

Analysis

Russia's Energy Policy: Should Europe Worry?*

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East-West relations are deteriorating to a level not seen since the Soviet period. Recent cover stories on Russia from *The Economist* (December 16, 2006) and *Der Spiegel* (March 5, 2007) present President Vladimir Putin as a gangster with a gasoline pump and a Soviet Commissar wielding Gazprom's massive pipeline network. These images illustrate a growing fear in the West that Russia is a threat. Russia, according to this point of view, is using energy as a weapon to rebuild its empire. This article examines to what extent Europe, which is heavily dependent on Russian oil and natural gas supplies, should worry.

Real and Perceived Threats

What the European consumer of Russian gas and oil worries about is mainly what he or she decides to worry about. A major turning point in Europe's perception followed the Russia-Ukraine gas dispute in January 2006: Many European governments and large parts of the media decided that the short-lived shutdown of Russian gas deliveries to Ukraine were something to worry about. Moscow had a different perception at the time: it simply could not understand why Europe sided with Ukraine in a conflict where, in Moscow's view, the issue was Ukrainian theft of Russian gas and living on Russian subsidies.

First, what Moscow failed to grasp was how the Europeans would interpret the way Russia treated its neighbor. From the European perspective, abruptly closing the pipe was not an appropriate means of resolving price disputes. The Europeans complained that they always paid their bills on time, so they could not fathom why the Russians would resort to such an extreme measure without prior consultation of its European costumers.

Second, and more importantly, Russia's assertive move against Ukraine came at a bad time. The overall political context at the beginning of 2006 was charged negatively against Russia. These general atmospherics had less to do with Russia's energy behavior than with the West's image of Russia as an increasingly authoritarian and anti-democratic power. Only against this larger background is it possible to understand why the shutdown of gas deliveries, which, after all, lasted only 24 hours, had such a tremendous psychological impact. Never mind that the Soviet Union/Russia had been a reliable supplier for the past 30 years, the question for Europe ultimately is whether it wants to partner with this kind of Russia moving forward.

Russia's problems with its transit country neighbors are a cause of concern for the near-term – a recent case in point is the dispute over oil and gas prices

between Russia and Belarus, which led to a three-day stoppage in Russian oil deliveries in January 2007. This issue will be much less important in the middle to long term. Russia's dependency on transit countries will decrease with the construction of new pipeline routes. Recent examples are the North European Gas Pipeline linking Russia directly to Germany through the Baltic Sea, the planned expansion of the Baltic Pipeline System (BPS) with the construction of a new oil pipeline to Primorsk circumventing Belarus, and the recently announced construction of an oil pipeline from Bulgaria's Black Sea port of Burgas to Alexandroupolis, in northern Greece. In mid-March 2007, Hungary decided to go ahead with the project to extent the Blue Stream gas pipeline from Turkey to Hungary. This project will lessen Russia's dependency on Ukraine and also undermine the EU favored Nabucco pipeline project, which is planned to carry Iranian and Caspian natural gas to Europe and runs along the same route as the Blue Stream extended pipeline. (See the corresponding oil and gas maps on p. 12 and 13)

Also, even if Russia's price hikes will cause more friction in the years to come, bringing the CIS prices up to world levels are a healthy development. Although moving at different speeds, Russia has been raising prices for its adversaries (i.e. Georgia) and allies (i.e. Belarus) alike. In this context, what are the issues that Europe should be concerned about when it comes to Russia's energy policy?

Developments in Russia's Oil Sector

Currently, 15 percent of EU oil consumption is of Russian origin and 30 percent of EU oil imports are from Russia. Only about 10 percent is transported via pipelines (the bulk through the "Druzhba"-pipeline), the rest with tankers (see the corresponding map on p. 12). Given that Europe's own oil production is declining, Russian oil is and will remain critical for

* This is an extended and revised version of a paper presented by the authors at the conference on "Global Perspectives on Energy Security" held at the Swiss Re Centre for Global Dialogue in Rüschtikon, Switzerland, 8–9 March 2007.

