

Prace OSW / CES Studies

**The resource wealth burden –
oil and gas sectors
in the former USSR**

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Contents

Introduction / 5

Agata Łoskot

Key points / 7

Agata Łoskot

Chapter 1. Export potential of the post-Soviet region / 8

Agata Łoskot

Chapter 2. The Russian energy policy / 18

Ewa Paszyc

Chapter 3. The oil and gas in the "transit countries" of the former USSR / 31

Arkadiusz Sarna

Chapter 4. Foreign investments in the oil and gas sectors of CIS energy producers / 41

Iwona Wiśniewska

Chapter 5. Oil and gas wealth – the impact on development prospects of CIS countries / 50

Wojciech Paczyński

Attachment / 59

Tables and maps / 60

The resource wealth burden – oil and gas sectors in the former USSR

Oil creates the illusion of a completely changed life, life without work, life for free... the concept of oil expresses perfectly the eternal human dream of wealth achieved through lucky accident... In this sense oil is a fairy tale and like every fairy tale a bit of a lie.

– Ryszard Kapuściński, *Shah of Shahs*

Introduction

The former USSR area plays a great role in the international oil and gas market. Russia is a real gas giant, with the richest deposits of this material in the world. Russia is also the main exporter of natural gas to many European countries. Keeping a strong position in this market remains a priority for the Russian Federation's economic policy. Europe is a very attractive region because its demand for gas is expected to grow steadily, while its own gas production keeps decreasing. In the long term, the Far East will be an important market for Russian exports, too. According to estimates, demand there will grow even faster than in Europe. Caspian gas producers, for the time being, can not really compete with Russia in this field, and this status quo will most probably be preserved in the nearest future.

The post-Soviet countries also have substantial oil deposits. Among CIS members, Russia has the richest oilfields; Kazakhstan comes second, with large proven deposits of petroleum. In the Eurasian market, raw materials coming from the former USSR area are the major alternative to oil produced by OPEC countries. Russia does not belong to the cartel, and during the last two years, when international oil prices remained high, it continued to substantially increase both the production levels and exports.

European countries are the main consumers of Russian petroleum, yet in the future, Russia may strengthen its role in such markets as the USA, Japan and other countries trying to become less dependent on OPEC oil. A boost in production and exports by Kazakhstan and Azerbaijan, countries situated by the Caspian Sea, should also be expected in the next five years. The significance of this region for the international market is bound to grow when new oil transport routes, independent of Russia, are opened (see chapter Export potential of the post-Soviet region).

This collection of papers attempts to give an accurate and clear description of the main characteristics and of the key problems pertaining to the oil and gas sectors in the former USSR. It is aimed at showing the wealth and production and export opportunities on the one hand and at outlining a number of problems that now limit

the development of trade in energy materials in this region and might impede it in the future. These issues seem to be of particular importance in the context of the dilemmas facing the Polish and European energy security policy.

This report consists of five studies, focusing on: the resources and export potential of the Commonwealth of Independent States countries, Russian policy towards the entire oil and gas sector in the former USSR area and in the countries of the former Eastern bloc, and the role the energy resources potential plays in Russian foreign policy. Also, the studies outline the situation of the so-called transit countries, i.e. the ones controlling major export pipelines for Russian oil and gas, discuss the importance of foreign direct investments for the oil and gas sectors, as well as the opportunities and dangers that natural resource wealth might pose to the development of CIS countries. In terms of geographic coverage, the studies pertain to both key oil or gas producers (Russia, Kazakhstan, Azerbaijan and Turkmenistan) and the important transit countries for energy resources from CIS area (Ukraine, Belarus, Lithuania, Latvia and Estonia).

While working on this project, we used the generally available literature, statistical yearbooks, specialist press and agency and internet news bulletins. We also want to acknowledge the valuable comments from CIS countries oil and gas experts, whom we talked to while working on this project.

Agata Łoskot

Key points

1. The oil and gas sectors are not only among the most important sections of the economy, but they are also an important tool in the domestic and foreign policies of the Russian Federation. Moscow, through its consistent actions aimed at reconstructing a post-Soviet energy area, has tightened its control over the energy sectors of the CIS countries and, above all, over their resources and transport infrastructure. Russian energy resources have maintained the dominant position in the Central and Eastern European markets and Russia has grasped control over the key transit routes in this area. Eastern Europe is becoming a “bridgehead” for Russian companies in their expansion in the EU market (see chapter The Russian energy policy).

2. The European former Soviet Union countries (detailed analysis covers: Belarus, Ukraine, Lithuania, Latvia and Estonia) are still largely dependent on supplies of Russian energy materials. Nevertheless, the degrees of such dependence and its political and economic consequences are very diverse. The Baltic states are using their asset of advanced market reforms, while Belarus and Ukraine play a game with Russia, where the main stake is control of the transport routes for Russian oil and gas to the West and South of Europe (see chapter The oil and gas in the “transit countries” of the former USSR).

3. Energy-rich CIS countries have become the main beneficiaries of foreign investments in the region. However, the relatively modest influx of foreign capital was lower than the needs of the oil and gas sector. The policy of Kazakh and Azeri authorities, which is quite open to foreign investments, has contributed to development of the oil industry in those countries. Limited access to the Russian market has in turn resulted in foreign capital obtaining a much smaller share in the Russian natural resource sector. The Russian government monopoly over oil and gas transportation in the CIS area remains a serious impediment for new investments (see chapter Foreign investments in the oil and gas sectors of CIS energy producers).

4. The natural resource wealth of the former USSR countries offers a chance for faster development and alleviating poverty, yet the fact of possessing such wealth complicates the economic and social policy. Neither the current condition of the state institutions nor the political situation in the CIS countries provide grounds for making too optimistic forecasts for the social and economic development in this area. Despite good short-term prospects, there still remains the risk that some of the resource-rich countries will not be able to put their natural wealth to good use (see chapter Oil and gas wealth – the impact on development prospects of CIS countries).

Agata Łoskot

Chapter 1.

Export potential of the post-Soviet region

Agata Łoskot

1. Resources

The post-Soviet area holds large deposits of oil and the world's largest reserves of natural gas¹. The richest raw material base is that of the Russian Federation. Russia controls more than 30 percent of the world's gas reserves and has large oil deposits. Another important hydrocarbon-rich area that emerged after the fall of the USSR is the Caspian Sea region. Kazakhstan and Azerbaijan are the Caspian oil potentates, while Turkmenistan and Uzbekistan have substantial natural gas deposits. Even though these countries' resources are much smaller than those of Russia, they are a potentially important additional source of energy carriers for European and Asian consumers.

1.1. Oil

1.1.1. Russia

Russia has the world's seventh largest oil resources (after Persian Gulf countries and Venezuela) with proved deposits exceeding 8 billion tons² (Table IV). Until early 2002, more than 2 thousand oil and gas-oil fields had been discovered in the Russian Federation. 85 percent of them are located in Western Siberia, presently the country's main raw material base. Western Siberia's resources, though, have already entered the phase of declining output³. An increase in regional production in recent years was due to the introduction of modern equipment and extraction technologies. The remainder of currently exploited resources are located in the Ural Mountains, in the Transvolga region and in Northern Caucasus – Russia's oldest oil provinces whose deposits are 70–90 percent depleted. In 2000, Western consortia began producing oil and natural gas in the Sakhalin Shelf. Russia's oil and gas potential also includes deposits in Eastern Siberia (Yakutia, Krasnoyarsky Krai and the Irkutsk Oblast) and in the Arctic Shelf (the Barents and Kara Seas). These, however, were discovered relatively recently⁴, (early 1990s), have been poorly explored and remain idle. At the moment, approximately 900 of Russia's explored fields remain inactive.

The Russian oil sector, which experienced a decline after the USSR disintegrated, is recovering quickly now, as oil prices have remained high for the last several years. The volume of production

and exports has grown in recent years. In 2002, Russia's output increased to approx. 380 million tons⁵ making the country the world's second largest oil exporter after Saudi Arabia⁶. The largest oil companies are LUKoil, Yukos, Surgutneftegas and TNK – together accounting for over 50 percent of last year's oil production⁷. The Russian government forecasts production to grow further in the nearest future⁸.

1.1.2. The Caspian Sea region

The largest oil reserves in the region are those of Kazakhstan. Proved deposits amount to 1.2 billion tons⁹, or below one sixth of the Russian reserves. Major Kazakh oil fields are the onshore Tengiz, Karachaganak and Uzen deposits and the Kashagan field offshore in the Caspian Sea. Azeri oil resources are estimated at nearly one billion tons (Table IV)¹⁰. The main exploited fields include Azeri, Chirag, and Guneshli. It is believed that Turkmenistan may possess considerable oil deposits, though they have not been proved yet.

Output and exports grow rapidly in both Kazakhstan and Azerbaijan (in intermittent phases – especially in the case of Azerbaijan) as production and transportation infrastructure is being developed. At the moment, these countries produce 47 and 15 million tons of oil, respectively, and Kazakhstan exports over 30 million tons (Table V). The upward production and export trend is expected to continue (Diagram 1). According to forecasts, Kazakh oil production should reach 120 million tons by 2010¹¹. It is expected that in

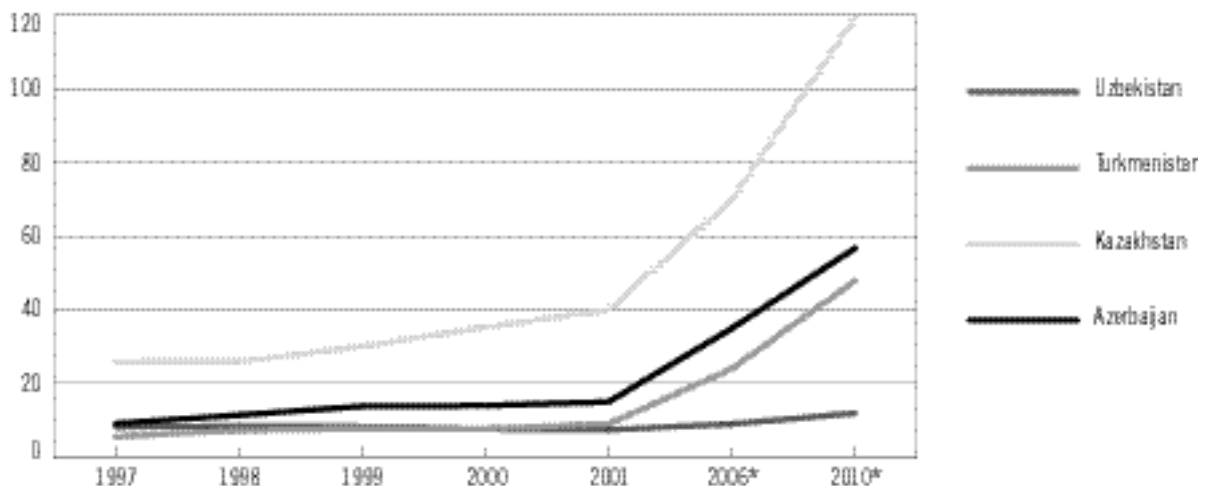
the next decade, countries of the Caspian region will be able to export approx. 200 million tons of oil¹², the largest exporters being Kazakhstan, Azerbaijan and Turkmenistan.

1.2. Natural gas

1.2.1. Russia

The Russian Federation has the world's largest reserves of natural gas. Proved deposits amount to more than 47.5 trillion cubic metres, which accounts for nearly 1/3 of the global reserves (Table IV)¹³. Gazprom, the Russian monopoly, owns nearly two thirds of these resources, although other Russian companies also control increasingly significant fields. Russia's major proved gas deposits are located in Western Siberia, in the Khanty-Mansi Autonomous Area and in the Yamalo-Nenets Autonomous Area whose deposits are currently being exploited on the largest scale (they hold more than 80 percent of Russian gas reserves). 190 gas fields discovered there include Yamburg, Urengoi and Medvezhye, the world's largest field. Only some of them are being exploited, though this is enough to make up more than 90 percent of Russian output. All Western Siberian fields have entered the phase of declining output¹⁴. Gas is also produced in Russia's oldest production zones, i.e. in the Caucasus and Transvolga regions. However, fields in these regions are currently depleted in around 90 percent. Finally, the Arctic Shelf, in particular the Barents Sea and the Kara Sea (the Shtokmanov Field, among others), Eastern Siberia (the

Diagram 1 – Oil production in the Caspian Sea region (million tons)



Data of: IEA, www.eia.doe.gov, * – estimates

Kovykta field, among others) and the Sakhalin Shelf add to the production potential. In 2002, natural gas production increased for the first time in several years and amounted to 595 billion cubic metres (Table VII)¹⁵. Domestic consumption remains huge, but still approx. 33 percent of the annual output is exported.

According to the International Energy Agency (IEA), the volume of Russian exports was decreasing before 2001 (Table VII). According to Russian sources, exports have remained relatively stable owing to internal consumption reduction, among other measures. The Energy Strategy of the Russian Federation to 2020¹⁶ points to the fact that an increase in the gas output in the next several years will not be possible unless Moscow implements fundamental reforms. Since internal consumption is projected to grow, the negative trend may continue.

