

OŚRODEK STUDIÓW WSCHODNICH
C e n t r e f o r E a s t e r n S t u d i e s

The Russian gas for Europe

WARSAW OCTOBER 2006

THE RUSSIAN GAS FOR EUROPE

Agata Łoskot-Strachota

1. Production and export of Russian gas / 2

Chart 1. Production and export of Russian gas

Diagram 1. Structure of Russian gas sales

Chart 2. Major consumers of Russian gas

Chart 3. Russian gas: Export routes to Europe

Map 1. Russian gas: Export routes

Map 2. Gas imports to Europe: Shares of different gas suppliers

2. Gazprom's foreign investments / 7

Map 3. Gazprom's realized investments in Europe (as at 1 July 2006)

3. Gazprom's expansion plans / 9

Map 4. Gazprom's expansion plans

Conclusions / 11

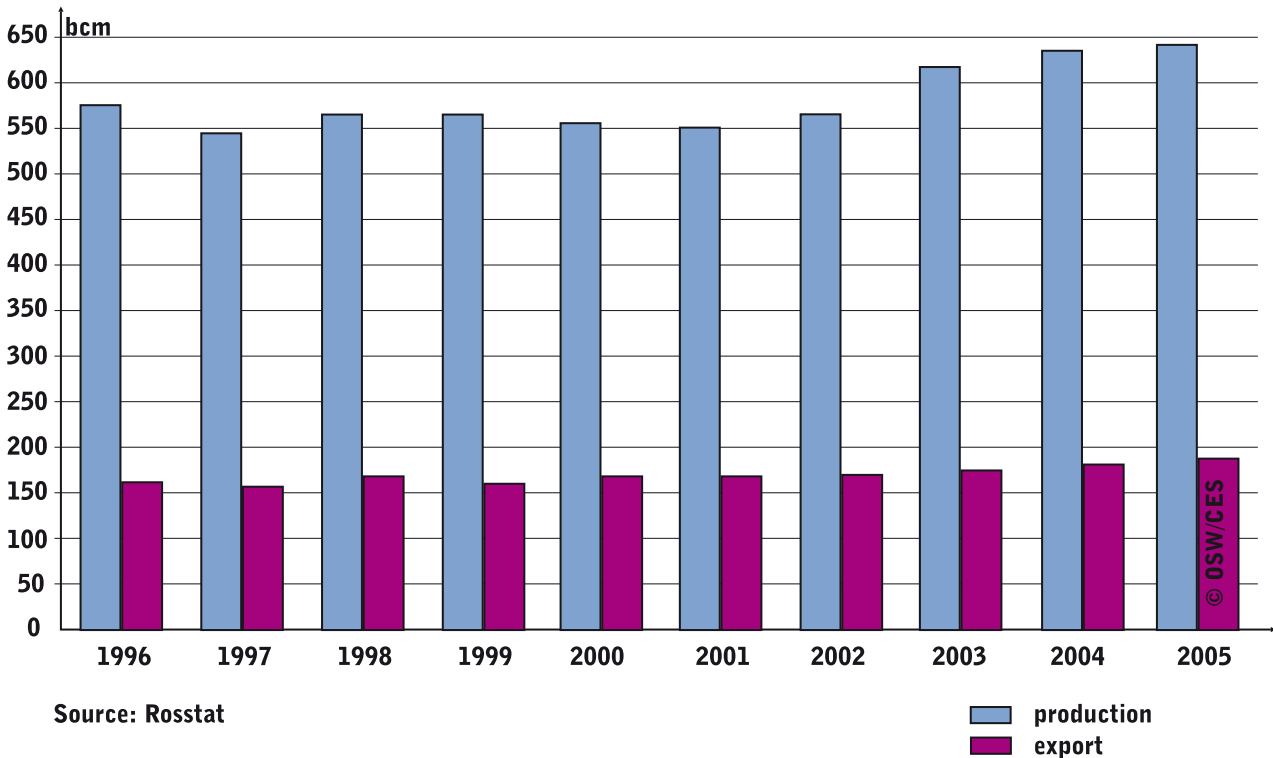
Appendix / 12

1. Production and export of Russian gas

The volume of natural gas production in Russia has remained relatively constant over the last decade, with a small increase reported only in the last three years (see Chart 1). Since the currently operated deposits are largely becoming depleted and there are no major investments in new fields, gas production will probably remain at the same level or decrease in the coming years.

Gas exports have likewise remained stable at approx. 180 bcm a year for the last several years (see Chart 1)¹. However, Gazprom has announced that it plans to increase the volume of gas exports, especially to European countries with which it has signed long-term contracts. Therefore, in order to meet the contractual obligations vis-à-vis its Western partners, the gas monopoly has to seek additional sources of gas in Central Asia. Gazprom aims to keep full control of gas exports from this region and to prevent Central Asian producers from selling their gas directly in European markets.

