institute) had reached similar conclusions. It then revised the estimate on domestic consumption of natural gas by 2030 upwards from 436 bcm, an estimate extrapolated from the energy strategy, to 654 bcm - an increase of 50 per cent. The institute therefore recommended that Russia should focus on developing new gas fields to meet future domestic demand rather than new export opportunities.⁶⁸ Such conclusions were

also presented by IPEM. The IPEM analysts concluded that by 2010, the gas deficit would have reached 120-124 bcm per year, and by 2020, the deficit would be a minimum of 186 and possibly up to 343 bcm per year.⁶⁹ Yet other analysts pointed out that there had been repeated warnings that Gazprom's output would fall if the government failed to raise the heavily subsidised domestic gas price.⁷⁰ There had indeed already been a drop in Gazprom's production in 2001-2002, which had worsened a domestic shortage begun in 2000.⁷¹

Then the concerns became official. Russia's Minister of Economic Development and Trade, German Gref, at a cabinet meeting on 17 August 2006, in conjunction with the approval of a draft budget for 2007 which reportedly included plans for a tripling of investments for Russia's power industry including nuclear power from 2008 to 2009, warned that there was a distinct possibility of a natural gas deficiency on the country's domestic market in the period 2007-2009, when he expected an imbalance between Russia's production and consumption. From 2007 to 2009, there would likely be gas shortages of 5-6 bcm in the domestic market, Gref explained: "The domestic market alone will demand an additional 26-27 bcm of gas, and we have a production forecast for only 21 bcm... This imbalance will for the first time expose itself and come to the fore."⁷²

Officials from Gref's ministry within days made assurances that Gazprom's foreign customers need not worry. Gref had referred to a worst-case scenario, they suggested. Although the officials admitted that output volumes grew slower than did domestic consumption, they promised that no gas shortages were expected in the next three years. According to their estimate, even in the worst-case scenario the shortage would make just one per cent of output. If so, the gas deficit would reach 6 bcm in 2008, and 8 bcm in 2009, the ministry forecast.⁷³

However, the ministry also reported that natural gas output would grow only by 0.9 per cent in 2007, and 0.6 per cent in 2008, before output growth again reached 2.1 per cent in 2009. This forecast was based on the assumption that gas would mostly be extracted from fields already in operation, a situation which seems likely to continue in the near future.⁷⁴ As for Gazprom, the firm in 2005 produced 547.9 bcm, which was an increase of 0.5 per cent as compared to the previous year - and indeed the lowest growth figure in a series of years with declining growth.⁷⁵

In comparison, the ministry stated that it expected average annual domestic consumption of natural gas to grow from 1.5 to 1.6 per cent in 2007 (to 470 bcm from 449 bcm in 2006). However, exports were expected to be reduced by 3.5 per cent in 2007, although they were expected to grow again during the following two years, by 3.1 and 4.5 per cent respectively.⁷⁶

On 18 September 2006, the head of the presidential administration, Sergei Sobyenin, held the first of several planned meetings with the goal of developing an energy strategy to 2015. The first meeting was devoted to the fuel balance in Russian electricity in the coming years. Among those present at the meeting was Viktor Khristenko, Minister of Industry and Energy; Anatoly Chubais, the head of the state-controlled electricity producer Unified Energy Systems of Russia (UES); Sergei Novikov, the chairman of the Federal Tariff Service; and Kirill Seleznev, general director of the wholly-owned Gazprom subsidiary OOO Mezhtregiongaz (since May 2004 Gazprom's vehicle for its domestic gas distribution assets)⁷⁷ as well as a member of Gazprom's management committee. It became clear that Gazprom had allotted only 100.5 bcm of natural gas for Russian electricity in 2006, which was 11 bcm less than in 2005. However, by the end of August 2005, UES had already used 90 bcm of natural gas - and winter was approaching. Gazprom

explained that it had allotted less gas for UES since several companies which formerly belonged to UES are currently buying gas independently. However, UES complained that it already experienced a gas shortage and had had to compensate by using heating oil, consumption of which exceeded the target by 34 per cent last year and which was more than three times more expensive than natural gas, and coal, the volume of which had to be increased by 8.4 per cent. The construction of new coal production facilities in various regions was also discussed. The meeting eventually agreed to raise the price of electricity, although UES may find this impossible to carry out this year. To make the situation yet worse, representatives of UES have stated that they expect to receive even less gas next year, although they claim that UES needs a minimum of 140 bcm and that 160 bcm would be ideal - and that demand is increasing.⁷⁸