1.2.2. The Caspian Sea region

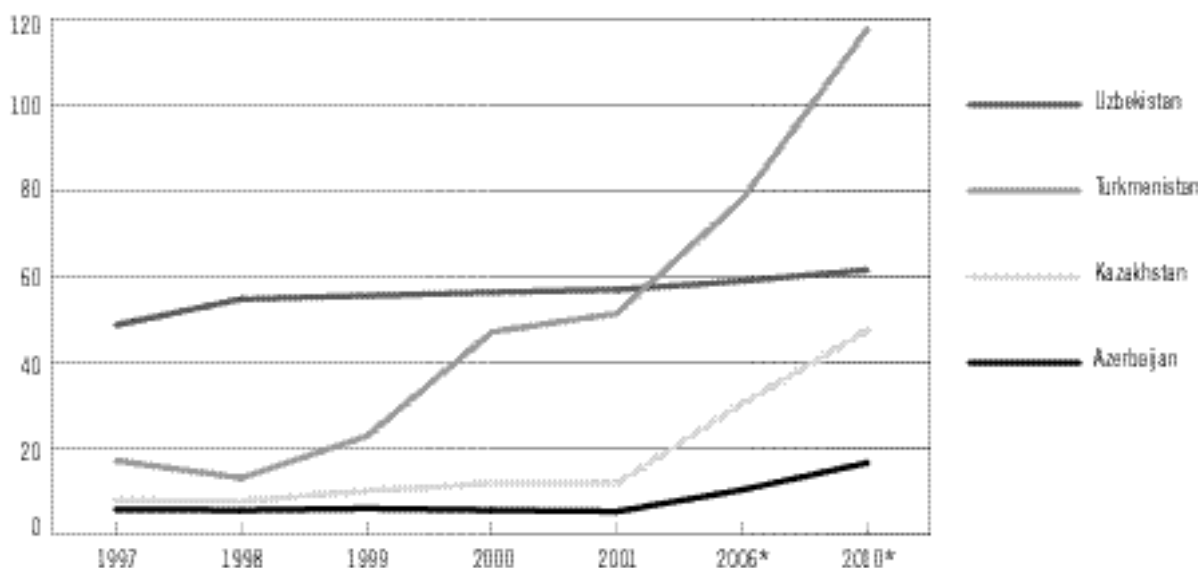
Turkmenistan has the largest natural gas reserves in the Caspian region estimated at more than 2 trillion cubic metres or approx. 1.3 percent of the world's reserves (Table IV)¹⁷. The largest discovered and exploited gas field is the giant Dauletabad in southern Turkmenistan. The country is the single largest gas exporter in Central Asia and the sixth largest in the world. Uzbekistan controls the second largest gas reserves in the Caspian region (1.9 trillion cubic metres), though only small quantities are exported

owing to large domestic consumption. Azerbaijan may become another important gas exporter in the region in the coming years. Even though its resources are relatively small (the largest field is Shah Deniz), the country has chosen to sell its gas to the West. Finally, Kazakhstan may also turn out to be an important producer and exporter of gas, as it is believed to possess substantial resources (Diagram 2). In the next decade, the Caspian region as a whole may be able to export approx. 150 billions cubic metres of gas per year¹⁸.

1.3. Eastern Europe – oil and gas

Ukraine, Belarus, Lithuania, Latvia and Estonia remain largely dependent on energy resource imports from Russia. They have small oil and gas reserves of their own, but almost all of their output is being used up internally. Ukrainian gas resources cover approx. 1/4 of domestic demand. Lithuania is the only Baltic State that produces very small quantities of its own oil in the Baltic fields. Estonia produces petroleum products from bituminous shale. In 2001, 75 percent of domestic energy consumption came from this source¹⁹.

Diagram 2 – Natural gas production in the Caspian Sea region (billion m³)



Data of: IEA, www.eia.doe.gov, * – estimates

2. Basic export routes (existing and projected)

A well-developed and efficient system of pipelines and reloading terminals is necessary to export energy resources from the former USSR. The existing network of oil and gas pipelines in this area has been largely inherited from the USSR. Export routes from Central Asia end in inland Russia, and major Russian pipelines cross Ukraine and Belarus. This system fails to meet the export needs of Russia and other CIS energy producers. Pipeline projects on both sides are attempts at the diversification of transport connections and markets for their products and are designed to ensure less dependence on transit through neighbouring countries.

2.1. Oil

2.1.1. Russian routes

More than ten large oil companies produce oil in Russia (Attachment 1), but the pipeline network belongs almost entirely to Transneft, the state-owned monopoly.

Russian oil is transported to Europe mainly through the Druzhba pipeline system. Pipelines from Western Siberian fields cross central Russia, Eastern and Central Europe to reach western and southern parts of Europe. One section of the pipeline system goes to the Baltic States; a route across Belarus and Poland to Germany and further west; a route across Belarus and Ukraine that forks just before the Slovak border, with one branch crossing Slovakia and the Czech Republic to end in Austria, and another ending in Hungary and the Balkans (Map 1). In 2002, Russia dispatched approx. 57 million tons of oil through the Druzhba system, which accounted for 44 percent of its total oil exports²⁰.

There are plans to make the Druzhba system more efficient and increase its capacity by integrating the Croatian Adria Pipeline into it. As a result, Russian resources could then be transported to the Balkans in larger quantities and further re-exported from the Adriatic port of Omisalj (e.g. to the US). Another option discussed by some sources is to use the newly built Odessa–Brody pipeline in Ukraine, originally intended to reach Płock and Gdańsk, for the exports of

Russian oil²¹. As the output of Western Siberian fields decreases, other, less intensively operated reserves gain importance, for example the Russian section of the Caspian Shelf. Oil from this area will be transported together with Kazakh oil along the CPC Tengiz–Novorossiysk route launched in late 2001.

Russia also sends its oil to Western markets by sea: across the Baltic (over 24 million tons, i.e. 19 percent) and the Black Sea (47 million tons, i.e. 36 percent of total oil exports)²². Recently, Russia has tended to export less and less oil through terminals in the former Soviet republics, thus reducing its dependence on transit through neighbouring countries. Pipelines within Russian territory (the Baltic Pipeline System) supply oil to the Baltic ports of Primorsk and St. Petersburg, to Ventspils in Latvia²³ and to other harbours. From there, Russian oil is dispatched to Northern Europe. Oil is shipped from Russian Black Sea terminals (Novorossiysk, Tuapse) and the Ukrainian facility in Odessa reaching Bulgaria, Romania, and Turkey and further to the south of the continent (Map 1).

Oil is also exported from Russia by rail²⁴. Even though the quantities dispatched in this way are small, this mode of transport is worth mentioning for two reasons. Firstly, the volume of exports sent by rail may be increased²⁵. Secondly, oil exported by rail is usually not included in national statistics; hence it is theoretically possible to evade certain limits or obligations.

In the nearest future, building new routes to European markets and modernisation of existing ones will become a priority for Russian energy commodity sector. At the same time, though, new destinations are seen as increasingly important. Hence, on the one hand, the terminal in Primorsk is being extended and its capacity increased, along with the whole infrastructure (pipelines delivering oil to Primorsk and oil tanks), and ever more specific plans are made to incorporate Ukrainian (Odessa–Brody) or Balkan (Adria) routes into the system. On the other hand, there is more and more talk about the construction of new terminals, including one in Murmansk on the Barents Sea, and new export routes, mainly to Asian markets, including China and Japan in particular (the Angarsk–Dacin and

Angarsk–Nakhodka pipelines, respectively – see Map 1).

2.1.2. The Caspian routes

The Caspian oil reserves are situated far from attractive markets, and export of Caspian oil remains dependent on the existing transport systems of neighbouring countries (mainly Russia), whose current capacity fails to match the region's potential. Russia and other CIS countries remain the chief consumers of Caspian oil, though some quantities are also sold to European markets. Practically all export routes for Central Asian oil which are mostly post-Soviet facilities cross the Russian territory. Even though governments of major countries involved in the region and oil companies operating there have been contending with one another for twelve years now to build alternative transport routes, the only major project that has actually been implemented is the Caspian Pipeline Consortium's (CPC) Tengiz–Novorossiysk route with a capacity of 30 million tons. It has been co-financed by the Russian Federation and crosses the Russian territory. The second major existing export pipeline that is especially important for Kazakhstan is the Atyrau–Samara route that ends in inland Russia (15 million ton capacity).

Existing Azeri oil pipelines are much smaller than those of Kazakhstan. The most important ones include the Baku–Supsa pipeline built by a BP-led Western consortium, which bypasses Russia (7 million tons), and the Baku–Novorossiysk pipeline that ends in a Russian terminal (5 million tons).

The development of new export routes is closely connected with the growing production of oil. From among all projects intended to expand the Caspian export infrastructure, the pipeline from Azerbaijan's Baku across Georgia to Ceyhan, the Turkish port on the Mediterranean (BTC), is the closest to being complete. The pipeline, to be launched in 2004, will have the capacity of 50 million tons a year. It will be the first major pipeline in the Caspian region that bypasses the territory of Russia. It is being built by an international consortium supported by the US administration, and is intended to transport Azeri oil to European markets. In future it may also transport Kazakh oil, if the underwater Aktau–Baku section is built. There are a few parallel plans to

build new pipelines for Kazakh oil. Projects of connections to China, Iran and India are being considered. Kazakhstan is also going to expand the existing post-Soviet Atyrau–Samara pipeline doubling its capacity.

2.2. Gas transport infrastructure

2.2.1. The Russian routes

Russian gas exports are controlled entirely by Gazprom which owns the entire pipeline network. Most of the major gas export routes start in the Tyumen region. There are plans to develop deposits in, and build new pipelines from the Yamal Peninsula, but implementation of these plans has been systematically postponed as yet. Gas is transported to Europe via three main routes. The most important one is the system of major gas pipelines including Bratstvo (Brotherhood) and others. It crosses Ukraine and Slovakia, and then splits into two branches, one of which reaches Hungary and Austria, and the other the Czech Republic and Germany. It transports more than 100 trillion cubic metres of gas a year. The second route is the Yamal–Western Europe pipeline (the Yamal gas pipeline). It starts in Western Siberia and crosses Belarus and Poland to end in Germany and its current capacity is 20 trillion cubic metres. The third major connection crosses Ukraine, Romania and Bulgaria to reach the Balkans and Turkey. Its capacity is similar to that of the Yamal pipeline. In order to reduce the load on this route and make itself less dependent on transit countries, Gazprom has built the Blue Stream pipeline in co-operation with ENI of Italy. The Blue Stream runs under the Black Sea and connects southern Russia directly with Turkey. Other important pipelines include the ones to the Baltic States and Finland and the pipeline exporting gas to countries of the Southern Caucasus.

Gazprom's new top priority project, the trans-Baltic pipeline, which is to run across the Baltic sea floor, is intended to connect Russia directly with Germany, Great Britain and Scandinavia. It is modelled on the Blue Stream launched in 2003. This new connection will make Russia less dependent on transit through territories of third countries, notably Ukraine, and will further postpone the construction of the Yamal pipeline's second line across Belarus and Poland.

At the moment, Gazprom cannot afford to carry out the trans-Baltic project, though. The Russian monopoly also has plans to increase the capacity of the most important existing connections and, in the longer term, to build pipelines to China and Japan.

2.2.2. The Caspian routes

At the moment, the post-Soviet system of pipelines crossing Kazakhstan and Uzbekistan which is also connected to the major Russian pipelines (the Central Asia–Centre and the Bukhara–Ural pipelines) remains the basic route for the sale of gas produced in the Caspian region, notably in Turkmenistan. The present capacity of these pipelines is 50 trillion cubic metres a year. They transport Turkmen gas to Russia and Ukraine. The only new export connection is the small pipeline to Iran (target capacity of 13 trillion cubic metres) launched in the second half of the 1990s. Finally, there is the regional network of Central Asian gas pipelines connecting Uzbekistan with Tajikistan, Kyrgyzstan and southern Kazakhstan which provide gas to areas without own deposits.

There is a pipeline linking Southern Caucasus with Russia though at the moment there is no infrastructure that could be used for gas exports from the region. Azerbaijan has a small gas connection to Iran, but it has remained idle for many years.

The undeveloped gas wealth of the Caspian Sea region, and especially that of Turkmenistan, has attracted the attention of Eurasian gas importers from Europe as well as Pakistan, India and China, and transit countries such as Iran, Afghanistan and, first and foremost, Russia. The Russian-Turkmen gas contract signed in April 2003 provides for development of the transport infrastructure connecting the two countries. Another gas pipeline connecting Turkmenistan and the Russian Federation is to be built soon. In future, it may be extended into Ukraine. There is also a competing project that has been promoted for some time by the Turkmen President to build a trans-Afghan pipeline (Turkmenistan–Afghanistan–Pakistan). The Asian Development Bank is engaged in this project together with those countries that are directly involved.

Works seem to be most advanced on the Baku–Tbilisi–Erzurum (BTE) route from Azerbaijan across Georgia to Turkey. A consortium led by

British Petroleum (BP) and backed by the United States is building this pipeline. BTE is to be launched in 2006.

3. The region's export potential and its limitations

Only a fraction of the huge export potential of the post-Soviet area is being utilised. The region is capable of increasing its oil and gas production as well as its exports. This is very important for the consumers of Russian energy resources. The demand for gas and oil in territories neighbouring the former USSR is increasing. This tendency is apparent not only in the traditional markets for Russian gas and oil, but also in East and Southeast Asia. The Old Continent, the major importer of Russian energy raw materials, is gradually running out of its own resources. Meanwhile, natural gas, of which Russia is the world's largest producer, is becoming an increasingly important and sought-after fuel, especially in developed countries that are striving to reduce their oil and coal consumption to protect the environment.

There are many reasons why the export potential of the post-Soviet region is profited from on a much smaller scale than it could be. Following the break-up of the USSR, the Russian oil and gas sector slipped into a crisis. On the one hand, disintegration of the Soviet production, distribution, processing and sale system led to a drop in output. On the other, the system of economic, infrastructural and other ties inherited from the USSR proved so strong that in many cases it still restricts or determines the direction of change in the oil and gas sectors of the newly independent states.

It was only in 1999, after ten years of decline, that oil production in Russia began to grow, reaching 380 million tons by 2002²⁶. Gas production volume experienced a relatively small decrease, however exports declined. Gas contracts concluded with European countries were (and still are) performed at the expense of supplies to countries of the CIS²⁷. After 1990, the capacity utilisation of Russian oil refineries also decreased. According to the Russian Energy Ministry, it is now below 70 percent in the whole country.

One of the reasons for these declines is degeneration and poor technical condition of the oil and gas infrastructure.

3.1. Reserves

3.1.1. Russia

Russia's raw material base is deteriorating, both in terms of quantity and quality, as the proportion of resources that are expensive to operate and difficult to access is increasing²⁸. This is one of the most serious problems faced by the Russian oil and gas sector. After more than 40 years of wasteful exploitation of the Western Siberian reserves, those fields are now degraded. Primitive technologies, the retrieval of surface resources only, and the closing down of partly depleted wells has caused an environmental disaster and loss of nearly 40 percent of resources. The systematic decrease in production was exacerbated in the 1990s by a considerable reduction of spending on geological research and deep drills. Launching the operation of new fields in the undeveloped and insufficiently explored regions of Eastern Siberia and the Arctic Shelf will require colossal funding. Without foreign investments, the Russian Federation will be able to keep its oil production at the current level for a maximum of 10 years. Then, production will drop dramatically²⁹. Gas production in Russia began to increase only last year, following four years of decline³⁰. While gas exports dropped relatively little (to 2001³¹), this was due to reducing the volume of supplies to the internal market and the CIS markets (Table VII). Since 1999, the Russian market has been experiencing a gas deficit³².

