

Russia versus Gazprom

| by Nazrin Mehdieva

Rising domestic demand and the depletion of traditional gas-fields mean that Russia will have to make choices as to where to send its gas. But the priorities of profit-hungry Gazprom and the Russian government often conflict – a trend likely to be exacerbated by the deteriorating relationship between Russia and the West.

'Gazprom the National Heritage' – the advertising slogan seen across Moscow speaks volumes about the image the world's largest gas company seeks to embed in the minds of ordinary Russians. 'Gazprom' derives from *gazovaya promyshlennost'* (gas industry) – the name given to it following the reorganisation of the Ministry of the Gas Industry of the USSR into a state gas concern. Although the legal status of Gazprom changed several times – from a state concern in 1989 to a joint stock company in 1993 (RAO Gazprom) and again to an open joint stock company (OAO Gazprom) in 1998 – the name stuck, reminding us of its origins as a national gas company.

To ordinary Russians, Gazprom occupies a leading position among 'socially responsible' companies, and its positive assessment has grown steadily since 2005. Two-thirds of Russians believe that Gazprom's priority should be the "gasification" of Russia's regions, i.e. their connection to the Gazprom network of pipelines. According to polls conducted by the Russian Opinion Research Centre, the public feels that this should be done even at the expense of exports to Europe.

This public perceptions has helped Gazprom solidify its position in the market. Gazprom emphasises that it is the only company willing and able to gasify Russia's remote regions, where infrastructure is patchy at best. Yet, three years after the gasification programme officially became a government priority, the level across Russia remains low and highly unequal: 61.7% of Russia is gasified, versus only 4% of East Siberia and the Russian Far East (RFE). And despite marketing itself as an institute of national pride and heritage, Gazprom also pursues a very distinct commercial agenda. For this reason, it is often at loggerheads with the government, which pushes the company to meet ambitious production goals, extend the network of pipelines to East Siberia and connect it to the Asia-Pacific region – objectives that the company does not always share.

Declining production |

The Soviet Union became the world's largest producer of natural gas in 1984. Two years later, Russia started producing gas from its "super-giant" Yamburg field. The field is operated by Gazprom subsidiary Gazprom Dobycha Yamburg, which accounted for 41.6% of Gazprom's total gas output and 34% of Russia's total production in 2006. Today Gazprom's traditional three super-giant fields, i.e. fields containing over 850 billion m³ (bcm) of gas – Urengoi, Yamburg and Medvezhye – still make up the bulk of Russian production.



Russian President Dmitry Medvedev and Gazprom chief executive Alexei Miller. Photo: Zavrazhin Konstantin/Gamma

Pipeline infrastructure reflects this pattern of production. Most of Gazprom's 156,900 kilometres of trunklines run from Yamal-Nenets Autonomous Okrug in West Siberia to the European part of Russia and onwards to Europe via the transit states of Ukraine and Belarus. However, the production of low-pressure gas from the Cenomanian layers of the West Siberian fields is declining, raising questions as to whether Yamal or East Siberia will replace West Siberia as the next gas province. There is also concern about the investment needed to build new – and upgrade old – pipelines, 40% of which are between 21-33 years old and 20% of which are over 33 years old.

The combined loss from the three super-giant fields in the period of 2000-07 was 176.5 bcm – more than Gazprom's exports to Europe last year. To offset this decline, production from the neighbouring areas of the Yamburg and Urengoi fields was launched. Zapolyarnoye, discovered in 1965, was brought online in late 2001. This field alone is currently responsible for 100 bcm of output, and it is located in the same region – just 200 km off Novyi Urengoi. Total additional production in West Siberia in 2002-06 was 177.5 bcm, and another 93 bcm will be added by 2010. Most of the new production will come from raising output from the Kharvuta area of the Yamburg field, the Yuzhno-Russkoye and Zapolyarnoye fields, as well as the Achimov deposits of Urengoi. All these fields are already in operation, but the new volumes will be insufficient to offset the decline from the three super-giants and meet Gazprom's rising domestic and export obligations.

Russia's next gas province |

The need to develop a successor to West Siberia was first recognised in the 1970s, when some industry experts expressed concern over the insufficient number of exploratory wells being drilled in new provinces. Russia's economic collapse following the dissolution of the Soviet Union, coupled with the low gas prices in the mid- and late 1990s led to a lack of investment in geological exploration and development of new fields. Licences issued for production on the Yamal Peninsula by the late 1990s remained unimplemented and had to be extended to 2008-12.