Domestic gas consumption is indeed rising faster than Gazprom has foreseen. In 2005, Gazprom supplied 307 bcm to the domestic market, less than 0.5 per cent up from 2004, when Gazprom supplied 305.7 bcm.⁷⁹ Perhaps for this reason, Gazprom predicted a rise in domestic gas consumption by only 1 per cent in 2006. The real figure is reportedly 4 per cent.⁸⁰ Gazprom's export obligations are also rising fast. In 2005, Gazprom claimed to have sold 156.1 bcm of gas to Europe alone, up 2.9 bcm as compared with 2004.⁸¹ Exports were expected to increase to 180 bcm in 2010.⁸² When both domestic consumption and exports are rising faster than production, there would seem to be little doubt that the domestic deficit in natural gas will rise as well.

European Energy Firms Prepare for Gas Shortages

Will Gazprom and by extension Russia be able to fulfill all future export obligations and opportunities? Gazprom may be reluctant to answer this question for reasons more complex than a natural wish to guard one's business secrets. Since February 2004, changes to the federal law 'On State Secrets' have turned information on the quantity and volume of Russia's strategically valuable fossil fuel reserves and the methods, locations, and amounts of their extraction, production, and consumption into state secrets.⁸³

So besides Gazprom itself, who would be in a position to know whether Gazprom really will be able to deliver sufficient volumes of natural gas? It is perhaps a fair assumption that Gazprom's closest European partners - E.ON Energie AG and BASF AG - would be in the know. These are the two German companies with which Gazprom has allied in the project to build the North European Gas Pipeline. The three firms have cross-investments in each other and operate in what can only be regarded as a genuine (that is, not only official) strategic partnership. Gazprom has even agreed to rescue a heavily indebted Dortmund soccer club as a gift to its German partners, and to the German people.⁸⁴ So what can the activities of the German firms tell about the future of Gazprom's production potential?

Assuming that Gazprom in case of production shortages first would supply those customers with which it has entered into mutually profitable long-term contracts, one would expect major companies in need of gas to enter into such contracts, if they conclude that Gazprom in the future will not be able to fulfil all the various demands for natural gas. It so happens that both E.ON and BASF have extended their contracts with Gazprom several decades into the future. E.ON Ruhrgas AG, whose CEO Burckhard Bergmann sits on both E.ON AG's management committee and Gazprom's board of directors, on 29 August 2006 contracted deliveries of 400 bcm of gas for the period up to 2036. A subsidiary of BASF, Wintershall AG, already in July contracted deliveries of 90 bcm of natural gas for the period 2014-2030, in

addition to earlier long-term contracts still in force.⁸⁵ Such agreements are not spur-of-the-moment deals and would have taken several months to negotiate. It would not be unreasonable to assume that it was the gas shortages of the previous winter that clinched the deals for the European firms. While one could always argue that strategic partners might be quite happy to enter into mutual, long-term contractual obligations just as a show of good faith, the perceived need to tie up an otherwise overextended supplier would seem to be a far better argument to striking a deal on a volatile market - which is what the natural gas market is becoming in Europe due to the emerging trans-Atlantic trade in LNG and the rising demand for gas. "Long-term supply contracts are essential for producers to finance investments and for importing countries to ensure security of supply for markets," E.ON Ruhrgas vice-president Dieter Pfaff concluded in January 2006. He continued: "The system of long-term supply contracts has proven to be well functioning even throughout times of difficult political or economic circumstances, e.g., at the turn of the year 2005/2006 [during the Russia-Ukraine gas dispute]."⁸⁶ Therefore we should expect yet more long-term contracts between major European gas importers and Gazprom.

Endnotes

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² *Energeticheskaya strategiya*, 42-3. It is not only the energy strategy that occasionally uses language reminiscent of military strategy. At the 3rd Russian Petroleum & Gas Congress in Moscow on 21-23 June 2005, the President of the Russian oil pipeline monopoly Transneft, Semyon Vainshtok, quoted the famous Russian general Suworov to make a point.