Chart 1. Production and export of Russian gas



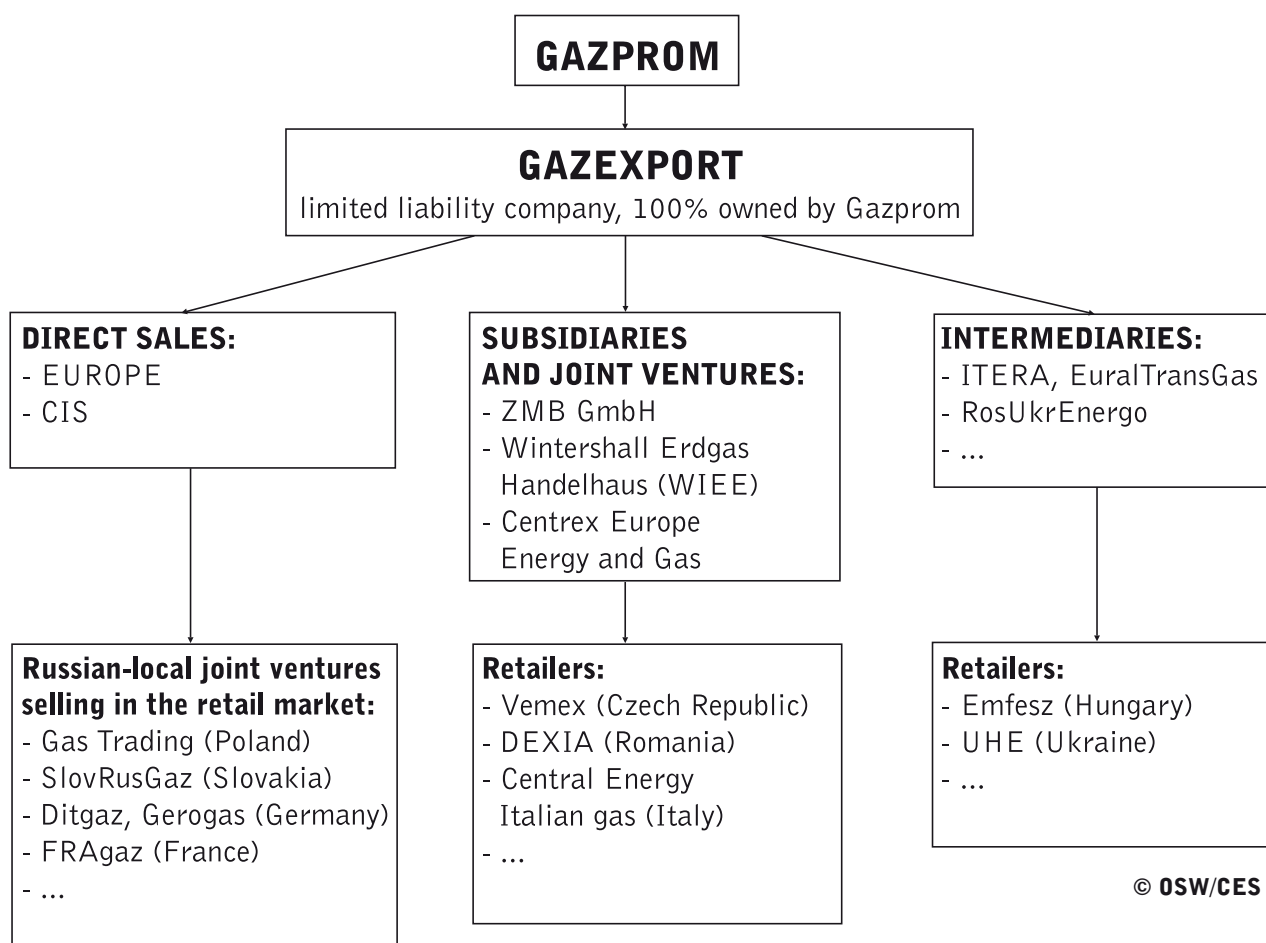
Gas is exported exclusively by Gazprom, the Russian gas monopoly (see Diagram 1). Gazprom sells Russian gas abroad in three principal ways:

- directly;
- via its subsidiaries and joint-ventures with local businesses (such as Germany's ZMB or Wintershall Erdgas Handelshaus registered in Switzerland);
- via trading companies with no formal ownership links to Gazprom, registered in tax heavens (ITERA and EuralTransGas in the past, RosUkrEnerg at present).

¹ Source: Rosstat, *Russian Statistical Yearbook 2002-2005*.

In the markets of buyer states, Russian gas is usually sold by companies with direct links to Gazprom, such as joint-ventures in which the Russian monopoly holds stakes (Gas Trading used to be an example of such a company in Poland; SloVRusGaz is a company of this kind in Slovakia and FRAgaz - in France). Alternatively, gas may also be sold by companies indirectly associated with the Russian monopoly, such as Vemex in the Czech Republic, a company owned by several companies with capital or personal links to Gazprom, or Hungary's Emfesz which is connected with RosUkrEnergo (see Diagram 1).

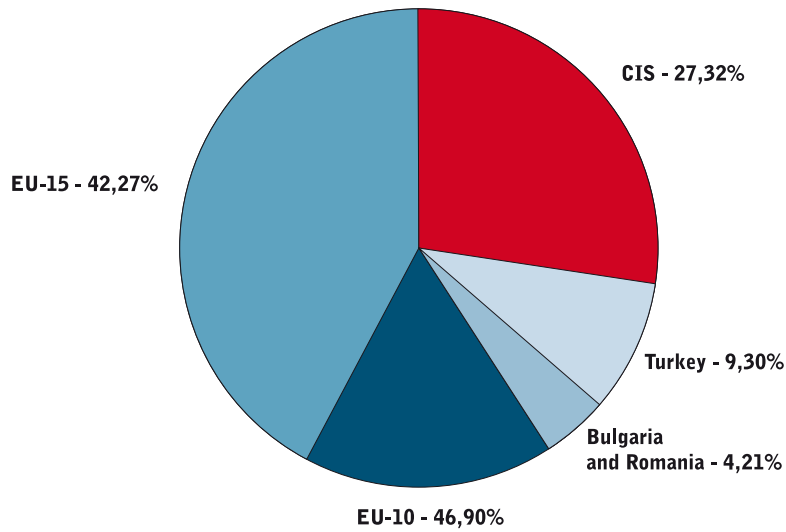
Diagram 1. Structure of Russian gas sales



Member States of the European Union are the most important consumers of Russian gas, buying approx. 60 percent of all gas exported from Russia, and the EU-15 accounts for approx. 70% of this volume. The two other important groups of buyers are the CIS countries (buying more than 27% of total exports) and the EU candidate countries in Southern Europe (13.5%)¹ (see Chart 2). The largest buyer of Russian gas is Germany, followed by Ukraine and Italy. At present Russia exports gas neither to Eastern Asian countries nor to the United States. Due to existing infrastructure shortages (all main export pipelines run to Europe and there is no infrastructure for the transmission of liquefied gas (see Map 1)), a major portion of Russian gas will continue to be sold mainly to European countries in the coming years.