Europe. Recent developments in Russia's oil sector are, however, potentially bad news for the European customer.

Russia's oil sector is dominated by a handful of private oil companies. It is largely due to these companies that Russian petroleum output was able to recover during the 1990s and is doing reasonably well today. However, there has been a trend towards re-nationalization starting with the destruction of Yukos in 2003. As Figure 1 on p. 8 illustrates, state ownership has increased since 2003 and is likely to expand further.

It is still too early to understand what effect increasing state power will have on the Russian oil sector; however, the expansion of state ownership is unlikely to have a positive impact on production and growth. Moreover, the atmosphere created by this trend is certainly not attractive to foreign investors. To be sure, Russia gets more direct foreign investment than ever before, but not in new long-term energy projects where very large sums are required, and where investors need to have the security that they will not be pushed out of the projects once they become operational.

But since the oil market is a global market with a relatively small share of oil transported through pipelines, Europe has some room for maneuver. Should Russian production stagnate or decline or should Russia divert considerably more of its oil to the Asian market, Europe could theoretically turn to other suppliers. According to Russia's Energy Strategy to 2020, approved by President Putin in May 2003, Russia plans to export about a third its oil to Asia by the year 2020. Whether Russia will indeed manage to export substantially more of its oil (and gas) to Asia without diverting current supplies away from Europe depends largely on the development of new fields in East Siberia and the Far East – in addition to the production of the Sakhalin fields. As of today, however, Russia has invested very little in a region which is believed to contain some 13 percent of Russia's total oil reserves and 19 percent of its gas, but located in extremely harsh climate making production difficult and costly. Also, Russia still lacks major trunk oil (and gas) pipelines which would be capable of transporting large volumes of energy to the Asia-Pacific market.

Developments in Russia's Gas Sector

Gas is a different story for three reasons: First, natural gas is and will remain largely a pipeline market, despite the growing importance of liquefied natural gas (LNG), which can be transported by tanker ship. Second, the dependency of Europe on Russia is significant. Third, Europe's gas demand is expected to increase much more than its oil demand.

The share of Russian gas in the gas consumption of individual European countries is high (see the diagram of European countries' share of Russian gas consumption on p. 11). Overall, the Russian share in EU gas consumption is 25 percent. The figure for Europe's share of imported gas is impressive, if Europe is taken as a whole: 70 percent of the gas imported by the EU-30 – that is the EU-27 plus Switzerland, Turkey and Norway – is of Russian origin. Most of the rest currently comes from Algeria.

If Europe's gas imports indeed increase by 150 percent by 2030, as International Energy Agency (IEA) projections suggest, then one thing is certain: Russia alone will not be able to meet this increasing demand even if the most optimistic scenarios about Russian gas production and export capabilities hold true. Russia will remain the single biggest supplier, but in relative terms, its importance will decline and Europe will have to look for alternative suppliers, including North African countries (notably Algeria), Iran and Qatar. According to the IEA and other estimates, Russia's share of European supply will drop from the current 70 percent to 35–40 percent of EU-30 imports by 2030.

Adding fuel to growing concerns about Europe's increasing dependency on gas imports were Putin's repeated statements in favor of the creation of a cartel of the world's leading gas exporting countries, including Russia, Qatar and Iran. Putin recently announced he would dispatch a team of experts to the Qatari capital, Doha, in April 2007 to further explore a possible gas alliance. Although most energy experts – including a number of senior Russian officials – consider the formation of a gas alliance a highly unrealistic idea, which in any case would not serve Russian economic interests, Putin's public announcements have stirred up even more uneasiness about Russia. (See analysis "Will Russia Create a Gas Cartel?" on p. 14)

As indicated in Figure 2 on p. 8, Russia's major gas fields are declining fast. Whether Russia manages to produce more gas and export more to Europe depends on four factors: the development of new fields, Russia's domestic energy market, Russia's independent gas producers, and the amount of gas from Central Asia.