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⁶ Pavel Felgengauer, "Oborona neftegazovoy trubyy," *Novaya Gazeta* 76 (13 October 2003; <http://novayagazeta.ru>).

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⁸ Vladimir Putin, "Mineral'no-syr'yevyye resursy v strategii razvitiya Rossiyskoy ekonomiki," *Zapiski Gornogo Instituta* 144 (1999), 3-9. The article has since been translated into English and re-published in Harley Balzer, "Vladimir Putin's Academic Writings and Russian Natural Resource Policy," *Problems of Post-Communism* 53: 1 (January/February 2006), 48-54. See also Harley Balzer, "The Putin Thesis and Russian Energy Policy," *Post-Soviet Affairs* 21: 3 (2005), 210-225. Putin's dissertation and journal paper were first brought to public light in Martha Brill Olcott, *The Energy Dimension in Russian Global Strategy: Vladimir Putin and the Geopolitics of Oil* (Houston, Texas: The James A. Baker III Institute for Public Policy of Rice University, 2004), 16. Olcott seems to doubt whether Putin wrote the dissertation himself or relied on a ghost writer, but she does not doubt that he stands for the views presented therein.

⁹ Putin, *Strategicheskoye planirovaniye*, 175.

¹⁰ Putin, "Mineral'no-syr'yevyye resursy," 3; translation from Balzer, "Vladimir Putin's Academic Writings," 49.

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¹² *Ibid*. 6; translation Idem, 51.

¹³ *Ibid*. 8; translation Idem, 54.

¹⁴ *Ibid*. 6; translation Idem, 52.

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¹⁶ On Russia as an exporter of energy, see Michael Fredholm, *The Russian Energy Strategy & Energy Policy: Pipeline Diplomacy or Mutual Dependence?* (Conflict Studies Research

Centre, UK Defence Academy, Russian Series 05/41, September 2005); Mark A. Smith, *The Russian, German and Polish Triangle* (Conflict Studies Research Centre, UK Defence Academy, Russian Series 05/61, October 2005); and Andrew Monaghan, *Russian Oil and EU Energy Security* (Conflict Studies Research Centre, UK Defence Academy, Russian Series 05/65, November 2005).

¹⁷ See, e.g., *Business Monitor International's Emerging Europe Oil and Gas Insight* 4, August 2006, p.13.

¹⁸ Gazprom web site, www.gazprom.com.

¹⁹ William Tompson and Rudiger Ahrend, *OECD Economic Surveys: Russian Federation* (Paris: OECD, 2004), 121-7, 143.

²⁰ *Upstream*, 17 June 2005, p.32.

²¹ Radio Free Europe/Radio Liberty (RFE/RL), 5 February 2002, 17 January 2003.

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³⁵ SeeNews, 19 January 2006.

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³⁷ Interfax Ukrainian News (Russia), 24 January 2006.

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- ⁵³ RIA Novosti, 21 March 2006; "Meeting with Russian Journalists Following the Ceremonial Signing of Russian-Chinese Documents," 21 March 2006, President of Russia official web portal, www.kremlin.ru. At the same time, Russian electricity producer UES signed an agreement with the Chinese State Power Grid Corporation, while Russian oil pipeline monopoly OAO Transneft and Russian state-controlled oil major Rosneft signed a protocol and an agreement with the Chinese National Petroleum Corporation (CNPC). Other agreements were signed as well. "List of Documents Signed Following Russian-Chinese Talks," 21 March 2006, President of Russia official web portal, www.kremlin.ru. A Chinese newspaper explained that the Altai pipeline would run along the route Krasnoyarsk-Novosibirsk-Novokuznetsk to Gorno-Altaysk and Urumchi in Xinjiang, where it would link up with China's West-East gas pipeline. The second pipeline would run from Sakhalin to Vladivostok and thence into China's Heilongjiang province. *Wen Hui Bao* (Shanghai), 21 March 2006 (www.whb.com.cn).
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ISBN 1-905058-93-4

Published By:

**Defence Academy of the
United Kingdom**

Conflict Studies Research Centre

Defence Academy of the UK
Watchfield
Swindon
SN6 8TS
England

Telephone: (44) 1793 788856
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ISBN 1-905058-93-4