¹ 2004 figures; source: *Natural Gas Information 2005*, IEA.

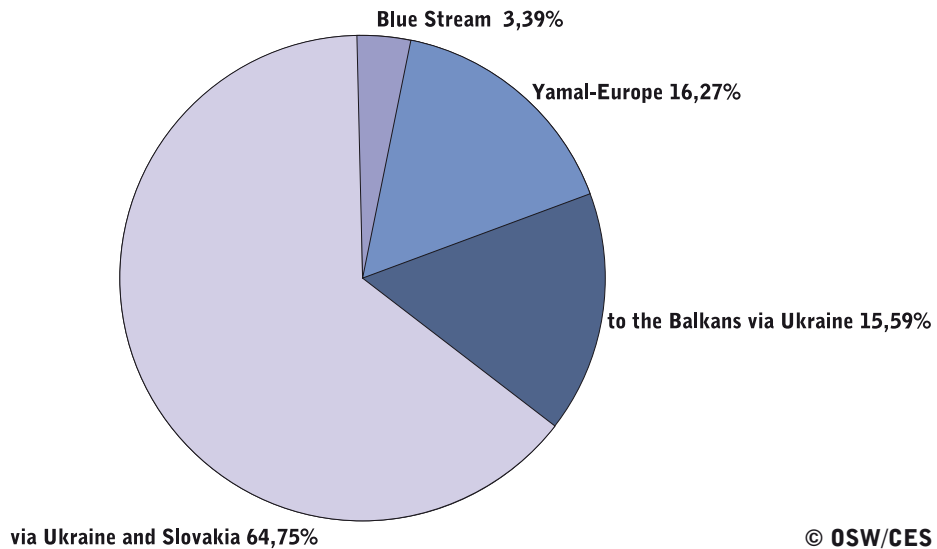
Chart 2. Major consumers of Russian gas



Source: Natural Gas Information 2005, IEA

© OSW/CES

Chart 3. Russian gas: Export routes to Europe



© OSW/CES

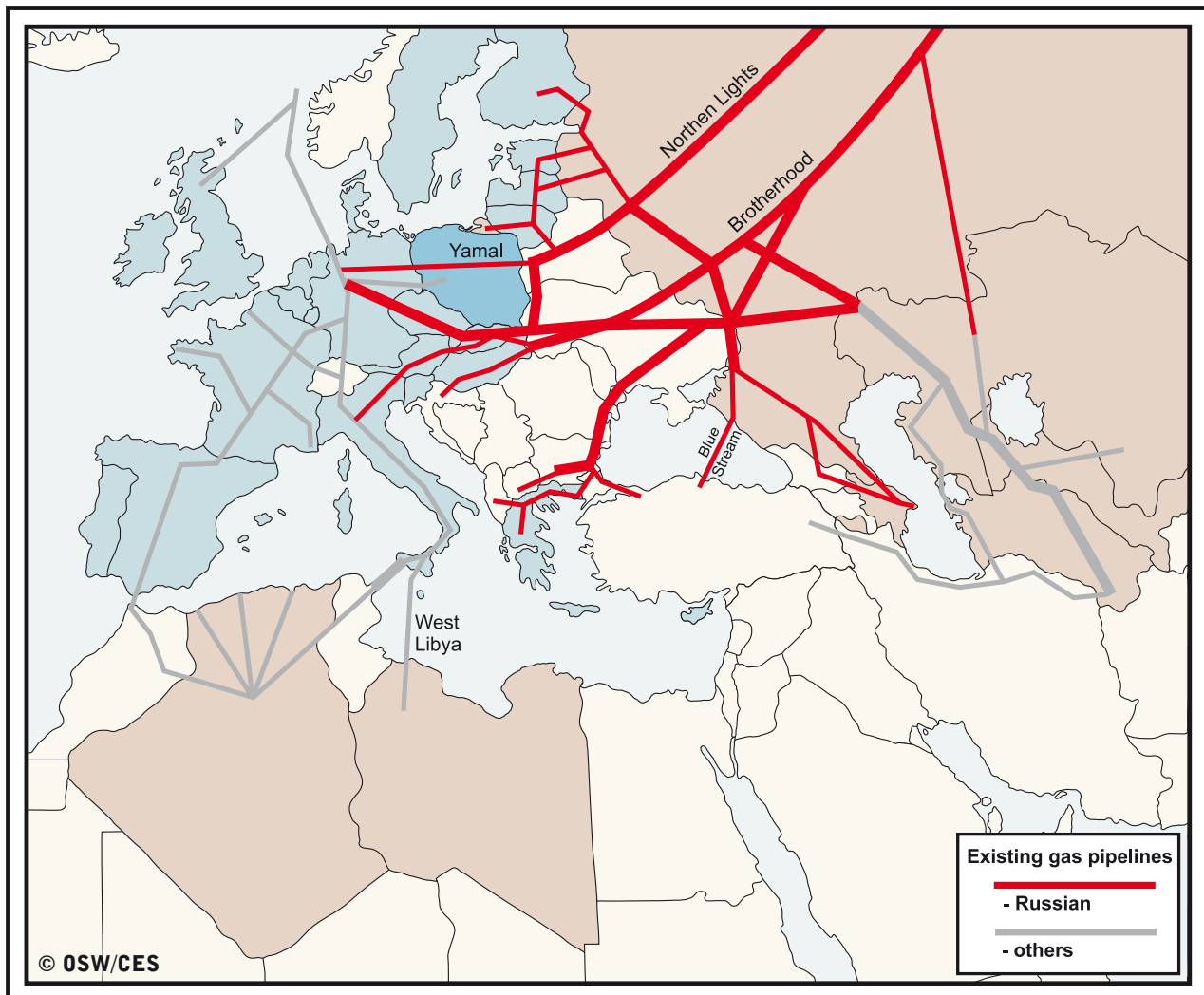
The main gas pipelines crossing Ukraine constitute the most important route for Russian gas exports, transmitting over 80% of all Russian gas sent beyond the CIS² (see Chart 3). The export route splits in Ukrainian territory to form the western branch transmitting Russian gas via Slovakia to the EU, and the southern branch supplying the Balkan countries and Turkey (see Map 1). There are also two other gas export routes of lesser importance: Russia sends approx. 15% of its gas exports to Europe via the Yamal Europe pipeline, while the Blue Stream connecting Russia directly with Turkey accounts for just 3.2% of Russian gas exports³ (see Chart 3).