Development of New Fields

The development of new gas fields is of paramount importance for Russia to achieve its target output levels (see Figure 3 on p. 9). Two issues are potentially worrisome, however:

A first concern is Gazprom's announcement that it intends to develop the new offshore fields, such as Shtokman or the Yamal fields, without foreign part-

ners. Experts question whether Gazprom on its own is capable of developing these fields, which would be so important for Europe, but which are located in extremely difficult terrain and require up-to-date technology. Gazprom's desire to go it alone indicates a trend towards energy nationalism, which is defining the new reality. Russian law makes it impossible for foreigners to control large offshore fields. They can take part in the development projects, but they are not allowed a controlling share.

A second worry is that it is unclear when the new fields will start producing. Without massive foreign investment, Gazprom will simply not have the money to develop new fields and simultaneously take care of other urgent matters, in particular the modernization of its infrastructure. The investments in the Shtokman field alone are expected to amount to \$12–14 billion in the first stage of the project.

The production-oriented upstream sector makes up only a modest share of Gazprom's investments, according to the company's own figures (see Figure 4 on p. 9). At the same time, Gazprom has spent lots of money building additional export pipelines and buying up foreign assets in the downstream sector, especially distribution networks in European countries. What Gazprom obviously wants is to control the whole chain of supply: from production to transportation and distribution. Gazprom seeks to establish dependencies via the building of export pipelines and long-term contracts, and only later worries about actually filling the pipelines. Gazprom CEO Alexei Miller's motto is simple: gas will not be produced until it is sold.

The Domestic Energy Market

The single biggest challenge for Russia in the energy sphere will be the reform of the domestic energy sector. Russia's Energy Strategy estimates that as much as \$200 billion must be spent in the gas sector alone by 2020. The numbers for the other sectors are no less impressive, as Figure 5 on p. 10 demonstrates.

However, reform has not yet seriously started. In the gas sector, the trend is even going backwards: If during the 1990s, there was discussion of liberalizing the gas market and breaking up Gazprom, today Putin and his entourage are in favor of enlarging and empowering this company.

The philosophy behind this strategy can be illustrated with a quotation from President Putin's 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. (...) Gazprom is a

powerful political and economic lever of influence over the rest of the world."

More likely at this point is a rise in domestic gas prices. Gas costs about \$52 per 1,000 cubic meters for Russia's domestic customers. Russian Economic Development and Trade Minister German Gref announced on March 2, 2007, that the price will increase to around \$100 by 2010. Whether this price increase will actually take place depends on the next Russian president. As long as gas is subsidized, it is simply not profitable to invest in the development of other energy sources.

Gas makes up the bulk of Russia's primary energy consumption (see Figure 6 on p. 10); in fact, in absolute volume, Russia uses more gas than any other country in the world. However, even if Russia replaces some gas consumption with nuclear or coal – a key ambition of Russia's current energy policy – domestic demand for gas is still expected to increase. This rising demand, of course, would leave less gas for export.

On top of all this, Russia intends to export more gas to Asia (see Figure 7 on p. 11). This shift in exports should not concern Europe as long as Russian gas is exported from new fields in East Siberia or the Far East, for example from the still to be developed Kovytka gas field, which is one of the largest in Russia. The one project that Europe should worry about at the moment is the proposed Altai pipeline from West Siberia to China, which would eventually redirect gas flows from west to east. Although many analysts believe that this project is too expensive to be realized, plans to build it clearly show that Russia is eager to diversify its oil and gas exports. The same way that Europe does not want to be too dependent on Russia, Russia does not want to be too dependent on Europe.

The Role of Independent Gas Producers

A key assumption in determining Russian production figures is that the share of gas produced by independent producers will increase. According to Russia's Energy Strategy, independent producers could produce up to 25 percent of Russia's total output by 2020 (with roughly half of the gas coming from non-Gazprom gas producers and half from oil companies). As Figure 8 on p. 11 shows, independent producers accounted for basically all the growth in the gas sector in recent years; Gazprom accounted for negative or zero growth. Allowing the independent producers to flourish would be good news. However, the question remains whether Gazprom and the Russian government will allow the independents such liberty. There are indications that Gazprom seeks to strengthen control over them.