3.1.2. The Caspian deposits

The Caspian region has some of the world's oldest discovered hydrocarbon deposits. Even though they have been largely depleted today (Azerbaijan, the Russian section of the Caspian Sea shelf), the Caspian region also has areas that have not been fully explored in terms of the size of their raw materials base (Kazakhstan, Turkmenistan). The Caspian Shelf holds the largest oil deposits discovered in recent decades, e.g. the giant Kashagan oil field in Kazakhstan, and potentially large gas deposits in Turkmenistan. Most deposits in the Caucasus and Central Asia that used to be exploited by the Soviet Union are

presently under-utilised as a result of infrastructure degradation and loosening of economic and transport ties between the region and its former metropolis. Output and export levels are lower even than in Soviet times. The newly discovered fields have not reached their peak productivity yet (Tengiz) and some of them are not being operated at all or are being used solely for local purposes (Karachaganak). This is so because of the absence of proper production infrastructure and export connections, and frequently also because of an unfavourable investment climate. In some countries, e.g. in Turkmenistan, formal barriers exist that impede the search for and exploration of new deposits³³.

3.2. Infrastructure

The post-Soviet production and transmission infrastructure, which used to form one system spanning the entire USSR, is currently unable to fully meet the region's export requirements. New borders have emerged, the infrastructure has been divided between different countries, the nature and intensity of economic and political contacts between Moscow and the former republics have changed, and most countries of the CIS are experiencing crises and economic transformations. As a result, the post-Soviet system of oil and gas pipelines is in need of modernisation and reconstruction. Major pipelines throughout the former Soviet area are gradually degrading and their capacity decreases because of insufficient domestic investments due to a shortage of funds, the absence of foreign investments and an unfavourable investment climate.

Construction of the Russian pipeline system began in the late 1960s and early 70s. At the moment, the total capacity of this system is lower than it was originally, and the system itself is being used differently – before the USSR broke up, the Union republics received (and needed) larger amounts of resources than the CIS countries do now. Back in Soviet times, Transneft pipelines transported approx. 600 million tons of oil a year, now this volume dropped by two thirds³⁴. Domestic demand and transport volumes have decreased the most, but major export pipelines are overloaded. In 2002, capacity utilisation of the system transporting oil beyond the CIS area was at around 85 percent, and in 2003 this per-

centage is projected to be even higher³⁵. Generally, Transneft's pipelines transport approx. 99 percent of Russian oil output to domestic consumers, the CIS countries and European markets. In addition, Transneft also provides its services to Kazakhstan and Azerbaijan, where transport needs are bound to grow. Hence it is necessary to increase the system's capacity. Meanwhile, the wear of Transneft's network exceeds 70 percent³⁶. In addition to technical degradation caused by exceeding the projected life-time of the pipelines, inadequate construction technologies and poor quality of pipes used in construction are behind the deterioration. According to Russian experts, in order to keep the pipeline system in working condition annual investments of US\$ 120–130 million will be necessary over the next several years³⁷.

Conveyance capacity of gas pipelines is also declining. The Central Asia–Centre and Bukhara–Ural pipelines connecting Central Asia with Russia could once transport 100 billion cubic metres of gas annually, but nowadays capacity has dropped to approx. 50 billion cubic metres. According to Alexander Ryazanov, Gazprom's deputy CEO, the conveyance capacity deficit of the Russian gas pipeline network may reach 100 billion cubic metres as soon as 2010. Expanding this capacity will require US\$ 15–20 billion in investments. Ryazanov believes it is necessary to increase private (non-Gazprom) investments in the gas infrastructure. However, while Gazprom remains a monopoly in terms of transport network ownership, independent gas producers are reluctant to make such investments.

3.3. Political conditions

Changes taking place in regional and global politics also have a substantial impact on the diminishing role of old, post-Soviet transport routes and the development of plans to build new ones. The emergence of new states in the former USSR area, especially the hydrocarbon-rich Central Asian republics, has attracted the attention of world powers and afforded the region an opportunity to enter new markets in the west (Turkey and others), east (China, Japan) and south (India, Afghanistan). In order to take advantage of this opportunity it is necessary to build new export connections, and this is precisely the stake of the

“Great Game” over the Caspian region that has continued for twelve years now. Today, Russia remains the chief transit area for Caspian energy resources. Since the break-up of the USSR, only small and insignificant export pipelines have been built outside its territory. Moscow's policy towards the region has successfully thwarted implementation of alternative projects. Exports through the Russian networks are regulated based on non-transparent criteria and subordinated to the state's strategy to preserve the monopoly on transport and exports. This can make it difficult to access the Transneft system for both domestic and foreign producers. Special inter-governmental agreements are needed for a third country to be able to transport its energy resources through Russia. Since Russia has not ratified the Energy Charter Agreement as yet³⁸, it continues to possess a fairly efficient tool, namely the ability to block a country's exports/transit in case of dispute³⁹. This makes the situation especially complicated for Central Asian producers who are nearly 100 percent dependent on the Russian system of export pipelines.

Underutilisation of the post-Soviet area's export potential is also due to the rather unfavourable investment climate in the region⁴⁰ that stems from the internal economic and political situation of particular countries. Export plans of the Russian Federation are impeded by the situation in its internal market. The oil and gas sector subsidises other branches of the economy and non-productive sectors, and sustains the energy-intensive industry. Growing gas consumption in the Russian market, the absence of much-needed reforms, low prices of energy carriers and decreasing production – all of these pose a serious threat and a challenge for the Kremlin. The changes needed to transform the economy and increase the volume of exports will not take place unless in-depth reforms are implemented. These, however, may cause serious social trouble in the country. For this reason, no reforms should be expected before the 2004 presidential elections⁴¹.

Similarly, the struggle over the succession of Heydar Aliiev might shake the internal situation in Azerbaijan, which has remained relatively stable for now. It is potentially possible, though hardly likely, that someone not connected with

the present ruling elite could rise to power. This would inevitably shake the entire system in which members or affiliates of the Aliev clan occupy all senior positions in the country and in the oil and gas sector.

As a result, throughout the former USSR area:

- the inefficient (economic) ties and relations inherited from the USSR are consolidating and impede internal economic reforms (in Russia);
- CIS countries that import energy raw materials face limited possibilities of diversifying their supplies;
- CIS countries that produce oil and gas face limited access to Western markets;
- supplies of raw materials from the region and investments in the CIS are subject to a constant or increasingly high risk.

The negative consequences of these trends in the post-Soviet area's oil and gas sectors affect energy resource producers and consumers alike. While the former face barriers that impede increasing production and exports, the latter are concerned about long-term stability and security of oil and gas supplies.

Nevertheless, both sides desire to overcome the obstacles and to establish a stable framework for co-operation. The Russian government has been calling for a reform of the gas sector for several years, though in vain so far. Such a reform would have to be co-ordinated with the entire Russian economic strategy aiming to modernise the Russian economy. European countries call on Russia to reform its energy sector. European proposals pertain mainly to the formation of a transparent formal and legal framework for investment projects and ratification of international agreements regulating the transit of energy carriers. In 2000, the European Union and Russia began their energy dialogue. So far, however, its only result has been the formulation of a list of the often contradictory interests of the two sides⁴².

Agata Łoskot

¹ 7.5 percent of the global oil resources and 35.4 percent of the global gas resources, respectively – See Table IV.

² Russian sources mention 15 billion tons (and sometimes even 60 billion tons) – Renaissance Capital, *Russia Oil & Gas Yearbook*, July 2003, p. 29. In their calculations, Russians include A and B type fields – proved producing and non-producing deposits, and type C1 fields, i.e. deposits on which few tests have been performed and which would be included into the category of probable deposits in western classifications. (According to IEA, approx. 30 percent of type C1 deposits could be regarded as proved deposits and 70 percent as probable deposits in western classifications). Such differences in the method of classification of deposits and measurement methodologies frequently lead to misunderstandings and mistakes in both gas and oil resource estimates.

³ The Western Siberian resources have been exploited since the 1960s and the 70s. They reached their peak productivity in the late 80s.

⁴ The beginning of 1990.

⁵ For comparison: the Russian Federation produced approx. 347 million tons of oil in 2001.

⁶ According to Renaissance Capital (as above), Russia sold 186.7 million tons, i.e. over 14 percent more than in the previous year. Approx. 82 percent of this volume was sold outside the CIS).

⁷ *Ibid.*, p. 15; own calculations.

⁸ According to <http://www.eia.doe.gov/emeu/cabs/russia.html> Russia plans to increase its production to 390 million tons by 2010. The “Energy Effective Economy” government programme mentions 420 million tons by 2010.

⁹ According to American forecasts, they could even reach 15 billion tons.

Source: <http://www.eia.doe.gov/emeu/cabs/kazak.html>

¹⁰ Expectations of potentially much larger deposits in Azerbaijan have been reduced considerably.

¹¹ Source: www.eia.doe.gov/emeu/cabs/kazak.html; forecasts included in the development programme for Kazakh Caspian Sea deposits mention reaching 150 million tons output by 2015.

¹² Source: <http://www.eia.doe.gov>

¹³ Russian experts estimate that these deposits could even amount to 212 trillion cubic metres. Due to differences in the technical parameters of extracted and re-pumped gas, differences are possible (and do exist) between Russian and Western gas volume measurements.

¹⁴ For example, the largest deposit in Yamburg is 46 percent depleted, the Urengoi deposit 76 percent depleted, and the Medvezhye field 78 percent depleted (data from the 2002 report of the Energy Ministry of the Russian Federation).

¹⁵ For comparison: in 1991 Russia produced 643 billion cubic metres of gas. Source: *Russia Oil & Gas Yearbook*, Renaissance Capital 2003, p. 9.

¹⁶ Cf. <http://www.mte.gov.ru/files/103/1354.strategy.pdf>

¹⁷ Prospectively, 7.4 trillion cubic metres (<http://www.eia.doe.gov/emeu/cabs/turkmen.html>), and according to the country's president Saparmurat Niyazov even 22 trillion cubic metres.

¹⁸ Source: <http://www.eia.doe.gov/emeu/cabs/turkmen.html>

¹⁹ Source: <http://www.eia.doe.gov/emeu/cabs/baltics.html>.

For more information see chapter The oil and gas in the “transit countries” of the former USSR.

²⁰ Source: FSU Energy, Petroleum Argus, 2002 edition, own calculations.

²¹ For more information, see chapters The Russian energy policy and The oil and gas in the “transit countries” of the former USSR.

²² *Ibid.*

²³ Ventspils was the main Baltic terminal for Russian oil exports until recently. Presently, Moscow has imposed a blockade on it, and Ventspils is losing its position. For more information see chapters The Russian energy policy and The oil and gas in the “transit countries” of the former USSR.

²⁴ In 2001, this amount reached 8.4 million tons. Source: FSU Energy of 25 Jan. 2002, p. 7.

²⁵ Transporting oil by rail is approx. three times more expensive than pipeline transport. However, given the recent considerable increase of Russian companies’ output and sustained high oil prices of, transportation costs are less of a problem. According to FSU Energy (5 September 2003), alone in August 2003, the volume of oil transported by rail exceeded the volume of July by more than 50 percent, and nearly doubled the volume of August 2002. This refers only to the share of transport that is controlled by Transneft.

²⁶ For comparison, in the peak year of 1987 production reached 570 million tons.

²⁷ Demand for natural gas in the CIS area has been decreasing since the USSR broke up.

²⁸ The largest operated fields in Western Siberia, which provide 60 percent of Russian oil production, are approx. 50 percent depleted. Older fields are approx. 60–80 percent depleted. Water content in oil exceeds 70 percent. Experts estimate that less accessible resources account for 55–60 percent of all operated resources (Toplivo-Energetichesky Kompleks Rossii Federalny Spravochnik 1999–2000, www.rusoil.ru).

²⁹ Contrary to this, forecasts included in the government programme “Energy Effective Economy” assume that oil production will grow to 420 million tons by 2010, that exports will reach 200–250 million tons and that approx. 130 new deposits will be developed.

Source: <http://www.mte.gov.ru/files/103/1354.strategy.pdf>

³⁰ Production decreased in 1992–2000 by approx. 9% (report of the Accounting Chamber of the RF, 25 Jan. 2001).

³¹ In 2002, Russian gas exports also increased for the first time in several years.

³² In November 2001, Gazprom developed a new field for the first time in its history. Zapolarnoye in Western Siberia can make up for the decreasing production of the region’s currently operated fields in several years, once it reaches its peak productivity estimated at 100 billion cubic metres per year.

³³ For more information, see chapter Foreign investments in the oil and gas sectors of CIS energy producers.

³⁴ In 2002, 374 million tons of oil was transmitted *via* Russian pipelines; but Russian companies could have supplied much larger quantities.

³⁵ In 2002, it was possible to send 174 million tons of oil beyond the CIS using the Transneft system; in 2003, the degree of utilisation of Russian oil pipelines for export beyond the CIS is projected to reach 87.5 percent. Source: Transneft: Oil for Pipelines, Renaissance Capital, June 2003, p. 6.

³⁶ Source: www.rusenergy.com

³⁷ Source: www.rusenergy.com

³⁸ Source: www.encharter.org

³⁹ For example, Moscow prevented Ashgabat from accessing its pipelines in 1998 following a disagreement concerning the sales prices of Turkmen gas.

⁴⁰ The situation differs between Russia, the authoritarian Turkmenistan, Kazakhstan and Azerbaijan. In the latter two countries, foreign investors and international institutions have been quite influential in terms of initiating or accelerating legislative change. For more information, see chapter Foreign investments in the oil and gas sectors of CIS energy producers.

⁴¹ For more information, see chapter Oil and gas wealth – the impact on development prospects of CIS countries.

⁴² For more information, see chapter The Russian energy policy.

Chapter 2.

The Russian energy policy

Ewa Paszyc

1. Objectives of the oil and gas policy

The export policy of the Russian Federation is an important element in the state's strategy explicitly formulated by President Vladimir Putin. The Kremlin's strategic goal is to establish the country as an economic power, a position that will enable Russia to regain its place in the international scene and consolidate or even strengthen Moscow's influence there¹. The natural resource deposits and the fuel industry are Russia's most powerful and most profitable instrument of economic influence. Foreign expansion of Russian companies may be intended to multiply profits, but at the same time it is in line with the state's strategy. Russian capital expands mainly into areas that Moscow considers to be the domain of its vital political and economic interests. The degree and scope of this expansion largely depends on the character of ties existing between particular regions or countries on the one hand, and Russia and its fuel industry on the other.