² 2005 figures; proprietary calculations based on: Prime-Tass, *Gazprom Annual Report 2005*.

³ This refers to the export of gas beyond the CIS; 2005 figures; source: Prime-Tass and BOTAS of Turkey.

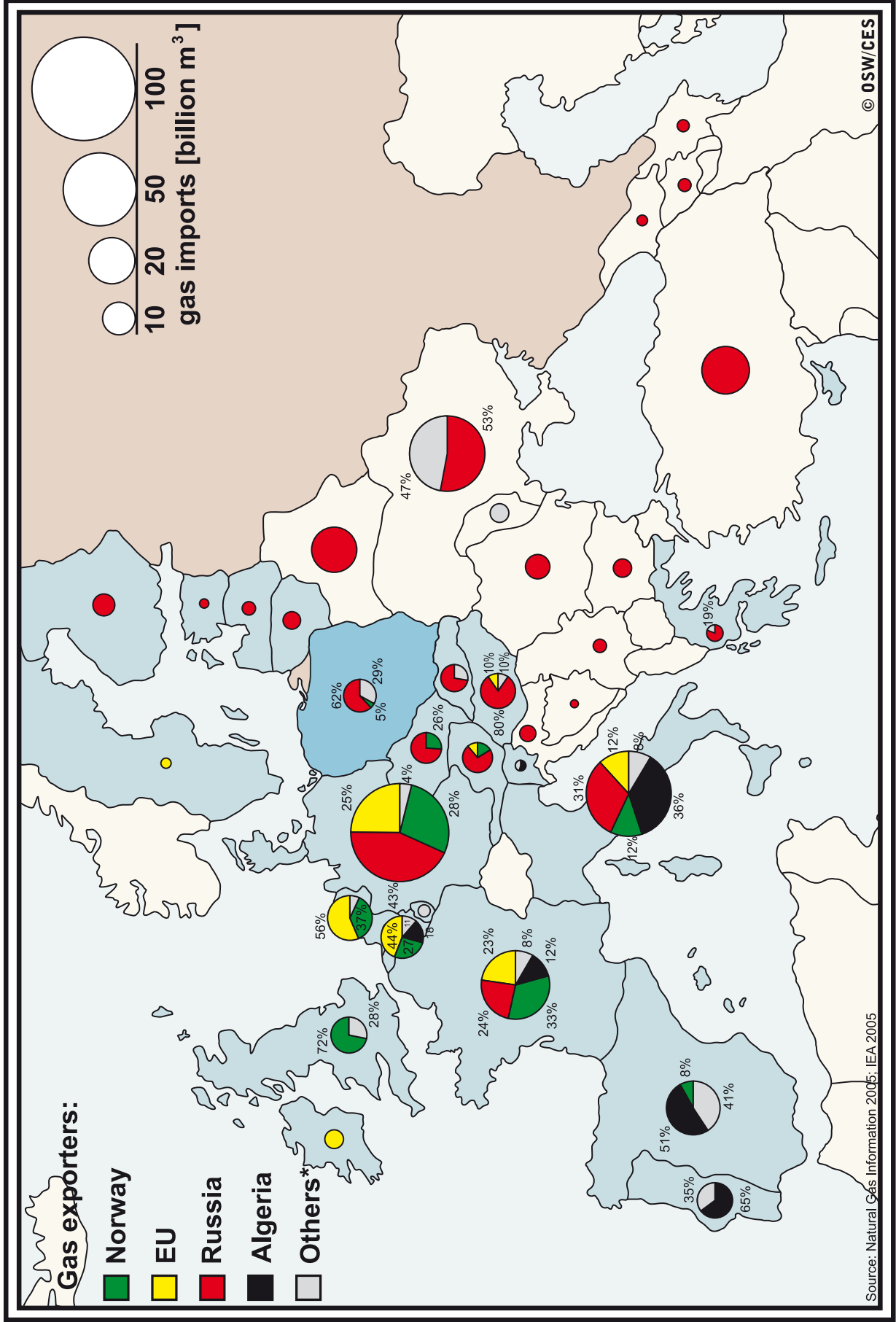
Gas supplied by Gazprom accounts for approx. 23%⁴ of gas consumption in the European Union. European states show varying degrees of dependence on the import of gas from Russia (see Map 2). Countries of Central, Eastern and Southern Europe remain heavily dependent on gas imports from Russia and some of them, e.g. the Baltic States, rely on Russia for even 100% of their gas. Western European countries have much more diversified sources of gas supply, for example, Germany, the greatest gas importer in the EU, buys its gas also from Norway (approx. 30%) and from other EU Member States, while many other EU countries (e.g. Spain or the Netherlands) buy negligible amounts or do not buy at all from Russia (see Map 2).