A case in point is the situation surrounding the Kovytko project, which TNK-BP hopes to develop. TNK-BP is a 50-50 joint venture between BP and Renova Group, in which Russian oligarch Viktor Vekselberg is the dominant shareholder. TNK-BP owns a 62.4 percent stake in Rusia Petroleum, the operating company at Kovytko. Kovytko is currently the richest gas project in East Siberia, with the potential to develop into a springboard for the establishment of a unified gas supply system in the east of Russia. With annual production estimated at 40–45 billion cubic meters (bcm) per year, Kovytko could produce enough gas to satisfy 15–20 percent of the non-contracted gas demand of China and South Korea by 2020.

It is highly unlikely that Gazprom will allow Kovytko's gas to be exported unless it can gain a controlling share in this project. While the regional implementation of the project is underway, Gazprom has so far effectively stalled the international sales, which would include the construction of an export pipeline to China. Since the Russian government has assigned Gazprom as the official coordinator for the development of gas production in the Russian east, and given that only Gazprom has the right to own and operate gas export pipelines in Russia, the Kovytko project is entirely at the mercy of Gazprom. According to Vekselberg, "Gazprom's entry into the project is inevitable."

The situation around the Kovytko project resembles recent trends in the gas sector, particularly the case of the Sakhalin-2 oil and gas project, in which the Russian state forced foreign companies to hand over part of their stakes to Gazprom for \$7.45 billion on December 21, 2006. Sakhalin-2 was established in 1994 and was the only project in Russia that lacked Russian participation. In order to get the foreign partners to hand over their stakes, Moscow threatened them with the enforcement of the country's environmental legislation, alleging that project activities had violated it. Once the deal was complete, these environmental concerns disappeared.

Gas from Central Asia

Another key assumption is that Central Asian gas continues to flow north. It is much cheaper for Russia to buy up Central Asia's gas than invest in expensive fields in its north. Since all the major Central Asian gas pipelines go through Russia, it has so far been easy for Russia to "convince" the Central Asians to keep selling their gas to Russia. Gazprom currently purchases about 60 bcm a year from Central Asia, an amount which is significant but unlikely to increase any time soon, especially if Turkmenistan, which pro-

vides the bulk of these supplies, is not able to increase its production substantially. At the same time, it can be expected that Russia will be able to at least hold this level and not lose out to Western competitors.

The scale of Russian direct investment in the region is modest, particularly in comparison to the investment of other countries. Russian foreign direct investment in Kazakhstan, for example, amounted to only \$930.5 million (or 3.1 percent of total foreign direct investment) for the period between 1993 and September 2004. The three largest foreign investors, the US, Great Britain, and Italy, accounted for almost \$15 billion (50.73 percent). However, Russia has so far been very good at securing long term contracts on gas deliveries, and Russian companies have bought key pieces of energy infrastructure.

Turkmenistan's new president, Gurbanguly Berdimukhammedov, has confirmed the previous gas deal signed in 2003, which gives Russia an almost exclusive right to import gas from Turkmenistan at least until 2028. Under the deal, Turkmenistan sells Gazprom up to 60 bcm of gas in 2007, 60–70 bcm in 2008 and up to 80 bcm in each of the following years (in 2006, Gazprom imported 42 bcm of gas from Turkmenistan). Since Turkmenistan's current output stands at about 60 bcm, it will have to increase production substantially to meet its contractual obligations. More importantly, should Turkmenistan indeed decide to stick to the partnership with Russia, none of the other interested parties (mainly China, the US and Europe) can hope for direct Turkmen gas deliveries in the foreseeable future.

Gazprom's relation with Turkmenistan is not, however, a one-way street. Gone are the times when Russia virtually blackmailed Turkmenistan to sell its gas for \$44 per thousand cubic meters, with only half in cash. Now, the price stands at \$100 and is expected to increase. This jump clearly indicates the importance Gazprom attaches to Central Asian gas and also shows that Russia is ready to offer a (relatively) good price in order to outbid international competitors.