1.1. Oil and gas relations between Russia and the former USSR region. Transport monopoly and control of energy resources

Russian fuel companies are still most active in expanding their operations in the former Soviet republics, i.e. countries of the Commonwealth of Independent States and the Baltic States. In the CIS area Russia is not only the largest producer of oil and natural gas. Also, it holds a monopoly on the transport of hydrocarbons produced by the former republics, and is the sole supplier of energy resources to those countries that have none of their own.

The network of gas and oil pipelines inherited from the USSR guarantees Russia's exclusive position in terms of the transit of hydrocarbons produced by Turkmenistan, Uzbekistan, Azerbaijan and Kazakhstan. This situation profits Moscow in at least three ways. Firstly, it enables Russia to control the gas and oil sectors of these countries (especially their energy resource exports). Secondly, it supplements any gas shortages that Gazprom may experience, enabling it to meet its obligations under foreign contracts

and domestic supplies. Finally, it generates proceeds from transport services.

The transport monopoly is also an efficient tool to keep the CIS within the span of Russia's influence. Moscow is determined to keep this situation unchanged, as the government's reaction to the protest of influential oil companies concerning the transit of Kazakh oil has demonstrated. The Russian Prime Minister Mikhail Kasyanov dismissed it by saying: "Transit is a matter of state strategy and is not subject to debate"². For the same reason Russia has attempted, to thwart projects of pipelines bypassing its territory³.

The relations with those former republics that depend on Russian oil and gas supplies are less profitable in financial terms. The nearly absolute dependence of these countries affords Russia certain benefits, e.g. by enabling it to influence the republics' policies. In addition, it helps Russia in attempts to take over control of the oil and gas pipelines of these republics (Belarus and Ukraine in the first place), which Russia uses to export its commodities to Central and Western Europe. Russia is also able to take advantage of the chronic energy debt of some of the CIS countries to take over businesses, especially local gas and oil infrastructure operators, processing plants (refineries), power plants etc, at a low cost.

1.2. Central Europe and the Balkans. Keeping the region dependent on Russian supplies and efforts to gain direct access to the EU market

Until recently, Central and Eastern European countries were almost completely dependent on oil and gas imports from Russia. This dependence dated back to the times of the USSR. It had formed due to two basic factors: the existence of the Druzhba oil pipelines and a gas pipelines system that tied these countries to the sole Soviet supplier, and the preferential prices offered at the time to satellite countries. Political changes in the region that followed the break-up of the USSR altered that situation of dependency to a very small extent.

Presently, the main objective of the Russian oil and gas policy in the former socialist countries is to keep control of those transit connections in the region that are of crucial importance for Russian exports (mainly pipelines in Slovakia, Bulgaria and Romania), and to retain the position of

the largest (or exclusive) supplier of oil, petroleum products and gas in these markets.

Potentially, it is the "oil ties" that could have loosened to the greatest extent. Most Central European countries can theoretically import oil from other sources. This ability may be restricted by the transport situation (e.g. the absence of on-shore oil terminals and the "attachment" to the post-Soviet pipeline system) or economic and technological restraints (refineries adapted to the heavy Russian oil). In practice, markets of most of these countries are still dominated by Russian oil for various reasons (Diagram 1).

The gas markets of Central European countries continue to depend on imports from Russia⁴. This is due to several factors. Firstly, gas supplies are about a "rigid" connection between producers and consumers through gas pipeline networks. Countries of Central Europe have no such connections to exporters other than Gazprom. Secondly, Russian gas is cheaper than gas provided by other suppliers; e.g. it is nearly 15 percent cheaper than Norwegian gas. Thirdly, a system of long-term contracts guarantees the Russian monopoly an exclusive position in terms of supplies to the former satellite countries. Finally, the still influential Gazprom lobbies present in those countries have effectively obstructed projects to allow alternative suppliers of the blue fuel. Such alternative suppliers and competition, be it merely potential, could alleviate the negative consequences of Gazprom's status as a monopoly in the gas markets of Central European countries, by allowing them to negotiate more efficiently against gas and transit prices imposed by the monopoly or unfavourable contract terms.

From the point of view of the Russian state and its businesses, Central Europe and the Balkans are in many respects a natural and interesting area of expansion. First and foremost, they are situated in the proximity of Russia and along direct routes of energy resource exports to Western and Southern Europe. In addition, they have large and developing fuel markets. A dominant position in these markets is a kind of guarantee of profits, especially since fuel prices are higher there than in Russia and the CIS.

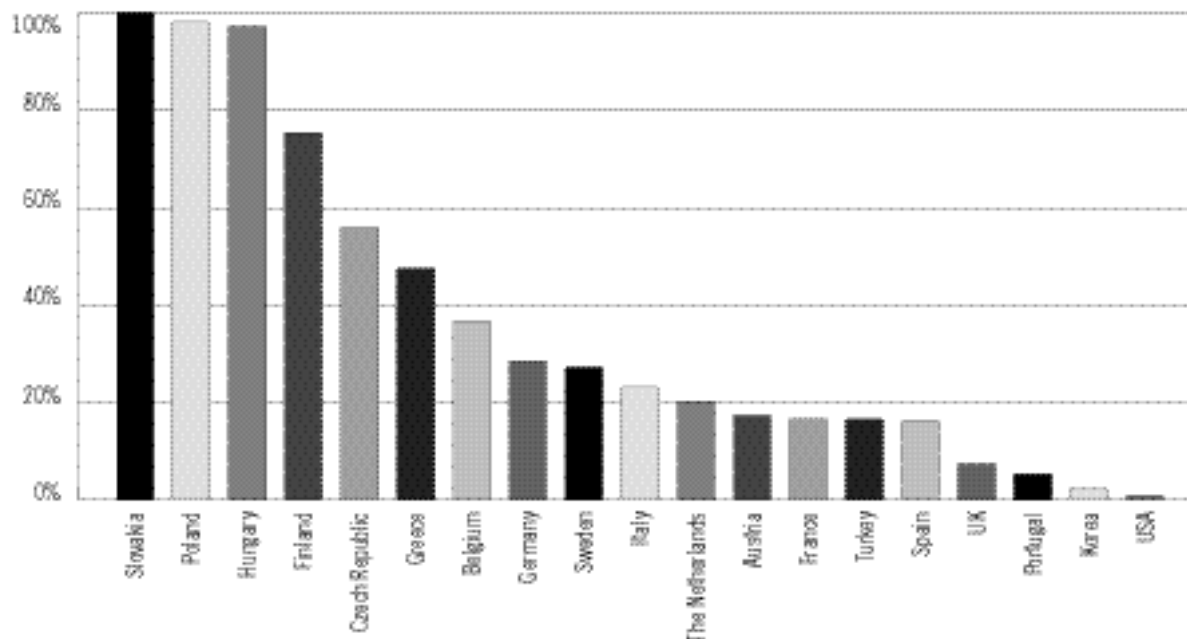
Another advantage offered by the Central European countries is the prospect of their EU mem-

bership. Investment plans of Russian businesses in the region include participation in the privatisation of raw-material processing plants. By locating the production of fuels and petrochemical plants in the new Member States, close to the Western end-consumers and within the EU customs area, Russian companies may be able to multiply their profits.

1.3. Western Europe. Direct presence and increasing the share of Russian resources in the EU market

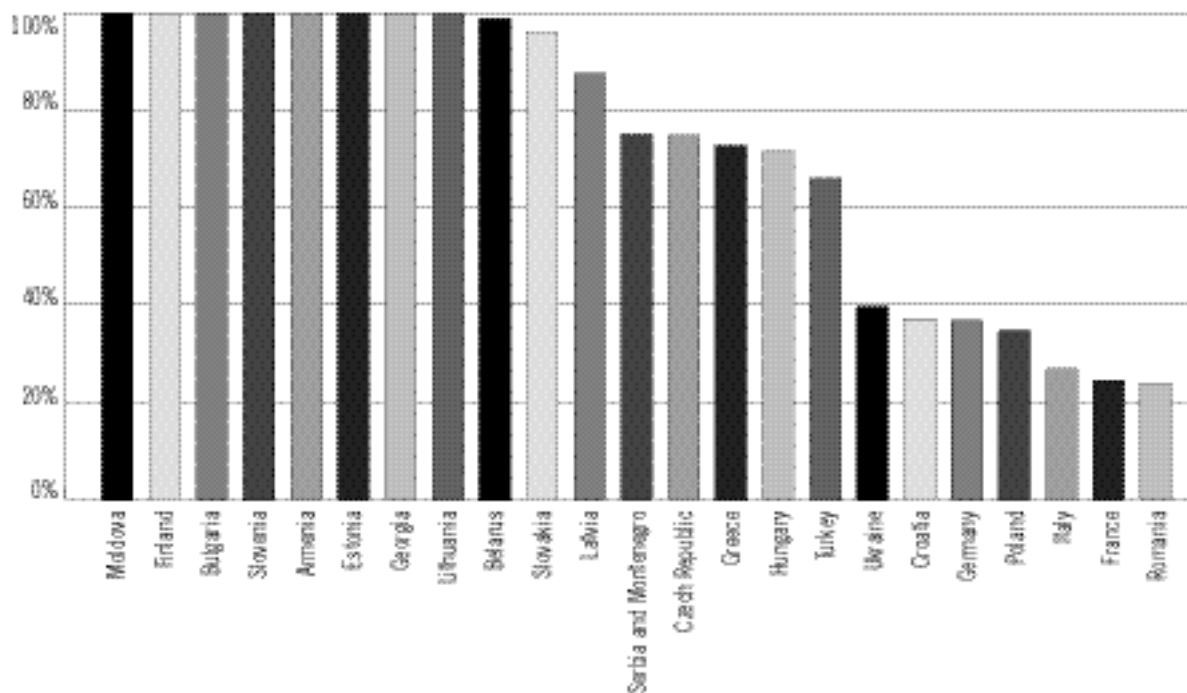
The most important goal of the oil and gas policy of Russia is to be directly and strongly present in its largest and most profitable market, the EU. The situation of Russian companies in

Diagram 1 – Dependence of OECD states on oil imports from the former USSR region



Data of: Oil Information 2003, IEA

Diagram 2 – Dependence of European countries on natural gas imports from Russia



Data of: Natural Gas Information 2003, IEA

the EU is made difficult by the fact that its oil market is diversified and basically divided among western concerns that import oil from different sources. The oil trading system based on short-term contracts and transactions offers oil consumers the ability to choose and change their suppliers. The western oil-processing sector is practically beyond the reach of Russian oil companies.

The situation in the Western European gas market is completely different. Russian gas occupies a strong position there, despite the presence of other competing producers of the blue fuel, notably Norway and Algeria. In 2001, Russian gas accounted for more than 20 percent of the Western European gas market and its share is bound to increase as the own resources of European countries (mainly Great Britain, Denmark, the Netherlands and, in the longer term, also Norway) become depleted. Gazprom hopes to increase its exports to Europe also because gas consumption in the EU countries is forecast to grow. According to EU commissioners, the European Union is prepared even to double the volume of its gas imports from Russia⁵. Experts believe that by 2020, countries of the enlarged European Union will import approx. 70 percent of their gas consumption (in 2002 – 40 percent). Gazprom reports indicate that under contracts already held by the concern, exports to Western Europe could increase by 60 percent by 2010⁶. There is only one factor that could realistically limit the growth of the volume of Russian gas supplies to the European market, namely production constraints of Gazprom in the event of a “gas emancipation” of Central Asian countries. Developing new deposits in the Russian Arctic shelf is bound to be expensive and will inevitably drive production prices up. Still, for the time being the possibility of production shortages remains theoretical.

Because of the strong position of Gazprom in the Western European market, Russian politicians and representatives of the gas monopoly do not bother to avoid in their public speeches more or less veiled threats. For example, they reminded the UE that in addition to Europe, Russia has other, equally interesting directions of exports, notably China and the region of Southeast Asia, as well as the US⁷.

Despite this rhetoric, Gazprom is taking measures to enter new markets in Western Europe. To

this end, the President and the government of the Russian Federation support the monopoly's campaign to build a trans-Baltic gas pipeline to transport Russian gas directly to Germany, Great Britain, the Netherlands and Scandinavia. The construction of such a major gas pipeline would put an end to all other projects to build gas pipelines across the Baltic Sea⁸.

1.4. Expanding presence in oil and gas markets of other regions (Asia). Search for new markets

Fierce competition in the European oil market spurs Russian companies to seek new markets. The Asian market offers especially good prospects for Russia's export ambitions. According to long-term forecasts, the potential of the Chinese gas market will be comparable to, or even greater than the potential of the European market already by 2020. Hence the plans to expand export activities in Asia⁹.

It is mainly China that offers a secure and developing market for energy carriers. Analysts estimate that by 2020, the deficit of energy resources in China may reach 200 million tons of oil equivalent¹⁰. The markets of other Far Eastern countries, notably Japan and South Korea, are also growing and promise good profits. No wonder that the Energy Strategy of the Russian Federation to 2020 defines the construction of an oil pipeline from Russia to the markets in Asia as one of the top priorities¹¹, especially since the future partners are ready to co-finance such an investment. The Chinese gas market also offers potentially good prospects, but the West-East project in which Gazprom takes part remains in the phase of preliminary agreements¹².

The Asian market is important for Russia for two other reasons. Firstly, if the export plans are to be implemented, the untouched resources of Eastern Siberia will have to be explored and developed, leading to an economic activation of the region. Secondly, Asia is treated as a potential partner in the creation of a multipolar world in Russia's foreign strategy to counterbalance the unipolar *Pax Americana*.

2. Instruments of the Russian energy policy in Europe and the CIS

In its export strategy, Moscow resorts to different measures and methods. All of them serve to develop the three basic tools for optimisation of the Russian policy:

- a sustained transport monopoly (CIS) or control of energy resource transport / transit corridors (the Baltic States, Central Europe, and the Balkans);
- retained control of resources (production and exports of oil and gas) in Russia's zone of influence (mainly the CIS);
- development of own processing capacity (CIS and the former socialist countries) and sales networks.