Map 1. Russian gas: Export routes



⁴ Source: *Natural Gas Information 2005*, IEA.

Map 2. Gas imports to Europe: Shares of different gas suppliers



* For Central and Eastern Europe - Central Asian gas transported via Gazprom pipelines

2. Gazprom's foreign investments

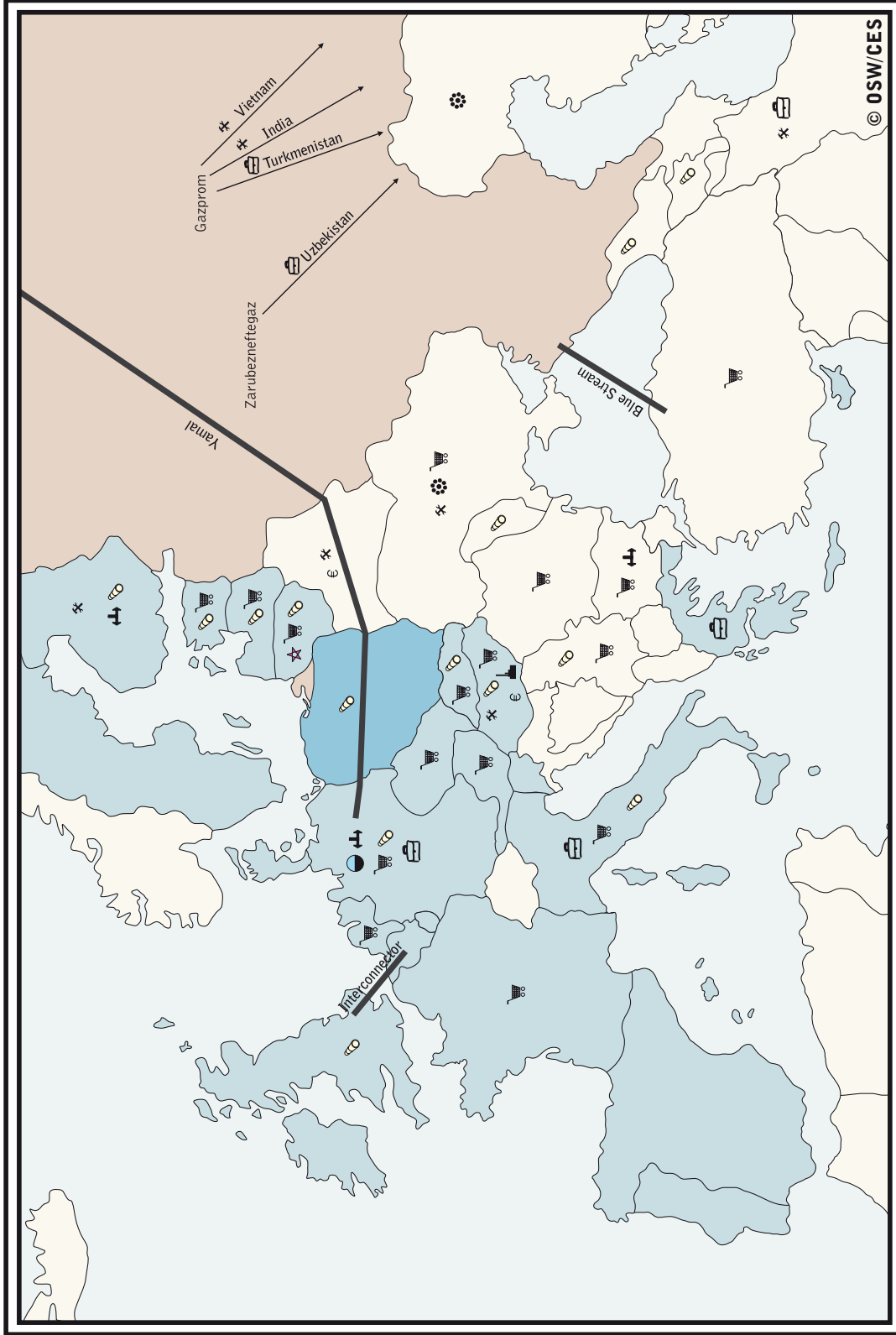
Gazprom is Russia's largest foreign investor. Its investments are mostly located in Europe, especially in the CIS and in countries of the former communist bloc, but increasingly also in Western Europe (see Map 3). Gazprom invests mainly in gas transport and export, but also, on a growing scale, in the gas distribution and retail sector:

- gas trade - Gazprom invests directly or indirectly (via daughter companies and joint ventures) in businesses selling Russian gas in all Central and Eastern European countries, the Baltic States, the Balkans and in the EU (Germany, France, Austria, the Netherlands, Finland);
- gas transport and transit - especially in the important transit countries; although gas pipelines in Central Europe and the Balkans are operated by companies in which Gazprom holds minority stakes (or 50% stakes at the maximum), the Russian monopoly has a decisive say in those companies owing to certain provisions in their articles of incorporation or the “willing” attitude of local lobbies whose representatives sit on the companies' management boards;
- gas distribution in local markets - Gazprom is making efforts to expand its presence in local markets. In connection with the liberalization of gas markets in the EU and the gradual opening to competition, Gazprom has recently been increasingly interested to invest in this sector, especially in Western Europe (Germany, Italy, Great Britain);
- gas storage.