In the foreseeable future, the EU and the US cannot count on substantial amounts of other Caspian gas flowing directly westward. Only Azerbaijan will transport gas in this direction through the newly opened Baku-Tbilisi-Erzurum pipeline (also known as the South Caucasus Gas Pipeline). There is little hope that large amounts of Kazakh gas will fill the pipeline in the near future because a substantial part of Kazakhstan's additional gas production will be absorbed by its expanding petrochemical industry and Kazakhstan's largest gas fields are located in the north of the country near Russian borders and it is more con-

venient to transport gas via the existing transportation networks. Moreover, China is a serious competitor and might be able to draw some of Kazakhstan's gas export east through a projected pipeline that would follow the already existing oil pipeline.

At the moment, Gazprom is trying to sign contracts for as much of Kazakhstan's gas as possible. For 2007, Gazprom managed to secure some 8 bcm of gas, which roughly equals Kazakhstan's total planned gas exports. Gazprom also bought 13 bcm of gas from Uzbekistan, which produces almost as much as Turkmenistan, but currently uses 80 percent for domestic consumption.

Dealing With a More Assertive Russia

Many of Europe's worries are the same worries that Russia has, if one reads Russia's Energy Strategy to 2020 closely. A major concern of the Energy Strategy is the lack of investment and the negative consequences for future production. However, one key difference is that Russia is not in the same hurry as Europe is. It is Russia, not Europe, which is currently sitting on the oil and gas reserves. For Russia, it is not vitally important if Shtokman starts producing in 10, 15 or 20 years. It can be almost certain that Shtokman gas will find a buyer.

The Russia that the West is dealing with today is a different Russia from two-three years ago, and definitely a more assertive Russia. Earnings from energy exports have played no small role: Income to Russia from oil exports grew dramatically from the transition from Yeltsin to Putin, from \$14 billion in 1999 to \$140 billion in July 2005–June 2006. As Figure 9 on p. 12 shows, not only has Russia over the past three years almost repaid its foreign debts to the Paris Club, it had also accumulated some \$89 billion in the stabilization fund by the end of 2006.

This new wealth marks a very significant development since it means that Russia feels it is no longer beholden to the West, and can pursue a more "independent" foreign policy line. This attitude is not only reflected in Putin's rhetoric over energy export diversification from Europe to Asia or the building of a gas cartel, but shows at the level of public diplomacy (e.g. Putin's speech at the Munich conference on February 2, 2007) or in Russia's announcement that it plans to increase military spending substantially, including the modernization of its nuclear forces.

What does this all mean for the West? For one thing, it should encourage the West to develop alternative sources of energy even more aggressively—the EU has already sent a clear signal with its decision on March 9, 2007, to commit the 27 member states to slash overall

European greenhouse gas emissions by 20 percent and increase the share of renewable energy sources to 20 percent of energy consumption by 2020. Likewise, US President George Bush has announced plans to reduce gasoline usage by 20 percent over the next decade.

At the same time, the EU and the US should make it clear that these steps are not directed against Russia, but are for the benefit of the environment and sustainable economic development. Neither side gains from a further worsening of relations, and the West needs to be careful that relations with Russia do not result in an "energy security dilemma," as recently described by Andrew Monaghan. Such a dilemma might occur when the two sides continue to feel insecure vis-à-vis each other and begin to make preparations in case the other intends to threaten it. These preparations create extra suspicion and provoke additional measures in order to better prepare for an eventual threat. Translated into energy relations, such preparations would result in an intense race to diversify purchases and sales away from each other – despite the fact that because of existing mutual dependencies, neither Europe nor Russia desires this outcome.

As a matter of fact, the current negative political atmosphere and the anti-Russian hype in the Western media are not reflected at the level of economic cooperation with Russia. Gazprom negotiated contracts on long-term gas deliveries with a number of energy related companies, including most recently with Italy's Eni S.p.A. and Gaz de France (GdF). Negotiations and contractual agreements continue with a number of other European energy companies. These agreements, at least, do not indicate any major shifts in attitudes on either side.

