The Strategic Importance of Natural Gas in Russia: Will Its Potential Be Realized?

Friday, September 30, 2005

A Joint Conference by the James A. Baker III Institute for Public Policy of Rice University and the Carnegie Endowment for International Peace, held at the Carnegie Moscow Center

Natural gas has become a global commodity of geopolitical importance. World gas consumption is projected to more than double over the next three decades, with gas surpassing coal as the world's number two energy source. Gas could even overtake oil's market share in many large industrialized economies. The advantages of gas include ample supply; its greenhouse advantage over other fossil fuels; and its economic competitiveness as a feedstock for electrical power generation.

According to presentations made at the Baker Institute-Carnegie Endowment 2005 conference, Russia must jumpstart stalled energy-sector reforms and make new investments to realize the potential of its huge gas reserves. Speakers included: William Burns, United States Ambassador to the Russian Federation; Edward P. Djerejian, Director of the Baker Institute; and Jessica Matthews, President of the Carnegie Endowment for International Peace. Senior Russian industry figures, government officials, international energy specialists, and U.S. petroleum industry representatives attended the event, sponsored by Baker Botts L.L.P. and Chevron Corporation.

To fully tap the markets of the future, Russia will face new transportation challenges. Gas will have to travel greater distances to reach growing markets for the commodity in the U.S., Western Europe and Asia. Russia is already moving in this direction with the implementation of major LNG projects in the Sakhalin Islands, north of Japan. However unresolved debate about reform in the overall sector has delayed the adoption of a gas strategy that will allow Russia to reach its potential. Domestic political concerns and resource nationalism influence decisions on investment and sector regulation. Noted one top Western analyst, "Major projects take a long time. They should have been debated, discussed, and commissioned in terms of the front-end work by now. Zapolyarnoye, which is going on stream now, was perhaps discussed and commissioned a decade ago. We are very late in delivering new projects into the Russian market."

The conference participants took as a given that Gazprom, the Russian state gas monopoly, would continue to be the dominant force in the Russian gas sector, with 88 percent of current production and 70 percent of proven reserves under its control.

Presenters argued that unless reforms are handled properly both inside and outside the energy sector, "state domination could prove to be a severe brake on development." They also said that Gazprom could drive the expansion of gas resources. But as its management recognizes, this will require restructuring and reform in many aspects of its operations. The key, as one put it, was for Russia to improve the conditions "where private investment can effectively complement state decisions and where state decisions do not handicap private investment."

Russian analysts argued that political barriers exist to the implementation of Gazprom's reform strategy, which involves the liberalization of domestic gas prices. This would be an important first step toward energy efficiency and many economists believe it would spur general economic reform. A recent Carnegie Moscow Center working paper on "The Problem of Energy Policy," by Vladimir Milov and Ivan Selivakhin, argues that the key problem for the Russian economy is its energy intensive nature, encouraged by domestic energy subsidies.

Russians, however, don't want to pay more for their energy, and this is, as one presenter noted, "a serious political factor in our reality." Natural gas pricing policy has political consequences. So too does foreign ownership of Russia's oil and gas assets.

One researcher cited public opinion polls showing that 68% of the Russian population feels foreign control in any part of the gas sector is unacceptable. For many, Gazprom is not just the best known company in Russia; it is also a symbol of Russian power and stature. Management appears to share this view, having adopted the slogan "Natsional'noe dostoianie," which translates roughly as "National Treasure."

Gazprom Chairman Alexei Miller is trying to make Gazprom a total energy company, active in oil, gas and power generation. Gazprom made a major foray into Russia's oil industry with its purchase of 75.7 percent of the shares of Sibneft, an independent Russian oil and gas producer, for $13.1 billion.

The Sibneft deal raised questions at the meeting about how revenue-constrained Gazprom would be able to finance other important gas export projects such as the $35 to $40 billion development of the Bovanenskoye and Kharasaveiskoye fields of the Yamal Peninsula and the $20 billion Shtokman LNG project in the Barents Sea. Capital constraints could also raise questions about other Asia-oriented projects, such as the development, together with Surgutneftegas, of the Talakanskoye field, which is thought to hold up to 800 bcf of natural gas.

The Kovykta gas field, which is estimated to hold 70 tcf of gas, also has enormous potential for serving Asian markets, and it is a project in which major independent producers are active. TNK-BP, through its major shareholding in Rusia Petroleum, has been lobbying for an $18 billion development plan for the field, and shared its plans with participants at the seminar.