The Russian gas monopoly also invests in the production of gas extraction and transmission equipment, processing, marketing and the technical services for gas undertakings, as well as the banking sector (see Map 3).

Gazprom is also present in other continents, especially in the upstream segment (exploration and extraction) in Central Asia, India, Iran and other countries.

Map 3. Gazprom's realized investments in Europe (as at 1 July 2006)



LEGEND:

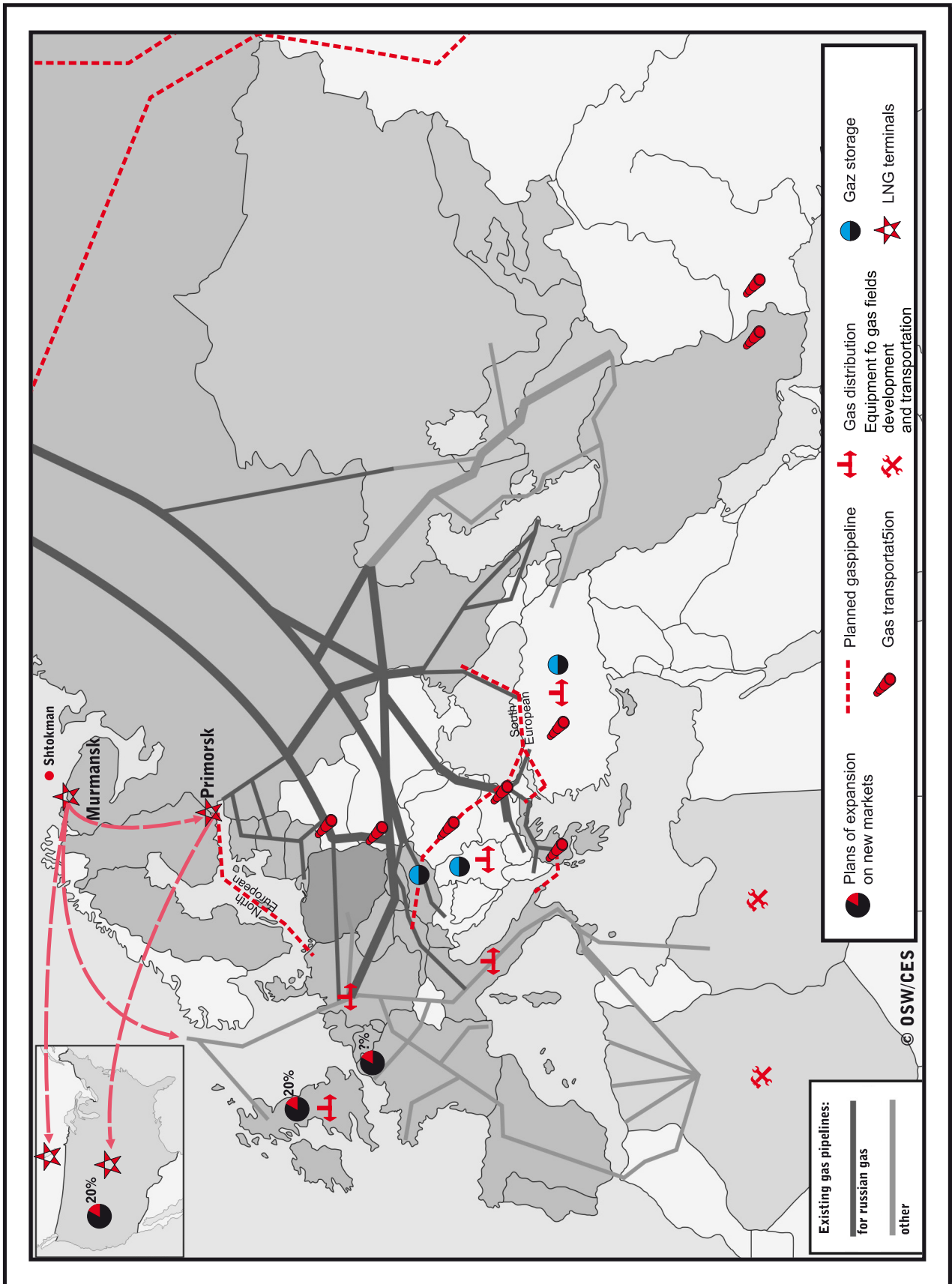
-  Gas trade
-  Gas transport
-  Petrochemical industry
-  Banking sector
-  Electricity production
-  Gas distribution
-  Research institute
-  Marketing and technical services for gas undertakings
-  Gas storage
-  Gas extraction and transmission equipment
-  Gaspipelines

3. Gazprom's expansion plans

The principal objective of Russia's gas expansion is to reinforce Gazprom's position in Europe as the single most important gas exporter and a major investor. In order to achieve this objective, Russia has taken a number of measures in recent years, including in particular:

- plans to carry out new export projects in order to diversify gas exports routes to current customers and to enter new markets. These projects include:
 - a) the North European Gas Pipeline (Nord Stream), a route that will connect Russian gas fields (Yuzhno-Russkoye) with Germany via the Baltic Sea. The first branch of this pipeline, with a capacity of 27.5 bcm, is to be built by 2010, and the target capacity of 55 bcm is planned to be reached in 2012. The pipeline will cost an estimated 5–8 billion EUR. The project is to be carried out by Nord Stream, a company owned by Russia's Gazprom (51%), Germany's E.ON Ruhrgas (24.5%) and BASF Wintershall (24.5%). Most probably, Gasunie of the Netherlands will join in as another shareholder. The North European Gas Pipeline will supply Russian gas to Germany and to new markets in Northern Europe (including the United Kingdom). It will also reduce Russia's dependence on the current transit countries (Ukraine and Belarus) – see Map 4;
 - b) the South European Gas Pipeline also known as Blue Stream II, a projected route that would supply Russian gas to Southern and Central Europe via the Black Sea and Turkey (once the capacity of the Blue Stream has been expanded). Russia's Gazprom and Hungary's MOL are willing to work together on this project. If it is implemented, Russia will gain a new gas export route (one that bypasses Ukraine) to its traditional Southern European markets and to Central Europe. The project will also make it possible to limit or even prevent the export of gas to European markets from other sources, especially the Caspian region from which, according to original plans, gas was to be transported via Turkey (see Map 4);
- measures to step up control of transit routes for Russian energy resources in third countries (and in particular, to take over control of Ukraine's main gas pipelines and of Beltransgas, the Belarusian company that owns most of the country's transit gas pipelines) – see Map 4;
- measures to limit the access of gas from other sources to European markets. To this end, Russia seeks to carry out the South European Gas Pipeline project (see above) and is taking efforts to use the connector pipeline from Turkey to Greece and Italy (originally intended for the supply of gas from the Caspian region and, possibly, the Middle East, the objective being to diversify sources of supplies to Southern Europe) as another route transporting Russian gas to these markets. By gaining access to the Turkish transit gas pipelines, Russia could limit, or, in the extreme scenario, even stop exports of gas to Europe from non-Russian sources. This would reduce competition for Russian gas in the European gas market;
- expanding Russian presence in the downstream segment (retail and distribution) of the EU oil and gas market. For example, in late September 2006 a deal was signed that allows companies in which Gazprom is a shareholder (GWH and Centrex Europe Energy & Gas AG) to sell gas in Austria's retail market. Gazprom has also attempted to enter the German retail market (offering shares in the Yuzhno-Russkoye field to German companies in return) and to take over a stake in Britain's Centrica;
- concluding strategic alliances with European energy companies (including E.ON Ruhrgas and MOL).

Map 4. Gazprom's expansion plans



A possible formal or informal “gas alliance” with Algeria, the third largest exporter of gas to the EU after Russia and Norway, would be helpful in bringing about Russia’s expansion in the European gas sector. Measures indicating that the parties are working towards such rapprochement have been observed for several months, for example, in August this year a memorandum was signed announcing closer co-operation between Gazprom and Algeria’s Sonatrach. A Russian-Algerian partnership would be able to control more than 50% of current gas imports to the EU and effectively prevent other gas producers from accessing the market, especially in Southern Europe. If such partnership were formalized, this would reduce the level of competition in the European gas market and might lead to an increase in gas prices.

Conclusions

1. As a result of Russia’s gas expansion in the EU:

- Russian gas would gain a stronger position in the markets of individual Member States and in the energy balance of the EU as a whole. In particular, in some EU Member States, the gas market would get to be dominated by supplies from Russia, competition would be restrained and freedom of access to these markets would shrink. In the Baltic States and Central Europe, this could reinforce their unilateral dependence on Russian gas and permanently tie the energy sectors of these countries to Russia. In Southern Europe, this might limit the possibilities of diversifying gas supplies, especially by preventing the supplies of Caspian gas to the EU;

- Gazprom would gain more influence on the terms and conditions under which Russian gas is sold in Europe (gas prices, the question of re-export, terms and conditions of distribution in the Member States’ markets, etc.). This could lead to a spread of untransparent practices in the energy sector as the Russian monopoly uses gas trading companies with unclear ownership and business and political affiliations.

2. It is in the interest of the European Union to develop partnership with Russia in the gas sector, but on specific terms and conditions that will ensure, inter alia:

- transparent terms of co-operation with a clear definition of the role of trading companies in mutual relations between the EU and Russia in the gas sphere; the presence of companies with concealed or untransparent ownership should be restricted in the EU;

- access of alternative gas producers to Europe’s gas market and transport networks. In particular, it is necessary to ensure an unrestrained possibility of gas transit from the Caspian region to the EU, both via Russia and Turkey (a transit corridor independent of Russia);

- that no cartel of countries exporting gas to Europe or any other more or less formal agreement between gas exporters is established which might have an adverse effect on gas prices in Europe; in particular it is necessary to prevent a potential Russian-Algerian “gas alliance”.

Appendix

Table 1. Gazprom's most important investments in the Commonwealth of Independent States

Company	State	% of shares	Other shareholders	Sector
ArmRosGazprom	Armenia	45	10% Itera, 45% Armenian Energy Ministry	Gas and electricity transport, gas distribution, network operation, construction of new routes, gas import and export
Belgazprombank	Belarus	34,99		Banking
Brestgazoapparat	Belarus	51		Equipment for field operation and gas transmission
Centr-Kaspieniegaz	Kazakhstan	50	JV with LUKoil	The company seeks to develop the Tsentralnaya oil and gas field
KazRosGaz	Kazakhstan	30	20% Rosneft, 50% KazMunaiGaz	Supplies and transit of Russian and Kazakh gas; developing gas transport systems in both countries
Moldovagaz	Moldova	50% +1	35% Moldovan Department for Privatisation and State Treasury, 14% Turaspolttransgaz of Transnistria	Buying, transport and distribution of Russian gas
Druzhovskiy zavod gazovoi apparatury	Ukraine	51		Equipment for field operation and gas transmission
Institut Yuzhniigiprogaz	Ukraine	40		Research institute
RosUkrEnergo	Ukraine* Switzerland	50	50% GazpromBank, 50% Raiffeisen Investment A. G.	Intermediary trading Turkmen gas, mostly supplying gas to Ukraine, and also to Poland
Gaztranzyt	Ukraine	37	Naftohaz Ukrainy 37%, Turkey's Turusgas 18%, Transbalkan 8%	Activities include expanding the capacity of Ukraine's main transit pipeline to the Balkans and Turkey
Zarubezhneftegaz (Gazprom subsidiary)	Uzbekistan	b.d.		Production sharing agreement (PSA) for the Shakhpakhly field (approx. 500 million tons a year), ongoing negotiations concerning a PSA for a field in the Ustyurt region