Europe needs to formulate a common energy policy toward Russia stressing common interests and needs. This strategy should be based on a better understanding of what the real and perceived threats are. For example, Europe does not necessarily lose if Russia begins to export more gas to China even if the result is less than the expected increase in gas supplies for Europe. From an ecological point of view, Russian gas supplies to China would help the country reduce its dependence on extremely dirty coal. Greater natural gas use in China would help it cut its greenhouse gas emissions.

Likewise, Russian purchases of European energy assets – a development often portrayed negatively in Western media – in fact facilitate mutual interdependencies, rather than further diversification. However, the West should insist on reciprocity; that is, if Russian energy companies are allowed into the EU energy market, then EU companies should be allowed to enter the Russian market. Currently, Gazprom has sole ownership of Russian gas pipelines and Russia's

state-owned company Transneft' holds the monopoly over the oil pipelines.

East-West Energy Cooperation Beyond High Politics

It is important that, besides intensifying their energy dialogue at the highest political levels, the West and Russia look for areas of cooperation in the less politicized – but no less important – areas of their larger energy relationship. Among the many options, the one area of cooperation that has been largely neglected is the promotion of greater energy efficiency through the entire chain of production, transportation and end use, as well as the development of renewable energy sources. These are largely unexplored areas of cooperation, which have, however, huge development potential and are economically attractive for both sides. Moreover, the promotion of energy efficiency and renewables is in line with global efforts to reduce carbon dioxide emissions.

Because gas prices are heavily subsidized and therefore very low for Russian domestic customers, Russia is one of the most inefficient countries in terms of the amount of energy it uses. In fact, Russia uses more than twice as much energy to produce a unit of GNP as the European Union, though it is making slow improvements. According to the Russian Ministry of Industry and Energy, Russia could save half of its current energy use. Since, as Western experience shows, enhancing energy efficiency requires not only an initial engagement on the part of the state both politically and financially, but also the introduction of innovative models and the latest technology, Western companies could contribute to the effort to reduce Russian energy use. Helping to boost Russian energy efficiency may be an effective way to improve relations, particularly as Russia has announced it plans to reduce its energy subsidies for domestic consumers, forcing them to pay something closer to market prices. The country members of the International Energy Agency have managed to prevent significant demand growth by implementing energy saving mea-

asures. Helping Russians reduce their energy demand would help make higher prices more palatable for the population and politically acceptable for policy makers.

Massive losses in the gas sector occur not least because a substantial amount of gas is burned during oil production. Although Russia claims that it burned off 15bcm of gas in 2005, satellite pictures suggest that as much as 60 bcm was flared. The amount of these flares is increasing as oil production increases. Additional gas supplies are lost in transit because of Russia's aging pipeline system. According to Gazprom, investments in the gas transmission system could lead to annual gas savings of up to 10 bcm. The one area with the greatest potential for energy savings is the system of district heating for residences. Now much of the energy devoted to heating Russian homes is wasted because the heat is centrally produced and then transported, with significant losses along the way. Huge losses also occur in the electricity sector. Introducing more efficient methods will be costly, but it is time to think about how these measures can be adopted, and how the West could assist – not least in order to reduce the associated environmental problems and increase Russian gas supplies.

Finally, joint efforts should include the development of alternative sources of energy. Russia currently gets only about 3.5 percent of its energy supply from renewable sources, including its numerous hydro-electric dams. Russia's Energy Strategy to 2020 suggests that as much as 30 percent of the country's energy needs could be met using alternative sources, if these were developed to their full potential. Joint Russian-Western research on such sources of energy could lead to the development of new technologies that would be extremely valuable on the global market place as energy prices continue to rise, benefiting both Russian and Western partners.

While there has been considerable tension in Russia's relations with the West, there is also some potential for improving these relations. Efforts in the energy sector may prove helpful in this regard.

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Suggested reading:

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