2.1. Control of energy raw materials transport, transit and resources

Controlling the energy resources transport and transit connections is of fundamental importance for Moscow's export strategy. The transit monopoly enables Russia to control the energy raw material resources and exports of the former republics. Presently, the Russian Federation controls nearly all gas transit routes throughout the post-Soviet area of influence. At the same time, as the largest oil producer and the main transit corridor for oil produced in the CIS area, Russia controls a large segment of the CIS oil export infrastructure. The activity of Russian companies in the Baltic States and further abroad clearly proves that one of the objectives of their expansion is to gain control of those sections of European oil pipelines and oil terminals in the former USSR area and in some Central European countries which are important in terms of transit¹³. The Russian gas monopoly seems to be the most successful in building a transport control system. Until recently, Gazprom was rather unscrupulous in its choice of measures¹⁴. The less severe methods include, for example, the cutting off of gas supplies (e.g. to Bulgaria, Georgia or Armenia) or driving local companies into debt and then trying to take them over as repayment of dues¹⁵. Presently, gas blackmail (suspending of supplies) is used almost exclusively in relation to

insolvent contractors in the CIS. In the remainder of the post-Soviet area of influence, Gazprom uses more civilised methods and a proven plan of action. The company establishes a holding or joint venture with a local gas pipeline operator creating a transit monopoly for Russian gas (such a joint venture is usually an import monopoly as well). Then it gradually exploits formal measures (certain provisions in company articles, terms of gas contracts, etc) and non-formal means (personal connections, pro-Gazprom lobbies) to gain the deciding vote.

Russia's strategic objective of optimising the blue fuel transport to Western markets is also pursued through projects to build new direct export pipelines, some of which are planned, and some already being implemented by the monopoly. Such projects are intended to eliminate transit through third countries (the trans-Baltic gas pipeline and the Blue Stream).

Because of the characteristics of the oil market, its higher degree of liberalisation and the fierce competition of powerful Western companies, Russia has been much less successful in controlling the transit of oil than it was in the case of gas transit. Nevertheless, Russia and the Russian companies continue to take some measures to this end. They aim to acquire interests in companies operating local oil infrastructures and thus control the most important sections of major European oil pipelines. Russia's determination and the methods to which it resorts depend on the significance of the given company for Russian exports and the character of connections with the given country.

2.1.1. CIS and the Baltic States

Most oil and gas pipelines in the CIS area have been inherited from the USSR. After its break-up, the Russian Federation got only a portion of the infrastructure. The very significant remainder, including the Baltic terminals and main oil and gas export routes (in Ukraine and Belarus), which are of crucial importance for Russia, ended up beyond the borders of the Russian Federation. Hence, already in the 1990s it became a top priority of the Russian policy to restore a uniform transport system within the CIS. To this end, it was necessary to strike deals with the former republics in whose territories the pipelines and terminals had ended up. What made

this task easier was the fact that nearly all export routes for CIS-produced hydrocarbons crossed Russia and there still existed strong ties between the former republics, their economies and their elite on the one hand, and the former metropolis on the other. Reconstruction of the post-Soviet transport network is advanced but not complete.

Under long-term deals concluded in 2002–2003 with gas producing countries (Kazakhstan, Uzbekistan and Turkmenistan), Gazprom presently controls the transport of gas from Central Asia. Efforts to establish gas consortia with major transit countries, notably with Ukraine, have been less successful. The Russian monopoly also has difficulties establishing a gas infrastructure management company in Belarus. However, the country is almost completely dependent on Russian gas supplies and has a huge gas debt, which is likely to eventually force Minsk to enter the consortium.

As regards oil, the Baltic ports, especially the largest one – Ventspils in Latvia – are of crucial importance for Russia in terms of transit. Attempts made by Russia's Transneft to buy a controlling stake in this terminal have failed so far. Russia hopes to solve this problem and procure the outcome it desires using an oil blockade – one of the severe methods to which Moscow resorts only if the installation it wants is of strategic importance to the state or to Russian companies, and plans to privatise it run counter to Russia's interests.

2.1.2. Central Europe and the Balkans

Another important objective of Russia's has been to gain control of those transit connections in former socialist countries, which are particularly important to Russian gas exports. At the moment, Russia has de facto control of all gas transport routes in this area. Gas pipelines in Central Europe and the Balkans are operated by companies in which Gazprom holds minority blocks of shares or 50-percent blocks as a maximum (Table I). However, owing to the provisions of these companies' articles and the "friendly attitudes" of local lobbies whose representatives sit on these companies' boards, the Russian monopoly always has the deciding vote. This allows Gazprom to dictate the terms and prices of transit and retain its status as a monopoly in these markets¹⁶.

Controlling the system of oil transport in Central Europe is a more complicated matter. Many countries in the region possess infrastructures that allow them to be independent of Russian supplies¹⁷. Russia's goal is to continue dominating the oil markets of Central Europe and to maximise exports. Hence, the country endeavours to gain control of those sections of the infrastructure that enable diversification of supplies and, at the same time, may increase the export capabilities of Russian concerns. Russian oil companies in Central Europe participate in privatisation tenders to acquire shares in operators or shareholders of local oil infrastructures that are important from the point of view of supplies diversification. Frequently, winning such tenders also offers a chance to control additional export channels¹⁸.

2.1.3. Western Europe

Gaining control of the major Western European oil and gas transport routes leading to the largest oil and gas consumers is beyond the reach of Russia. Besides, Moscow does not have such ambitions anyway. Legislation presently in force in France and Italy, Gazprom's major contractors, makes it practically impossible for any competitors to sneak into their internal markets. One of the very few gaps in the tight protection of the Western gas infrastructure system is the German anti-monopoly legislation.

In future, though, liberalisation of the EU gas market will ensure that all producers have equal access to the transport networks. Hence, the present aim of the Russian monopoly is to reinforce its position as Western Europe's main supplier and to defend its interests as effectively as possible in negotiations concerning the liberalisation of the European gas market. The Kremlin expects Gazprom to maximise export profits by directly entering the gas markets of the largest consumers of Russian gas. This has been partly achieved in Germany only. The Wingas company that was established there (Gazprom 35 percent, Wintershall 65 percent) deals with transport and distribution of the blue fuel in the German market in which it has presently a share of approx. 15 percent. Wingas intends to use the liberalisation of the European gas market to expand its activities beyond Germany¹⁹.

2.2. Development of processing capacity and sales networks abroad

Another important instrument in the oil and gas policy of the Russian Federation is to develop the processing capacity of Russian companies and to create proprietary sales networks abroad. Oil companies have been particularly active in this area for some time. In Europe, it is easier for them to expand operations than in the former Soviet republics (especially the Baltic States, Ukraine and Belarus) and in Central and Southern Europe. Western European companies are willing to buy the cheaper Russian oil, but they try to keep control of refineries, petrochemical and chemical plants and their sales. The EU anti-monopoly laws offer Russian companies a certain opportunity to enter the EU energy market by obliging companies with excessively high market shares to sell portions of their assets²⁰. Privatisation of energy companies offers another such opportunity.

Limited access to Western hydrocarbon processing and petroleum product markets has induced Russian oil companies to pursue the tactic of gradual expansion of their European holdings by establishing “bridgeheads” in the Baltic States, Central Europe and the Balkans. This tactic is based on two assumptions. Firstly, refineries in the former Council for Mutual Economic Aid area are located relatively close to Western European markets, which partly solves the problem of transporting petroleum products and reduces costs²¹. Secondly, once countries of the region become EU Member States, it will not be possible to protect the Western European market against Russian fuels using customs instruments²². Russian companies compete effectively for businesses in Central and Eastern Europe and in the Baltic States and expand successfully using inter alia the following instruments:

- high or complete dependence on Russian energy resource supplies under long-term contracts (in principle, this refers to all countries in the post-Soviet area of influence);
- transit fees, including fees for the transport of Russian oil and petroleum products (Lithuania, Latvia) and Russian gas (Ukraine, Slovakia, Bul-

garia), accounting for significant proportions of the budgets of some of the countries;

- informal personal and business ties between Russian companies and managers of companies in the energy sectors in these countries, dating back to the USSR times or more recent, based on mutual benefits, and the presence of pro-Russian lobbies that determine the results of privatisation procedures and other key undertakings (to a smaller or greater degree, this applies to all countries in this area)²³.

Gazprom is the best-established company in the region. It is present in all countries of the region as a shareholder of local gas pipeline operators and gas distributors. When entering tenders for shares of such businesses, Gazprom frequently establishes coalitions with its major Western European partners, being Ruhrgas, Gas de France and ENI.

As regards Russian oil companies, LUKoil, Yukos and, to a smaller degree, the Tyumen Oil Company (TNK) are the most active in the markets of the former Soviet Union and the Eastern Block. Their efforts are quite consistent, and their objective is obvious. All of them intend to gain control of, or at least acquire substantial shares in, the local oil transport and processing infrastructures and to obtain direct access to the local petroleum product markets.

The foreign investment policies of the two largest Russian concerns appear to follow a kind of division of zones of influence. While LUKoil gathers foreign assets in Eastern Europe (Ukraine), the Balkans (former Yugoslavia, Bulgaria, Romania) and in the Caspian region, Yukos prefers the western direction (Slovakia, Hungary, Lithuania and the Mediterranean). Oil companies (above all, LUKoil and Yukos) are especially interested in buying refineries and gas stations in markets supplied through the Druzhba²⁴.

At the moment, Russian oil concerns control a large portion of hydrocarbon processing plants and fuel distribution networks in Ukraine, the Baltic States, Romania and Bulgaria. They also plan to participate in the privatisation of establishments in this sector in Poland (Gdańsk Refinery), Slovakia, countries of the former Yugoslavia and in Southern Europe (Table II).

3. Outcomes of the Russian energy policy

3.1. Successes

3.1.1. CIS – progress in the reconstruction of post-Soviet energy space

The Russian oil and gas policy has been implemented quite successfully in the CIS where Russian companies have managed to keep and consistently strengthen their positions in the energy sectors of most of the former Soviet republics. Russia has concluded a number of contracts and agreements with governments and state-owned gas and oil establishments of the CIS countries, thus gaining control of the best part of the former republics' resources and preserving (for the time being) its transit monopoly.

Russia's greatest success in the CIS area seems to have been the conclusion, after several years of negotiations, of the 25-year gas deal with Turkmenistan in April 2003²⁵. It guarantees Moscow long-term supplies of relatively cheap gas from the second largest gas producer in the CIS (after Russia), at the same time solving Gazprom's gas deficit problems²⁶. Russia has also signed transit deals with the other Central Asian countries (Kazakhstan, Kyrgyzstan and Uzbekistan). Strategic agreements on co-operation with Russia in the gas sector were concluded with all former republics in the region²⁷.

Moscow is also building up its position in the oil sectors of Central Asian countries. In summer 2002, a 15-year agreement for the transit of Kazakh oil through the territory of the Russian Federation was signed²⁸. Russian companies (notably LUKoil) are strengthening their holdings in Kazakhstan, a country with the second largest oil resources in the CIS (after Russia)²⁹.

The fact that Russia has been able to keep its monopoly on transit in Central Asia for the twelve years that followed the break-up of the USSR is certainly an achievement. The only major new connection built within this period in the Caspian region, i.e. the Caspian Pipeline Consortium (CPC), also crosses Russian territory.

Russia tries to strengthen its position and influence in those former Soviet republics that import oil and gas and at the same time are important in terms of the transport of these resources

to Central and Western Europe. In the years 2002–2003, preliminary agreements were signed with Ukraine and Belarus concerning the creation of consortia uniting Gazprom and the national owners and operators of gas infrastructures (Beltransgaz and Naftohaz Ukrainy, respectively). However, contrary to the Russian side's ambitions, both these projects are still far from complete³⁰. By creating these consortia Moscow hopes to gain control of the most important facilities transporting Russian energy resources to Europe.

Russia is also reinforcing its position in the internal markets of former Soviet republics. Russian companies hold shares in petrochemical, metallurgic plants, manufacturers of pipes and equipment for the oil and gas industry, transport companies and gas station chains. For example, Russian companies have shares in three out of six Ukrainian refineries, and in two of them they are majority shareholders (Table II).

3.1.2. Baltic States – preserving the transport monopoly

As regards the energy policy towards the Baltic States (Lithuania, Latvia and Estonia), Russia has been successfully pursuing its two main objectives: to keep the dominant position in their oil and gas sectors and to limit its dependence on these countries in terms of transit. Gazprom and Russian oil companies hold monopolies on the supplies of energy raw materials and fuels, while at the same time they possess substantial stakes in the Baltic businesses dealing with the trading and distribution of natural gas and petroleum products (Tables I and II). In August 2002, Yukos took control over the Lithuanian Mazeikiu Nafta concern along with its oil refinery in Mazeikiai – the Baltic States' only oil refinery, a portion of the Lithuanian oil pipelines system and the Butinge oil terminal³¹.

In order to make itself independent of the oil transit through the Baltic States, especially through Latvia's Ventspils, the largest terminal in the region, Russia launched its own Baltic terminal in Primorsk. Nevertheless, insufficient capacity of Russia's own infrastructure and the shortage of terminals continue to impede growth of exports, which is why Russia is unlikely to give up efforts to take over control of Ventspils.

3.1.3. Central Europe and the Balkans – market domination

One of Moscow's most significant successes in terms of the energy policy in this part of Europe is the fact that it managed to keep countries of the former socialist block dependent on Russian oil and gas. Russia remains the main supplier of energy resources to countries of the region and has been able to successfully impede most projects to launch alternative supplies. For example, contracts signed by Poland in 2000 for the supply of gas from Denmark and Norway have not been ratified yet and are unlikely to be implemented any time soon. Another important success for Russia in terms of the energy policy is the fact that Gazprom has been able to bind Poland with a long-term contract for the supply of gas through the still non-existent second pipeline of the Yamal–Europe gas export route³².

Moscow's policy led to the signing of an agreement on the reversing of the Adria oil pipeline's direction (until now, oil had been delivered by tankers to the Croatian Omisalj terminal and from there to the Balkans) and its integration into the Russian Druzhba export system. Yukos is actively involved in this project³³. Thus, Russia acquired another export connection – a gateway into the Adriatic, and a possibility to impede alternative supplies (through the Omisalj terminal). Russia is taking similar measures in relation to the relatively new Ukrainian Odessa–Brody pipeline. The original plan for this pipeline was to export Caspian oil to Europe. However, Russian companies supported by the Russian government strive to use this pipeline to transport Russian oil in the opposite direction: from Brody to Odessa, thus connecting the new Ukrainian pipeline with the Druzhba system.

