Working paper
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Russian Gas and Alternatives for Europe

FG 5 2006/07, June 2006

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Gas imports from Russia to Europe (i.e., Western and Eastern Europe, excluding the CIS states) will amount to 180–200 bln m³ annually from 2010, when the European demand increases due to the construction of new gas power plants.

There is no question that Russian gas reserves are sufficient to supply Europe for many decades, but it is uncertain whether the deposits will be opened up soon enough to meet the increasing demands of Europe and South East Asia/China.

Moreover, the Russian gas supply to Europe depends indirectly on whether Turkmenistan continues to be a gas supplier for Russia or whether it turns predominantly to the Asian market.

First observation: The major problem in the future will not be excessive dependency on Russia, but rather receiving sufficient amounts of gas from there in a timely manner.

Balances

Table 1 offers an optimistic scenario for the Russian gas balance. Russian oil companies and independent gas producers expect a considerable increase of their production in 2005–2020.

Still, Gazprom is planning only a slight increase in its own production, even if the exploitation of the newly discovered deposits in the Barents Sea and on Yamal Peninsula is started without delay. With substantial amounts of gas imports from Central Asia (Kazakhstan, Turkmenistan, Uzbekistan), total supply of gas will increase in that period by more than 2% annually. This would permit an increase of about 2% in gas exports to Europe and substantial exports to China/Korea and the United States.

Regarding Russian gas import from Central Asia, it remains uncertain whether Turkmenistan will keep to its obligations of gas supplies which are expected to amount to 90 bln m³ after 2010. Ashkhabad has been considering alternatives to the Russian market for a long time. With this aim in view, it would like to construct a gas pipeline to Pakistan via Afghanistan or to China via Uzbekistan and Kazakhstan.

Second observation: The success or failure of Russian export plans depends on the ability to permanently interlink the Turkmen gas economy with Russia.

No Stress

Europe is in a principally favourable situation because, unlike any other region of the world, it is surrounded by gas-exporting countries with which it is connected by

pipelines or from which pipelines can easily be built – namely Russia, the Central Asian CIS states, North Africa, and the Middle East. Alternatives exist and have to be developed *(See Table 2)*.

The African countries – primarily Algeria, but also Nigeria, Libya, and Egypt – will be able to significantly increase their gas exports to Europe and, by 2020, reach the level of Russian supplies to Europe.

Natural gas from the Middle East will come to Southern Europe in the form of LNG (liquid natural gas) as well as through the "gas transport corridor" Turkey on the "Nabucco" pipeline which, however, has yet to be built.

The Caspian countries (that is to say, first of all, Azerbaijan and Turkmenistan) will only deliver minor quantities, because the net export potential of Azerbaijan is low and the exports of Turkmenistan are reserved by contract for the Russian domestic market and would more likely go eastward to China rather than westward to Europe.

Third observation: Although Russia in the long run will remain the biggest individual gas supplier for Europe, its relative share in European gas imports will decrease.

Diversification

Moreover, a progressing geographical diversification of European gas imports is brought about by an increased use of LNG, although this does not apply to all European regions equally.

LNG will gain importance above all in Southern Europe as well as in France and Britain, while increasing imports will make Germany and the countries of Eastern Europe even more dependent on gas coming in pipelines from Russia.

So far, the gas fields of West Siberia, apart from the supply to the European part of Russia and the west of the Commonwealth of Independent States (CIS), are used exclusively for the supply of Europe including Turkey, which puts Europe and Russia into a state of close interdependency.

Fourth observation: While Europe needs Russian natural gas, Russia is dependent on the European market.

Competition?

There is a common statement that Europe and China are actually not in competition over Russian supplies. The situation would change if West Siberia were to be included in the gas supply of China.

Gazprom's April 2006 announcement to build a pipeline from West Siberia to China was a surprise for most of the observers and gave rise to speculations over the motives. However, Gazprom had had this option in mind for many years. Indeed the way from West Siberia to Central China is longer than the way from East Siberia,

but this solution would allow reliance on the existing production potential in West Siberia, while the East Siberian gas fields are being explored, but are not yet in service.

After completion in 2010, West Siberia will supply as much as 40 bln m³ of natural gas to China, which is the same amount that is expected to come from East Siberia *(see map)*.

The new pipeline will provide Gazprom a limited option to make alternative contracts on gas supply either with Western or Eastern purchasers.

However, a situation critical for Europe would emerge only if the West Siberian gas fields failed to produce enough gas to supply both Europe and China with increased amounts of gas. This would be the case if the opening of new gas fields were delayed, meaning that the decrease in production of the large West Siberian "giant fields" could not be compensated for. If Russia, with its West and East Siberian pipelines, is able to largely cover China's demand for gas imports, it sure would gain importance as a trading partner for Beijing and strengthen its strategic partnership with China.

Fifth observation: This is too early to speculate over a Chinese vacuum effect on European supplies.

Outlook

To a certain extent, Europe is able to exert influence on Russia and thus to safeguard its own imports.

One of its options is to urge ratification of the Energy Charter which would grant foreign investors equal rights with Russian investors and accelerate the opening of new oil and gas deposits.

Moreover, the European Union should cooperate with Russia both in energy saving in general and in the introduction of new technologies for producing electricity in particular, which would reduce Russia's need for gas.

At the same time, given an increasing quantitative dependency on North Africa and the Middle East – not only with regard to oil, but also natural gas – Europe will have to pay greater attention to its energy relations with this part of the world.

Map

Gas pipelines from Russia

Table 1
Russian natural gas balance in 2005 and forecast for 2010 and 2020 (bln m³)

		2005	2010	2020	Average annual Increase
Supply	Production of Gazprom	547	560	590	0,5%
	Production of oil companies and independent producers	93	120	235	6,4%
	Total production	640	680	825	1,7%
	Import	10	60	90	15,8
	Total supply	650	740	915	2,3%
Demand	Export to Europe	150	180	200	1,9%
	Export to CIS	55	55	55	0,0%
	Export to Asia / USA	0	30	120	
	Total Export	205	265	375	4,1%
	Domestic consumption*	445	475	540	1,3%

* Including own consumption of the gas industry and losses.
Sources: Gazprom, http://www.gazprom.ru; Vladimir Yolgin, "YANAO. Problemy i prioritety razvitiya" [YANAO. Problems and Priorities of Development], in: *Neftegazovaya vertikal*, August 7, 2004; *Energeticheskaya strategiya Rossii na period do 2020 goda* [Russia's Energy Strategy to 2020], approved August 28, 2003, http://www.mte.gov.ru/files/103/1354.strategy.pdf, and own estimates.

Table 2
Gas import potential of Europe in 2002 and 2020 (bln m³)

	Volume (bln m³)			Evolution	
Suppliers	2002	2020	Increase 2002-2020	2002	2020
Russia	126	200	74	63%	39%
Africa	65	199	134	33%	38%
Middle East	7	100	93	4%	19%
Caspian area	0	16	16	0%	3%
Others	1	3	2	1%	1%
Total	199	518	319	100%	100%

Source: Observaroire Méditerranéen de l'Énergie (OME), *Analysis of Future Supply Sources and Costs for Europe*, Newsletter, June 2004, http://www.ome.org