* registered in Switzerland but operating in Ukraine

Table 2. Gazprom's most important investments in new Member States of the EU

Company	State	% of shares	Other shareholders	Sector
Eesti Gaas	Estonia	37,02	33.06% E.ON Ruhrgas, 17% Fortum Oil&Gas, Iтера 9.75%	Gas trade and transport
Stella-Vitae	Lithuania	30		Gas trade
Lietuvos dujos	Lithuania	34	35% E.ON Ruhrgas, 34% Lithuanian government	Gas distribution (monopoly)
Kaunas Power Plant	Lithuania	99		Electricity production
Latvijas Gaze	Latvia	34	16% Russia's Iтера, 47.5% E.ON Ruhrgas	Gas trade and transport
Europol Gaz	Poland	48		Gas transport
Gas Trading	Poland	35		Gas trade
Slovrusgaz	Slovakia	50		Gas trade and transport
Tagdem	Slovakia	7,6		Gas trade
Vemex	Czech Republic	min. 33*	33% ZMB, 33% Austria's Centrex	Gas sale
Borsodchem	Hungary	25**		Petrochemical industry
DKG-EAST Co. Inc.	Hungary	38,1		Equipment for field operation and oil and gas transmission
General Banking and Trust Co. Ltd.	Hungary	25,5		Banking
Panrusgas	Hungary	40		Gas trade and transport
TVK	Hungary	13,5**		Petrochemical industry

* Controlled by ZMB GmbH, a Gazexport subsidiary

** Investments financed by Milford Holdings Ltd. (Ireland)

Table 3. Gazprom's most important investments in UE-15

Company	State	% of shares	Sector
GHW	Austria	50	Gas trade
Gasum Oy	Finland	25	Gas transport and distribution
North Transgas Oy	Finland	50	Construction of gas pipelines on the Baltic Sea bottom
FRAGaz	France	50	Gas trade
Prometheus Gaz	Greece	50	Marketing and technical services for gas undertakings
Peter-Gaz	Netherlands	51	Gas trade
Ditgaz	Germany	49	Gas trade
Gerogas	Germany	51	Gas trade, stock exchange operations; partner - Ruhrgas
Verbundnetz Gas	Germany	5,3	Gas transport and marketing
Wingas	Germany	35	Transport and storage of gas. In late 2005 the company concluded a deal for direct gas supplies to the Czech glass works Vetropack
Wintershall Erdgas Handelshaus	Germany	50	Distributing gas supplied by Gazexport to 2012
Zarubezgas Erdgashandel	Germany	100	Gas trade
Interconnector	United Kingdom	10	Operator of the Bacton (UK) – Zeebrugge (Belgium) gas pipeline
Promgaz	Italy	50	Gas trade and marketing
Volta	Italy	49	Gas trade and transport

Table 4. Gazprom's most important investments in the EU Candidate Countries

Company	State	% of shares	Other shareholders	Sector
Topenergy	Bulgaria	100		Distributor and gas trade intermediary
Overgas Inc. AD	Bulgaria	50	50% Overgas Holding AD	Private gas sale and distribution company (1.000 km of gas pipelines, development of the country's gas distribution network, in 2005 it sold approx. 1 BCM of gas to Bulgargaz)
DEXIA Bulgaria EOOD	Bulgaria	25,5*		Gas trade intermediary
JugoRosGaz	Serbia	75		Gas trade and transport, construction of the southern branch of Serbia's Dimitrograd-Nis-Pojate gas pipeline that connected Bulgaria and Serbia's systems in 2003
Progress Gas Trading	Yugoslavia	50		Gas trade
WIEE Romania	Romania	50*		Gas trade
WIROM	Romania	25,5*	49% Distirgaz Sud	Gas trade and distribution, joint-venture of WIEE ad Distrigaz Sud
Gamma Gazprom	Turkey	45		Gas trade
Turusgas	Turkey	45	GAMMA 20% and Botas 35%	Company established to sell gas from the Blue Stream pipeline

* Gazprom is a shareholder via Wintershall Erdgas Handelhaus Zug AG (WIEE) - its joint venture (50%-50%) with Wintershall

Table 5. Most important investments in other countries

Company	State	% of shares	Other shareholders	Sector
Gazprom	India			The company carried out research in the Bay of Bengal in co-operation with GAIL; the location of an exploration rig was established and preparatory works for the drilling are now underway.
Gazprom	Vietnam			Completed construction of the first exploration rig in Vietnam's shelf. Field studies have been carried out and the locations of seismic tests have been determined.
Gazprom	Iran	30	Total – 40%, Petronas (Malezja) – 30%	Development of the 2nd and 3rd block of the South Pars field. The project is now in the investment return phase, expected to be completed in the second half of 2009.
Gazprom (UrdanetaGazprom-1 and UrdanetaGazprom-2)	Venezuela			Won the tender for exploration and operation of the Urumako-1 and -2 gas blocks, the combined reserves of which are estimated at 100 bcm.

Author – Agata Łoskot-Strachota
Editor – Katarzyna Kazimierska
Graphics and DTP – Wojciech Mańkowski
© Copyright by OSW/CES 2006

CENTRE FOR EASTERN STUDIES

Koszykowa 6a, 00-564 Warsaw, Poland
phone: +48 / 22 / 525 80 00; fax: +48 / 22 / 525 80 40

VISIT OUR WEBSITE

www.osw.waw.pl