Russia also tries to enter local oil and gas markets by purchasing shares in businesses dealing with the sale, transit, distribution or processing of oil and gas. The most active company in this respect is Gazprom, which holds substantial shares in companies dealing with gas transit and distribution (Table I). Similarly, Russian oil companies purchase shares of important local oil businesses. LUKoil holds majority blocks of shares in the Bulgarian Burgas, and the Romanian Petrotel refineries. Yukos holds shares in the Slovak pipeline system (Transpetrol) and in other companies (Table II).

3.1.4. Western Europe and the US

Russian oil and gas companies invest on a much smaller scale in Western Europe, mainly because of the lack of sufficient funds and existing legal barriers. Gazprom holds shares in gas sector companies in Austria, Finland, Greece, the Netherlands, Germany, Turkey and Italy. Yukos has invested in Norway and Great Britain (Tables I and II).

Another important achievement, from the Russian perspective, is Gazprom's partnerships and co-operation with Western concerns on numerous projects (Gazprom's partners include Ruhrgas, Gas de France, ENI). The Russian monopoly hopes that such co-operation will also be possible on the priority project of the trans-Baltic gas pipeline, which has received a lot of publicity recently. Russia has succeeded in interesting the European side, including Germany's Ruhrgas and the British government, in this project.

Finally, Russian companies have managed to enter the US market in the recent years. In summer 2002, TNK and Yukos shipped first batches of oil to the United States. While Washington seeks alternatives for supplies from the Near East, Russia may become an important additional source of oil.

3.2. Failures and problems

However, not all of Russia's oil and gas plans are implemented so successfully. Sometimes Moscow fails in its efforts to impede competing projects. As the Russian energy policy is founded on the transit monopoly, the start of construction works on the Baku–Tbilisi–Ceyhan oil pipeline and the Baku–Tbilisi–Erzurum gas pipeline that will transport Caspian oil and gas to Turkey is quite a disaster. These pipelines, built by consortia of Western concerns backed by the US government, will be the first major export routes for Caspian hydrocarbons that bypass the Russian territory.

It seems that Russia will not be able to keep its present position in the Turkish gas market, one of the largest consumers of Russian resources. Ankara has signed contracts for the supply of gas with Azerbaijan, Iran, Algeria and Nigeria. In addition, Turkey has raised objections to the terms of the contract concluded with Gazprom for the supply of gas through the Blue Stream

gas pipeline for several months. This put a question mark over the very profitability of this underwater pipeline investment worth several billion, and ultimately led to negotiations concerning modification of the contract's terms³⁴.

Russian companies participating in tenders for shares of European energy businesses do not always win, despite their frequently strong starting positions and advanced negotiations. Gazprom has failed to acquire shares in Transgas, the Czech company dealing with the import, distribution and transit of gas³⁵. Similarly, LUKoil did not succeed in its efforts concerning the privatisation of the Polish Gdańsk Refinery³⁶ or the Greek state-owned fuel holding Hellenic Petroleum³⁷.

Russia has also failed (for the time being) to establish the Russian-Belarusian and Russian-Ukrainian gas consortia through which Gazprom could control gas transit across Belarus and Ukraine.

The fact that Belarus and Ukraine have been able to impede undertakings of such significance for Moscow demonstrates that the Russian oil and gas policy may encounter even more serious problems.

4. Energy dialogue between Russia and the EU

In 2000, Russia and the EU embarked on an energy dialogue to develop clearer relations between the largest supplier of energy resources to the European market, i.e. Russia, and the largest consumer of Russian hydrocarbons, being the European Union. The energy security of Europe and the economic situation of the Russian Federation both depend on the shape and stability of these relations. So far, however, the parties have not been able to overcome fundamental differences in points of view.

The EU's intention is for the energy partnership to improve mutual relations in the area of trade and transit of Russian energy carriers (oil, natural gas and electricity) as the EU opens and integrates its energy market.

The main objectives of this partnership include³⁸:

- amelioration of the investment climate in the Russian oil and gas sector, in particular, better legislation on the production and transport of

- energy resources in the Russian Federation (including aPSA (production-sharing agreement), security of long-term supplies, and transportation systems security;

- the promotion of efficient and environment-friendly technologies (the issue of Russia ratifying the Kyoto protocol);

- stimulation of a reasonable resource economy and promotion of energy-saving technologies in Russia.

The EU wants Russia's participation in the energy partnership programme to stand for reforms and modernisation of its energy sector as well as the creation of transparent formal and legal conditions to enable investment projects. Access to the Russian conveyance infrastructure is another important issue for the EU. It could be settled if the Russian Federation ratified the Energy Charter Treaty (ECT), and especially its Transit Protocol.

The energy dialogue with the EU is apparently very important for Russia, too. According to EU estimates, the Russian oil and gas sector will need investments worth US\$ 460–600 billion over the next twenty years in order to meet its long-term export obligations (including obligations toward the EU). Without financial support from foreign investors, Russia will not be able to keep its exports on the current level, let alone increase them.

There are, however, a number of misunderstandings and conflicting interests that hinder dialogue and make efficient and mutually beneficial co-operation difficult.

One of the fundamental conditions that the EU wants to impose on Russia in the energy dialogue is the ratification of the ECT (the Treaty has been ratified by all countries in Central Asia and Southern Caucasus)³⁹. Yet the Russian side, and Gazprom in particular, is reluctant to ratify the Charter. Moscow assures that its intention is not to postpone ratification of the ECT but to force its authors to modify some of its assumptions so that they take into account the interests of Russia. Russia is particularly dissatisfied with the ECT Transit Protocol. It opens the energy market to all producers, offering export opportunities to new suppliers, in particular, independent producers in Russia and Central Asia that are presently controlled by Gazprom. As a result, Gazprom

may lose its monopoly on exports – the foundation of its power, position and revenues. Gazprom does not want to make its pipeline network available to competing producers of the blue fuel (Turkmenistan in the first place) as it fears losing its monopoly on transport in the CIS. The Ashgabat agreement signed in April 2003, which guarantees that Moscow will buy a lion's share of the Turkmen gas output over 25 years, should alleviate these fears because it minimises the possibility of Turkmen gas competing with the Russian blue fuel. In addition, the Energy Charter does not oblige its parties to render pipelines accessible to third countries, but it forbids suspending contracted supplies without a prior conciliation procedure. This provision may restrict some of the practices to which the Russian Federation has been resorting and in a way restrain (and regulate) its methods of managing the transport system. If Russia ratified the Energy Charter, its negotiations with other countries (including the CIS) concerning purchase and sale of gas would become restricted to the business and legal level, and numerous politically-motivated measures would no longer be available to Russia.

The Russian side also fears liberalisation of the EU gas market as agreed upon in 2002, and is reluctant to open its own market. For many reasons, the rules of the emerging European gas market – an open, transparent and competitive marketplace – may be difficult to accept for Gazprom. Firstly, they make it much more difficult for any single entity to dominate the market. Secondly, they require transparency in business (the opinions on this aspect of Gazprom's activity are very negative, even in Russia). The Russian monopoly rejects the EU market liberalisation principles that aim to abandon long-term contracts, cancel "take or pay" clauses, and eliminate contractual provisions restricting the right to freely re-export resources⁴⁰. The EU believes that the formula of Gazprom's contracts is against the principles of competition and that it impedes lowering of gas prices. Gazprom claims that this formula is a guarantee of its creditworthiness and ability to meet long-term obligations toward European consumers. The Russian Federation also fears that the EU could introduce a limit on the amount of energy resources imported

from any single source and that Russia would lose its position in the European market as a result. The European Commission decided back in 1997 that no single gas exporter should have a share of more than 30 percent in the gas balance of any EU Member State. This restriction, though, has not been brought fully into force yet, for various reasons.

At the moment, the energy dialogue between the two sides appears to have hit a dead end. The Russian Federation and the European Union have different ideas of what energy dialogue should be. The EU wishes to initiate co-operation and develop mechanisms to enable private companies to take specific action and invest. Moscow, on the other hand, hopes for a more political (or rather geopolitical) co-operation and for the strengthening of Gazprom's position in the European market.

Ewa Paszyc

¹ For example, the Russian foreign policy doctrine assigns priority to economic methods of influence.

² In the 15-year Russian-Kazakh deal of June 2002, Moscow guarantees to transport a minimum of 17.5 million tons per year, and this amount may be increased as Kazakh production grows. According to Russian companies, this policy offers worse conditions to domestic exporters as Russian production volumes increase and the capacity of the Transneft export pipelines remains insufficient.

³ Mainly from the Caspian region. Moscow's campaign against the construction of the Baku–Tbilisi–Ceyhan oil pipeline and the Baku–Tbilisi–Erzurum gas pipeline has failed to prevent the execution of the BTC, but caused substantial delays.

⁴ The Czech Republic is one of the few exceptions – it imports Norwegian gas since 2000 under a 20-year contract concluded in 1997.

⁵ For example, statement by the European Energy and Transport Commissioner Loyola de Palacio (6 Oct. 2000).

⁶ This does not have to entail an increase of the Russian share in the European gas market because the consumption of gas will grow as well.

⁷ For example, President Putin at the meeting of the Russian-German business forum (Weimar, April 2002).

⁸ For example, the gas pipeline transporting Norwegian gas to Poland. International law prohibits the construction of crossing underwater pipelines for safety reasons.

⁹ Yukos pursues the most active “eastern policy” and exports oil and petroleum products to China, though in small amounts for the time being. The concern is also negotiating the construction of an oil pipeline to China (“New markets”, *Neft Rossii*, Dec. 2001).

¹⁰ Data from a Bloomberg report (www.bloomberg.com/markets; 15 Dec. 2002).

¹¹ Towards the end of this year, the Russian government announced that it would decide whether the projected pipeline would connect Angarsk and Dacin (China) reaching a single recipient, or, in a much longer and expensive version, connect Angarsk and Nakhodka with a branch pipeline to Dacin. The problem is how to provide a sufficient volume of oil for the latter solution (a minimum of 50 tons per year, compared to 30 million tons in the case of the Angarsk–Dacin pipeline).

¹² The West–East project assumes that deposits of the Tarim oil field (China) will be developed, a gas pipeline of 4 thousand km in length and a capacity of 12 billion cubic metres (in the first phase) will be constructed and operated, and that gas will be sold in the eastern regions of China.

¹³ For example, transport of Russian oil through Ventspils was suspended as of 2002 in order for Transneft to take over this important terminal.

¹⁴ It is believed that Gazprom inspired the assassinations of Andrei Lukanov (president of Bulgaria's Top Energy) in 1996 and Jan Ducki (president of the Slovak SPP) in 1999. Both these companies had connections to Gazprom and were trying to loosen these ties at the time.

¹⁵ Under the 1998 contract, Gazprom took over the shares the state-owned Bulgargaz had in Topenergy, a company dealing with commercial distribution of gas in Bulgaria, in

return for redeeming its debt. Thus Gazprom became the owner of 100 percent of shares in Topenergy. There was a conflict between the state-owned Bulgargaz and Gazprom-controlled Topenergy concerning gas transit tariffs, among other issues.

¹⁶ The consequences of this policy could be exemplified by the situation of Europogaz, a Polish operator of the Yamal–Western Europe gas pipeline. By influencing appointments to the company's authorities and retaining the status of the sole supplier of gas to Poland, the Russian monopoly has been able to obtain relatively low transit prices and get the local partners to finance a substantial share of the transportation system's development. As a result, the debt of Europogaz exceeds US\$ 1.5 billion (*Puls Biznesu*, 02 Aug. 2002; www.pb.pl).

¹⁷ For example, the Czech Republic can import oil through the Trans Alpine Pipeline and Poland can use the Gdańsk terminal and the Pomeranian Pipeline.

¹⁸ For example, LUKoil tried to participate in the privatisation of the Gdańsk Refinery, a shareholder of the Gdańsk terminal.

¹⁹ The most recent proposal (30 Jul. 2003) made by Wingas was to purchase shares (32 percent) in Verbundnetz Gas (VNG), a gas distributor controlling 80 percent of the East German gas market and 16 percent of the general German market from Ruhrgas. In case Wingas wins, it will get a controlling block of shares in the gas distribution system of East Germany. Wingas intends to use the liberalisation of the European gas market to expand its activities beyond the German border. To this end, Wingas and Gazexport have concluded an agreement on the sale of Russian gas in the exchange markets of Belgium and Great Britain.

²⁰ For example, LUKoil has purchased a chain of gas stations in southern Germany from the merging BP and Aral.

²¹ A refinery loses its price advantage if the end consumer is more than 250 km away. Transporting fuel using pipelines may reduce costs, but the capacity of Russian petroleum product pipelines is small and the distance between Russian refineries and their customers in Western Europe too long (*Środkowoeuropejski rynek paliwowy* (Central European Fuel Markets), a study by the Centre for Economic Studies of the Institute of the Third Republic of Poland, Gdańsk/Warsaw, Oct. 2002).

²² These are the motives of the Russian companies' investment activity in Central Europe noted by the authors of *Środkowoeuropejski rynek paliwowy* (see above).

²³ For more information, see chapter The oil and gas in the “transit countries” of the former USSR.

²⁴ This is one of the reasons why Russian oil companies are interested in the Gdańsk Refinery or Transpetrol (operator of the Slovak section of the Druzhba). In 2002, Yukos bought 49 per cent of Transpetrol.

²⁵ See *Week in the East*, CES, 17 Apr. 2003, *Rosyjsko-turkmeńskie porozumienie gazowe* (Russian-Turkmen Gas Deal).

²⁶ Given the gas production levels shown by Gazprom presently and those projected for the nearest future, the Russian monopoly would very shortly experience difficulties performing its foreign contracts and supplying the internal market. Presently, the concern cannot afford to implement

development projects for new deposits – this would cost billions.

²⁷ The gas deals with Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan are long-term contracts.

²⁸ See *Week in the East*, CES, 13 Jun. 2002, Kazachstan i Rosja zacieśniają współpracę w sektorze surowców energetycznych.

²⁹ See *Week in the East*, CES, 13 Feb. 2003, ŁUKoil silniejszy w Kazachstanie.