The slow pace of exploration has translated into uncertainty regarding proven reserves. Official estimates for the Yamal Peninsula put explored reserves at 10.4 tcm (trillion m³ = 1,000 bcm) and potential reserves at 50 tcm. Total potential reserves for East Siberia and the RFE are believed to equal 58.3 tcm, of which 14.5 tcm are located offshore. Reserves

Gazprom will need to prioritise among its European customers



Photo: Donald Weber/VII Network

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assessments by De Golyer and MacNaughton, an independent reservoir engineering firm, of 94% of Gazprom's explored reserves put Gazprom's proven and probable reserves at 20.7 tcm – significantly lower than the 27.8 tcm claimed by Gazprom. (Note that total world gas production in 2007 was 2.94 tcm.)

The Russian system of classifying reserves is based exclusively on the geological attributes of the deposits. The physical presence of the gas is assessed without accounting for commercial factors, such as the cost of development and transportation. By contrast, under the Society of Petroleum Engineers (SPE) International Standards, used by DeGolyer and MacNaughton, both geological and commercial/economic factors are taken into account. The point is that while there is no doubt that Russia possesses colossal unexplored reserves, their economic attractiveness is not indisputable. In this light, it is understandable why Gazprom prefers to purchase gas from Central Asia, Azerbaijan, Algeria and Nigeria, rather than invest billions in establishing new domestic facilities.

Developing transportation infrastructure is another problem. To implement the government's eastern programme to supply Asia with gas, Gazprom will have to produce 106 bcm by 2020 and 160 bcm by 2030 in east Siberia and the RFE. To do this, the company will have to build over 11,000 km of trunk pipelines in climatically challenging conditions – in addition to investing in field exploration and development. Remarkably, in the Gazprom budget, pipelines constitute the largest investment group: in 2006, Gazprom spent 242 billion roubles (\$9.2 billion) on pipelines and only 130 billion on production. In 2008, the company will build 786 km of new pipelines, and the crux of these efforts will be focused on Yamal.

Bringing Yamal gas to the market requires construction of two parallel pipelines (with combined capacity of 117 bcm/year) across marshy terrain from the Bovanenkovo field to the gas hub in Ukhta. This section of the transport corridor will be 1,100 km in length and could cost over \$80 billion. One part of the corridor will be stretched to the hub in Torzhok to feed Gazprom's Unified Gas Supply System (UGSS). The other section will run only to Gryazovets and, from there, it will be extended a further 917 km to Vyborg in the northwest of Russia. The completion of the Gryazovets-Vyborg pipeline will enable the transport of the Yamal gas to Nord Stream.

Strategic choices |

The super-giant offshore Shtokman field in the Arctic, which is being hailed as another successor to West Siberia, will also require massive investment. Shtokman contains 3.6 tcm of gas and will eventually yield 60 bcm per annum, but the decision on its development is not to be taken until next year. To transport the Shtokman gas, the construction of a 1,365-km pipeline from Murmansk to Volkhov and on to Vyborg is necessary.

Currently, Yamal and not Shtokman is taking centre stage in Gazprom's development plans. The company's ability to start large-scale production on the peninsula and construct the associated pipeline infrastructure in 2011-15 will determine whether its output declines precipitously or stabilises and begins to grow. Yet, even if Yamal is developed successfully, the volume of gas available for export will depend heavily on domestic demand. The gasification programme, coupled with healthy GDP growth and expected investment in gas-fired electricity generation, could lead to growth in annual gas demand of over 2.5% until 2010. Consumption could reach 540 bcm per annum by 2015 and 574 bcm by 2020. The government's projections are 515 bcm and 520 bcm respectively. All these projections were made before the financial crisis.

Gazprom envisages the production of 610-615 bcm in 2015 and 650-670 bcm in 2020, suggesting that the share of production by independent companies in Russia will have to increase for Gazprom to meet demand on the domestic market. For this to happen, third-party access to Gazprom's pipelines will have to be eased.