TNK-BP has been pressed by the Kremlin to present a two-phase development plan that would first satisfy local economic needs before exporting supply to China and South Korea. The first $1.2 billion phase of the field's development is already underway and includes plans to develop and ship up to 4 bcm to local markets in Irkutsk. Rusia Petroleum is responsible for development of the field, including the drilling of approximately 20 wells and the construction of a connecting northern pipeline. Another southern pipeline to serve individual customers in the Irkutsk Oblast will begin initial deliveries of gas in 2006-2007.

TNK-BP has expressed a willingness to work jointly with Gazprom at Kovykta. The private firm would like to send 420 bcf per year by pipeline to China beginning in 2009, increasing to 700 bcf by 2013. The pipeline could also potentially supply South Korea with 350 bcf per year. Under the plan, Rusia Petroleum would drill an additional 300 wells and build 36 central processing facilities. A consortium would be formed to build and operate a 4,800 kilometer pipeline to China and South Korea.

But TNK-BP has had difficulty clearing the way for implementing this second export phase. Questions remain over final pipeline routing, market demand assurance, alignment of key shareholders, and participating companies. In past years, Gazprom has indicated that it intends to give priority to Sakhalin over Kovykta in developing resources to export to China and South Korea.

Projects at Sakhalin, slated for implementation since before the breakup of the Soviet Union, are moving ahead rapidly. Royal Dutch Shell's $10 billion Sakhalin energy project is expected to export 234 bcf per year of LNG by 2007, increasing to 468 bcf in the next decade. The expected primary consuming markets for Sakhalin LNG are in Japan and South Korea, with additional deliveries to China and the U.S. West Coast. This project will give Russia experience in LNG project development and open markets in Asia and the United States. Another consortium, led by ExxonMobil and including Gazpromneft, is developing the Sakhalin-1 project. This project could supply Japan, via pipeline, with up to 300 bcf of natural gas per year, and recently, there have been indications that China could also become a destination market.

Amy Myers Jaffe presented a recent Baker Institute study, "The Energy Dimension in Russian Global Strategy," which investigates the impact Russian gas policy choices will have on the development of international gas markets. She reported that left unfettered for timely commercial development, Russian gas is projected to be the single largest source of world supply until 2040. Moscow would be strategically positioned to move large amounts of gas to consuming markets in both the Atlantic and the Pacific, giving it the potential to link prices between the two regions.

The Baker Institute model shows that East Siberian gas must begin to flow into Northern China by the beginning of the next decade for Russia to capture optimum Asian market share and take advantage of rising demand in China and South Korea, which will otherwise be allocated to competing LNG suppliers. A delay in the development of Asian pipeline options for Russian gas, including pipelines to China and North and South Korea, could have dramatic consequences for both Russia and potential Asian clients. The model suggests that failure to develop Eastern Siberian pipeline options in a timely fashion could result in a sharp reduction in overall Russian gas production, leaving East Siberian reserves obsolete during the modeling period of 2002 to 2040.

Presentations by representatives of independent Russian oil and gas companies echoed these conclusions, warning that key export investment decisions need to be made right away. They argued that the export window for East Siberian gas supplies exists for the 2009 to 2012 timeframe.

Many important global powers, including the U.S., China, South Korea, and the EU, have considerable stakes in the future of the Russian gas industry, according to conference presentations. Conflict resolution on the Korean peninsula could bring benefits to Northeast Asian gas consumers and Russian producers. Such resolution could lead to construction of a gas pipeline to the peninsula from Russia, solving North Korea's energy issues. Development of eastern pipelines would allow Russia to commercialize more of its resources by minimizing the loss of markets to LNG supplies from other gas producers.

The creation of international joint ventures to develop Shtokman and other major export projects could push Gazprom to adopt a business culture that promotes efficiency and transparency. International oil companies believe that they can help Gazprom capture market opportunities by developing regasification receiving terminals in key end-use regions and aggregating smaller customers to facilitate sales in deregulated open markets like the U.S. Operating experience can help Russia achieve cost savings in LNG facilities development.

However barriers to international partnering remain, as tax and legal regimes do not yet offer adequate protection for minority shareholders and regulation can still be burdensome. Here negotiations in multinational frameworks can play a key role, producing instruments such as the European Energy Charter. Although there has been steady progress, Russia's legal protections for property still lag far behind other G-8 countries.

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