³⁰ For more information, see chapter The oil and gas in the “transit countries” of the former USSR.

³¹ See *Week in the East*, CES, 05 Sep. 2002, Jukos przejmuje litewski koncern naftowy.

³² In 2003, the Polish government renegotiated some provisions of this contract.

³³ See *Week in the East*, CES, 19 Dec. 2002, Rosyjska ropa popłynie przez Adriatyk.

³⁴ If Turkey succeeds, this will establish a precedent based on which other European consumer may also renegotiate the terms of their contracts. For more information, see: *Week in the East*, CES, 10 Jul. 2003, Turecko-rosyjski konflikt o Błękitny Potok zaostrza się (The Turkish-Russian conflict over the Blue Stream pipeline intensifies).

³⁵ See *Week in the East*, CES, 20 Dec. 2001, Prywatyzacja czeskiej energetyki.

³⁶ This was covered by *Rzeczpospolita* in the 03 Oct. 2002 article Ostateczny rozpad konsorcjum Rotcha i Łukoila. According to the most recent statements by the concern’s president, LUKoil has not given up its plans to participate in the privatisation of RG. Yukos, too, has repeatedly declared that it was interested in buying the Polish refinery.

³⁷ See RIA RosBusinessConsulting, 05 Feb. 2003, Greeks don’t give in to Lukoil, et. al.

³⁸ Source: <http://europa.eu.int>

³⁹ Cf. <http://www.encharter.org/index.jsp?psk=0602&ptp=tDetail.jsp&pci=24&pti=21>

⁴⁰ Gazprom has already declared it was ready for concessions on this issue.

Chapter 3.

The oil and gas in the “transit countries” of the former USSR

Arkadiusz Sarna

1. The importance of oil and gas sectors in the region. Basic information. Key facilities

1.1. Differing degrees of the oil and gas sectors’ importance for countries of the region

The oil and gas reserves and production of the “transit countries” in the former USSR area, being Ukraine, Belarus, Lithuania, Latvia and Estonia, are of negligible importance on the global scale. Domestically produced hydrocarbons satisfy only a fraction of these countries’ own needs and account for a small portion in their energy balances.

Even though these countries have been undergoing economic transformation for more than a decade now, and their energy resource consumption has dropped significantly since 1991, their economies remain highly energy-intensive (this refers to Belarus and Ukraine in particular). Hence, they remain heavily dependent on imports of oil and gas, the principal energy sources for most of them.

Almost all oil and gas imported into the region comes from Russia. Only Ukraine imports significant quantities of energy resources from Central Asia. However, even Asian supplies have to cross the territory of Russia, a country that controls the main oil and gas transport routes throughout the CIS area. The reliance of newly independent states on energy resource imports has turned out to be a serious economic issue and one of the main factors in these countries’ crucially important relations with Russia.

The region’s most important oil and gas facilities include the transit infrastructure. Proceeds from transit services provided to Russia account for a substantial portion of export revenues in Ukraine, Belarus and the Baltic States. Since the most important routes transporting Russian oil and gas to Europe cross the region, control of this infrastructure is one of the most important assets the region’s countries possess, as far as their relations with Russia are concerned. On the other hand, oil and gas are the main Russian export commodities. For this reason, Russia tries to consolidate its influence on transit infrastructure operations and to take control over the key oil

and gas facilities in the area. Dependence of the region's countries on energy resource imports is Russia's most convenient tool in the implementation of its strategy, which aims to take over major local facilities of the oil and gas sectors. All countries of the region rely on energy resource imports from Russia. The scope of this dependence differs from country to country, though, affecting the energy security of individual states to varying degrees, depending on the weight of imported energy resources in the energy balances of individual countries and the nature of the infrastructural ties between their respective energy sectors and Russia. This impact on energy security is also dependent on the progress of reforms in individual countries, their different political and economic strategies and varying geopolitical outlooks. Because of these differences in situations and prospects, particular countries of the region have different chances of joining the energy co-operation between the EU and Russia, as players in their own right. Ukraine is the only major oil and gas producer among the transit countries. It possesses the region's largest hydrocarbon reserves. As the result of a crisis, exacerbated in the early 1990s by the Soviet Union's disintegration, Ukrainian oil and gas production decreased considerably. In the second half of the 1990s, annual gas production in Ukraine stabilised at around 18 billion cubic metres. Oil production stabilised around 4 million tons annually (Tables IV, V and VII)¹. Gas and oil account for a dominant portion in Ukraine's primary energy balance (approx. 61 percent; gas alone accounts for approx. 45 percent)². Despite the twelve years of transformation and a systematic decline of consumption, Ukraine still utilises huge amounts of gas and substantial quantities of oil (Tables V and VII), because its economy continues to be dominated by the energy-intensive heavy industry. As a result, Ukraine remains one of the world's largest gas importers and the single largest importer in the region³. Nevertheless, under deals signed with Gazprom, Ukraine also exports increasing amounts of gas to Central European countries⁴. Additionally, Ukraine is the main transit country in the Russian gas exports system and a major transit country for Russian oil⁵. Nearly 100 percent of gas consumed in Belarus comes from Russia. Domestically produced oil

accounts for approx. 25 percent of internal demand⁶ and imports come entirely from Russia (Tables V and VII). Belarus shows the highest proportion of gas in the primary energy balance (70 percent) among all countries of the region⁷. To put it simply, the functioning of the Belarusian economy is founded on the cheap Russian "political gas" whose price is correlated with the policy direction currently pursued by President Alexander Lukashenko.

Among the three Baltic States, only Lithuania possesses small gas reserves. None of the republics produce any gas and all of them are fully dependent on Russian imports (Tables V, VII and VIII). Oil deposits in the Lithuanian offshore area are operated on a small scale, providing for a fraction of the republic's demand. Exploitation of oil deposits in the Latvian section of the Baltic shelf is still a matter of the future. In Estonia, oil shale plays an important role. Shale deposits are found in the north-eastern part of the Republic and they provide for as much as 75 percent of the republic's energy consumption. However, liquid fuels made from oil shale account for less than 20 percent of domestic consumption. Gas plays a dominant role in the primary energy balance of Latvia (it accounts for approx. 35 percent) and a substantial one in the balance of Lithuania (31 percent), whose principal energy source (35 percent of the primary energy consumption) is oil imported chiefly from Russia⁸.

1.2. Key infrastructure facilities

Import dependence does not translate directly into the lack of energy security, also due to the fact that Russia has to use the local oil and gas infrastructure, or, more specifically, the transit services it provides.

Russia's main westward oil export connection – the Druzhba pipeline system – crosses Belarus and Ukraine. Ukraine is also the location of the main route for Russia's gas export to Europe. Ukrainian oil terminals in Odessa are an important link in the Russian crude oil export system. Until recently, the Baltic oil terminals (in Latvia's Ventspils, Butinge of Lithuania and in Tallinn) have played equally important roles. After the USSR broke up, the former union republics inherited certain facilities without which the Russian gas export system cannot perform in

a stable manner. These include the giant underground gas storage facilities in Ukraine, notably Europe's largest store in Bilche-Volitsk in western Ukraine, with a storage capacity of 19 billion cubic metres (Ukraine's total gas storage capacity exceeds 30 billion cubic metres), as well as the storage facility in Latvia's Incukalna⁹ with capacity of around 4 billion cubic metres. Other important facilities in the sector include refineries¹⁰. All of them were built back in the Soviet times and were intended to serve the Soviet Union's needs, both in terms of exports and domestic consumption. Beside the major transit pipelines connecting the East with the West, i.e. Europe, the formerly "internal" Soviet pipelines still play an important role today. They include the Ukrainian pipelines that cross eastern Ukraine to reach the south-western parts of the Russian Federation and deliver Russian oil to Russia's largest terminal in Novorossiysk on the Black Sea¹¹.

1.3. The sector's importance to Russia

Taking into account the significance of the region's oil and gas exports to the Russian budget, one has to admit that the oil and gas sectors of these countries – and especially their transit infrastructure – are of fundamental importance for Russia. While Russian companies are gradually taking over petrochemical plants¹², and regional market reforms progress steadily, market potential of the transit countries becomes increasingly significant for Russia – transit countries offer a large outlet for gas and a growing market for oil and petroleum products¹³.

Russia has no choice but to export its oil and gas. In the longer run, it will remain dependent on the European direction of exports. Hence, to continue with the western direction of economic expansion it has to obtain the most favourable export terms possible. This means that Moscow needs to consolidate its influence on the strategic facilities in the region, first and foremost – the transit infrastructure. This is part of a broader strategy to keep the region – Gazprom's canonical territory, as one of the commentators put it – within Russia's zone of influence. The basic tools which Moscow implements in its strategy concerning the region include exploita-

tion of the infrastructural ties between energy sectors of the former Soviet republics and their dependence on energy resource imports as well as impeding any measures taken by the newly independent states to make themselves independent of Russia in terms of energy.

1.4. The sector's importance to the West

From the Western perspective, Russia remains the only major political and economic partner in the region for the time being, and this determines the character of bilateral relations. Other countries of the region, though, will become increasingly important for the West as their reforms continue, their economic potential grows and especially, in case Russia does indeed increase its exports to the EU as forecast. The direction and success of reforms implemented by the Baltic States, to be crowned with their accession to the EU in 2004, have attracted Western investors to the local energy sectors. However, due to the specific ties existing between local energy sectors and the Russian Federation, Western investors are forced to take into account the Russian factor that dominates the region. As a result, Russian companies are gradually taking over control of strategic facilities in the energy sectors, both in the Baltic States (even though the Baltic republics prefer Western capital) and, on a greater scale, in Belarus and Ukraine.

The region offers the shortest route for the exports of Russian energy resources to Europe, which are forecast to rise steadily in the coming years. Provided these projections are correct, it may be necessary for the West to become more intensively involved in ensuring the security of supplies and in the construction of a stable energy bridge between Russia, the resource provider, and the European consumers. Ukraine, and especially Belarus, have no prospects of integration with European structures in the foreseeable future. The status of an energy bridge could be the best insurance policy for their economic sovereignty and an important asset that could potentially help them join in the energy co-operation between Europe and Russia. The role Belarus and Ukraine play in this co-operation will largely determine their international status.

2. Energy policies of countries in the region

2.1. Belarus: Efforts to preserve the status quo

Taking account of the huge role oil and gas play in the energy-intensive Belarusian economy, official documents define priorities of the state's energy policy as implementation of energy-saving programmes¹⁴ and development of a domestic natural resources potential. Some also call for diversification of energy resource supplies. The Belarusian programme for social and economic development in 2001–2005 concludes that "the republic is almost fully dependent" on energy resource imports from Russia, which calls for "development of alternative variants of energy supplies" in view of Belarus' energy security¹⁵. President Lukashenko, whose words frequently mean more in Belarus than official documents, has repeatedly asserted the need to include diversification of gas and oil supplies in the government's plans concerning provision of energy resources¹⁶. In practice, though, such statements are usually little more than an emotional response to the political moves of Moscow and an attempt to press Russia over specific issues involved in the energy co-operation of the two countries¹⁷. The conclusions of official strategies are right, but they never lead to specific measures on the part of Belarusian authorities.

The measures that are actually taken and do affect the energy sector's functioning are in keeping with the general line of Minsk's political and economic strategy. They are largely limited to attempts to preserve the *status quo* of energy relations with Russia, i.e. to secure stable supplies of cheap Russian resources for the energy-intensive Belarusian economy in return for low-cost transit of Russian gas to the West. (Prices on the transport of gas through Belarus are 2.5 times lower than Ukrainian rates and 4 times lower than average European rates¹⁸).

The authorities in Minsk defer fundamental decisions, not only on the political, but also on the economic level related to the actual dimension of the integration. This is evident, for example, in the repeatedly delayed privatisation. Privatisation of the Beltransgaz state monopoly and

the Belarusian petrochemical industry could be a good example of this "avoidance strategy" in energy co-operation.

Russia has long been trying to take control over the state-owned gas monopoly. Pressed by Moscow, which exploits Belarus' dependence on Russian energy resources and its permanent inability to pay for supplies, Minsk finally decided to privatise strategic establishments. In April 2002, Minsk and Moscow signed an agreement on co-operation in the gas sector. It provided that, as of May 2002, internal Russian gas prices should be applied to fuel supplied to Belarus and as of July 1, 2003, a consortium of Beltransgaz and Gazprom should be established. In accordance with schedule, the Belarusian concern was privatised by April 1, 2003, and on April 30, the Securities Commission in Minsk registered Beltransgaz as a company owned 100 percent by the state¹⁹. At this point, though, the privatisation procedure and consortium formation was stopped.

On July 16, 2003, Minsk presented privatisation terms which barred out Russia – an open tender for a minority block of shares in the company, which the Belarusian side evaluated at US\$ 2.5 billion²⁰ (Gazprom had offered a maximum of US\$1 billion for a controlling block of shares). Minsk has been unrelenting over the Beltransgaz issue and privatisation of the petrochemical industry²¹. This has not only caused an impasse in privatisation procedures within the energy sector and a stalling of the joint consortium project, but also seriously impaired mutual relations between Russia and Belarus²². Irrespective of the fate of successive projects to integrate the post-Soviet space, Belarus, being isolated from other political processes taking place in the region, gradually becomes Russia's peripheral bulwark. The energy dependence is one of the key factors that determine the direction and speed of this drift.