Even so, Gazprom is unlikely to lose its monopoly on exports, which are projected to increase in line with the growing demand in Europe. If demand from Ukraine, Belarus, Poland and the CIS is fully met in 2012, Russia could be left with just under 100 bcm of

gas for exports to Western Europe. This contrasts with the 166.6 bcm by 2010 that the company quotes in its official export projections. Potential delays with Yamal beyond 2012 would exacerbate this situation. Faced with tight supplies and the politically sensitive issue of meeting demand on the domestic market, Gazprom will need to prioritise among its European customers.

In this light, the ongoing construction of pipelines that avoid traditional transit territories (e.g. Nord Stream and South Stream) will make a selective approach possible. Ukraine, Belarus and Poland stand to lose most from this policy. In 2006, some 65% of Russian gas reached West European customers via Ukraine (and Slovakia), over 15% via Ukraine and the Balkan states, and over 16% via Belarus. Ukraine was Russia's largest customer in the CIS. Under an agreement signed in October between Prime Minister Vladimir Putin and his Ukrainian counterpart, Yulia Tymoshenko, gas prices for Ukraine will gradually rise over the next three years – by which time Russia hopes to have completed Nord Stream.

The Asian dimension |

Recently, exports to the Asia-Pacific region have emerged as a key component of the government's vision of developing relations with China, Japan and South Korea. In the protocol of March 2006, signed during President Vladimir Putin's visit to Beijing, Russia envisages the construction of two gas pipelines with combined capacity of 60-80 bcm per annum. Initial exports of 30-40 bcm per year were due to start in 2011, but Gazprom, unwilling to divert exports from the lucrative European market, announced that the actual volumes supplied would be lower.

Moscow's logic of using energy resources for the political purpose of solidifying the traditionally precarious relationships with the Asia-Pacific countries is noteworthy in that it implies that Gazprom is expected to sponsor the implementation of this policy, regardless of its commercial value. The Altai project from West Siberia to China is costly and risks diverting output from fields already in decline. The second project from Sakhalin to Vladivostok seems more realistic, but its implementation will depend on the creation of regional gas infrastructure and the commitment of at least one large regional field. So far, Gazprom has been successful in delaying the development of Kovykta (Irkutsk Oblast) until 2017 and Chayanda (Yakutia) until 2016.

The Sakhalin-Khabarovsk-Vladivostok gas transmission system has emerged as Gazprom's top priority in the East, after Putin's decision that the Asia-Pacific Economic Cooperation (APEC) summit will be held on Russky Island, off Vladivostok. The construction of a gas pipeline from Sakhalin to Vladivostok could facilitate its extension to the Chinese border. But Gazprom has already proposed to build an LNG terminal in Vladivostok to diversify its customer base and avoid Chinese monopsony on its gas in the Asia-Pacific. LNG promotes Gazprom's goal of becoming a global energy company with access to all major markets, including North America. Since 2005, Gazprom has actively traded LNG cargos, but the expected start in January 2009 of LNG production at Sakhalin-2, in which Gazprom is now the majority shareholder, will open a new phase for the company.

The European market will remain the preferred direction for Gazprom's exports. Here lies a divergence in aims from those of the state, which wants to court the political benefits of supplying the Asia-Pacific countries with pipeline gas. Gazprom uses the export diversification argument as a bargaining chip in dealing with Europe. But Europe is Gazprom's most solvent customer, which in October was paying \$500/1,000 cubic metres – a price that exceeded Gazprom's own expectations.

Gazprom will therefore remain opposed to building pipelines to China. To meet its existing commitments, the company will, in the next few years, focus its exploration activities on West Siberia and Yamal where substantial reserves are yet to be found. The issue of developing the country's east will remain a sticking point in government-Gazprom relations, at least until and unless domestic prices of gas are liberalised. ■

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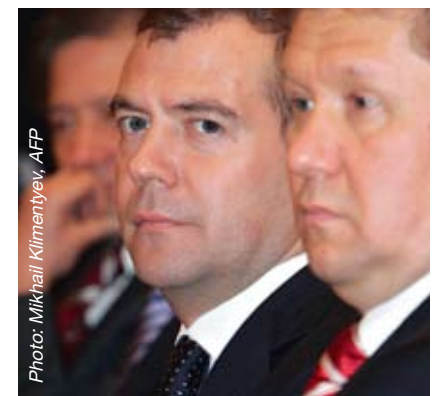


Photo: Mikhail Klimenkov, AFP

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