2.2. Ukraine: Struggle for a role in the energy game

The situation of Ukraine is better than that of Belarus, owing to the direction and progress of transformation processes that started back in 1991, and to Ukraine's economic potential, including its transit capabilities. Recently imple-

mented reforms, even if frequently incomplete, have streamlined the economy’s functioning over the last several years. As a result, Ukraine is no longer chronically insolvent and can pay for the gas imported from Russia and Turkmenistan. Unlike Belarus, it has admitted foreign investors to its energy market. Consequently, major local refineries were taken over by Russian companies, but simultaneously, Western capital also flew into Ukraine²³. Kyiv also took more active measures to diversify the supplies of energy resources and to make Ukraine less dependent on the Russian monopoly. It has also been trying to participate, as an independent player, in the energy dialogue between Russia and Europe. The largest Ukrainian diversification project is the Eurasian Oil Transportation Corridor (EAOTC). In the first half of the 1990s, Ukraine embarked on the plan to build the Odessa–Brody pipeline as part of the EAOTC. This pipeline was meant to provide Caspian oil to European countries via Ukraine, thus making the region less dependent on Russian supplies. Despite financing problems²⁴, the first line of this connection, as well as a new terminal in Pivdenny to which Caspian oil was to be delivered by tankers, were commissioned already in 2002. On 27 May 2003, the European Commission spelt out its support for this project as a route, albeit still only potential, for transporting Caspian oil to Europe. However, the fate of this major undertaking intended to diversify Ukraine’s supplies and reduce the country’s dependence on Russian oil remains uncertain. This is because there remain a great deal of unsolved business and technical issues²⁵ and because Russia continues to press Ukraine to use the pipeline “temporarily” for the transport of Russian oil in the opposite direction – from Brody to Odessa and further by sea. Nevertheless, it is gas that plays a dominant role in the energy-intensive Ukrainian economy and will continue to do so in the longer term. In spite of the timid attempts at reforms, the gas sector remains in the hands of a state-owned monopoly – the Naftohaz Ukrainy holding that controls gas production, distribution and transit²⁶. Like in Belarus and Russia, the gas monopoly plays an important, though costly, social role by keeping the energy prices low. Limited scale of structural transformation in the sector, scarce presence of Western investors, influence of in-

formal oligarchic groups in the industry – for these and other reasons there have been very few investments in the sector, and plans to increase domestic output have failed. As a result, Ukraine remains dependent on gas imports.

In the foreseeable future, Ukraine has no realistic chances of reducing its dependence on imported gas, which means that it is in fact bound to remain dependent on Russia in this respect. Kyiv tries to diversify the sources of gas supplies by co-operating with Turkmenistan. However, Turkmen gas is delivered to Ukraine *via* the Russian pipeline system. As a result, Ukraine has to seek other ways to counter the actual and potential impact of this dependence on its energy security. Ukraine’s main asset in this respect is its transit gas pipelines – Russia’s main gas export connection with European countries.

Taking account of the importance of these pipelines for Russia and the EU, and the forecast growth of Russian gas imports to the EU, Kyiv has taken active measures to join the Russia–EU energy dialogue. These measures include a project to establish an international consortium with Gazprom and European companies to manage the network of Ukraine’s major transit pipelines. In keeping with the interests of Kyiv, such a consortium would enable Ukraine to keep the revenues and assets of a transit country²⁷. Ukraine initiated talks concerning the future of its gas pipelines with Russia and Western countries after many years of pursuing a policy similar to the present strategy of Belarus, which consisted of efforts to preserve the *gas status quo*. One has the impression that Kyiv decided to begin serious negotiations only after Russia came up with projects to create new gas transport connections with Europe that would bypass Ukraine and thus threatened the Ukrainian monopoly on the transport of Russian gas.

2.3. The Baltic States: a fiasco of the energy security strategy

The progress of reforms and geopolitical prospects set the situation of the Baltic States apart from the predicament of the other former USSR countries that co-operate within the Commonwealth of Independent States. Lithuania, Latvia and Estonia are the only former Soviet republics that embarked on a consistent and, more impor-

tantly, effective system transformation after 1991. In mid 2004, their efforts will be crowned with accession to the European Union.

As part of their geopolitical strategies, the Baltic States took measures to improve their energy security. Already in the first years of independence, Lithuania decided to build the oil terminal in Butinge, with a view to import oil from the West by sea and thus make the Baltic States' only oil refinery in Mazeikiai less dependent on oil imports from Russia.

The policy of attracting Western investments has been an important element in the "Euro-Atlantic strategy" of the Baltic States. In addition to generating economic profits, it was intended to counterbalance Russian influence²⁸. The Baltic States made their markets wide open, more than any other former USSR country and, in some areas, even more than Central European countries. This led to a great influx of investments, mainly from Scandinavia. The investments stimulated further transformation and economic growth, and proved that there was more and more confidence in the Baltic markets and the direction of their reforms. Liberalisation, consistent privatisation and dynamic economic growth in the 1990s were among the reasons that Brussels took into account as it decided to invite the three republics to negotiate their EU accession in 1999.

Transformations in the energy sector aimed to restructure, commercialise and partly privatise strategic facilities with the preferred, Western capital. In this way, Western investors could gradually take over control of the energy sector's key facilities. In 1999, Mazeikiu Nafta, the Lithuanian oil holding in possession of the Baltic States' only oil refinery in Mazeikiai and the Butinge terminal, was privatised and taken over by US-based Williams International. In 2000, the government in Tallinn signed the preliminary agreement for the sale of 49 percent of shares in the country's two largest power plants that generated 90 percent of Estonia's electricity to NRG Energy, another American company²⁹. Lithuania and Latvia, who possess similar amounts of hydrocarbon resources in the Baltic Shelf, invited western investors to explore their fields³⁰.

However, the commitments of Western capital in the local energy sectors of the Baltic States failed to produce the desired results. It appeared

that the determination of Vilnius or Tallinn, the potential of Western investors and a favourable international situation were not enough for the ambitious plans to end energy dependence on Russia to become reality. As a result of pressure from Russia, who cut oil supplies, the US investor was forced to sell its controlling shares in Mazeikiu Nafta to Yukos – a decision the Lithuanian Parliament had to approve in September 2002. Latvia is also being successfully pressed by Russia. As of January 2003, Transneft excluded Ventspils from its schedule of export supplies. Losses resulting from suspension of transit amount to more than a dozen million dollars each month, according to the Latvians. Commentators believe that this is meant to force Riga to approve the taking over of shares in what used to be the largest Baltic export terminal, by the Russians.

3. Grounds of the failure of the region's policy to end its "energy dependence" on Russia. Prospects of the oil and gas sectors in the "transit countries" of the former USSR

Major undertakings in the region intended to reduce its energy dependence on Russia have failed mainly because they ran counter to the interests of the Russian Federation. The two sides' potentials and, consequently, the weight of their arguments, are deeply asymmetric. As a result, countries of the region are usually forced to take account of Russian interests. This refers to all of them without exception, irrespective of the progress of their reforms and future development prospects. Belarus drifts towards Russia, Ukraine tries to manoeuvre its way between Russia and the West and activates its own energy policy, and the Baltic States are rapidly reforming their economies and integrating with the European Union – but all of these countries have been forced in recent years to revise a number of their energy policy objectives under pressure from Russia.

The effectiveness of Russia's policy towards the region is founded on Moscow's overwhelmingly larger potential and consistent implementation

of its long-term strategy. In addition, Moscow has a broad range of instruments at its disposal. It can afford to impose economic blockades that generate losses to Russian companies involved in the region, at the same time affecting the small Baltic economies much more severely. It deals with different countries effectively using the "carrot-and-stick" method, e.g. by skilfully setting gas prices³¹. The authorities in Moscow have the support of powerful allies – the Russian oil companies and Gazprom who frequently implement measures that are consistent with their country's long-term strategy towards the region, even if they are doubtful from the economic point of view³².

Arguments of the region's countries in their relations with Russia are undermined, in addition to the import dependence and disproportion of potentials and assets, by their faltering and inconsistently implemented political and economic strategies. The Baltic States have made a few reckless and poorly considered privatisation decisions that favoured Western investors, but also, they have failed to co-ordinate their actions and engaged in exhausting competition over Russian oil transit, which only made it easier for Russia to press individual republics. In Ukraine, an internal consensus is missing on fundamental issues concerning the future development of the country's oil and gas pipeline network, as demonstrated by the discordant views on the operation priorities of the Odessa–Brody pipeline or formation of the gas consortium. Finally, Belarus is deferring fundamental economic reforms, thus having no options but to keep buying the cheap Russian resources in return for economic concessions.

Strong traditional economic ties have been inherited from the USSR, and new bonds that are forming on this basis involve powerful pro-Russian industry lobbies in individual countries. This, too, has contributed to the consolidation of the gas and oil *status quo* and the failure of attempts to diversify energy resource supplies and to seek alternatives to Russian projects.

All of these factors, exacerbated in the case of Ukraine, and especially Belarus, by the unfavourable investment climate stemming from slow progress of reforms, have deterred major foreign businesses. Guided by economic considerations, they do not regard countries of the region as se-

rious partners for their energy undertakings – the Baltic states do not have sufficient potential, Ukraine spells out contradictory or negative messages concerning investment opportunities³³, and Belarus utters no investment messages at all. The West sees this region in the context of its relations with Russia, which remains the only major, albeit difficult, partner. Russia dictates the terms of co-operation in this part of the world and is not interested in having competitors emerge in the region it regards to be its very own zone of influence. As Western investors show little interest in the region, its countries are doomed to co-operate with Russia on terms determined by the latter, and they cannot counter the impact of unilateral dependence on energy security.

The dependence of the region's oil and gas sectors on Russia seems to be permanent, irrespective of the progress of reforms and the development prospects of individual countries in the upcoming years. Yet its scope and nature, and the resulting threat to energy security and political independence, differ from country to country. The threat is much less serious in the case of the Baltic States, which are less sensitive to Russia's price policy than Ukraine and Belarus and much more stable, especially as they are about to join the European Union. Ukraine, and especially Belarus, are reforming slowly and have no realistic alternatives to cheap Russian energy resources. These countries will remain under the pressure of tight economic and infrastructural bonds dating back to Soviet times. The energy-intensive economies of Ukraine and Belarus are very closely bound with the Russian economy which not only supplies cheap energy, but also offers a market for the products of hundreds of Ukrainian and Belarusian businesses that could not be competitive in the world markets. (The economic growth observed in recent years, especially in Ukraine and Belarus, was largely due to the improved economic situation and increased consumer demand in Russia).

The energy dialogue between the EU and Russia offers Ukraine an opportunity to improve its situation and energy security (in the case of Belarus, this opportunity is purely theoretical). Kyiv faces a chance to become an important link in projects involving the transit of energy resources from the East – not only from Russia – to the West.

Its role, however, hinges on a number of factors, including the development of an energy strategy in keeping with the EU's expectations, the evolution of Russia's policy towards the region (today Russia is reluctant to admit new players to its dialogue with the West), and reforms in Ukraine itself. Hence, it will take more than commitments on the part of the EU – Ukraine, too, will have to show determination and make great efforts. The fate of the gas consortium, possibly involving Western companies, and of the project to transport Caspian oil to Europe *via* the Odessa–Brody pipeline could serve as a test of Ukraine's intentions in this respect.

In varying degrees, all countries of the region remain dependent on proceeds from the transit of Russian oil and gas. Irrespective of the implementation prospects of Russia's new projects to build export oil and gas pipelines bypassing the region, it will remain the main energy resource transport corridor between Russia and Europe for the next couple of years, and Russia will continue to depend on it. This offers countries of the region a good opportunity to develop, in co-operation with the EU, an optimal and more partnership-like model for co-operation between the transit countries of the former USSR, the West and Russia.

Arkadiusz Sarna

¹ 1975 was the year of peak production: Ukraine produced 68.7 billion cubic metres of gas. Oil production reached its peak in 1972 with 14.4 million tons. Source: Naftohaz Ukrainy (<http://www.naftogaz.com/ukr/about/history>).

² Source: www.bp.com

³ Supplies from Russia account for about half of the approx. 60 billion cubic metres of gas imported annually. These supplies are reckoned up for transit services provided by Ukraine to Gazprom (in the late 90s Ukraine obtained approx. 30 billion cubic metres of gas in this way, in 2002 – 26 billion cubic metres, and in 2003 this volume is expected to drop to 24 billion cubic metres). The remainder comes from Turkmenistan, and some quantity of gas is also imported from Uzbekistan. There are plans to import gas from Kazakhstan.

⁴ Naftohaz Ukrainy projects to export 7 billion cubic metres of gas in 2003. By May 2003, the concern had already sold 2 billion cubic metres of gas to Germany, 0.6 billion cubic metres to Hungary, 0.4 billion cubic metres to Romania and 0.3 billion cubic metres to Poland. Source: *Kievskie vedomosti*, 05 Sep. 2003.

⁵ Transit of oil and gas is provided by the state-owned monopoly Naftohaz Ukrainy. In 2001, companies of the holding transited 122.8 billion cubic metres of Russian gas (104.3 cubic metres to Europe and 18.5 billion cubic metres to CIS countries) and approx. 48.6 million tons of oil. Source: Naftohaz Ukrainy, 2001 Report (http://www.naftogaz.com/files/sm14_report2001.pdf).

⁶ Belarus gets small quantities of gas as a side product of oil production (which is also carried out on a small scale) in the Polesia fields. In recent years, Belarus produced less than 2 million tons of oil and 0.2–0.3 billion cubic metres of gas per year (Tables V and VII).

⁷ Source: www.bp.com 99 percent of electricity produced in Belarus comes from oil and gas-fired power plants. Source: Baltic Sea Region, Energy Information Agency (<http://www.eia.doe.gov/emeu/cabs/baltics.html>).

⁸ Source: Baltic Sea Region..., Latvijas Gaze (http://www.lg.lv/uploads/LG_Fakts_ENG.pdf) and www.bp.com

⁹ Built, as the Ukrainian storage facilities, in Soviet times, it ensures stability of the gas supplies system to the Baltic States. Belarus has the Osipovichi storage facility whose operational capacity is 0.36 billion cubic metres of gas. After the Pribug facility with a capacity of 0.48 billion cubic metres is launched (while the construction of another one is being considered), total storage capacity will reach only approx. 8 percent of the economy's annual consumption, much below the 30 percent world standard, which the Baltic and Ukrainian storage facilities do meet. Source: Latvijas Gaze (http://www.lg.lv/uploads/LG_Fakts_ENG.pdf) and: Programma socialno-ekonomicheskogo razvitiya (<http://president.gov.by/rus/programm/pr1.html>).

¹⁰ Ukrainian refineries in Kremenchug, Lysychansk, Kherston, Odessa, Drohobych and Nadvirna; Belarusian plants in Mozyr and Novapolatsk, and the Baltic States' only oil refinery in Mazeikiai, Lithuania.

¹¹ The eastern Ukrainian refinery in Lysychansk, built in the 1980s as Ukraine's largest and most modern plant at the time, was constructed to provide for those markets of southwestern Russia, which form the border area today. For mo-

re information on the plant's problems following the break-up of the USSR see: Arkadiusz Sarna, *Ukraina–Rosja: "Strategiczne partnerstwo", strategiczne... uzależnienie?*, CES Studies, 10 Mar. 1999.

¹² Russian companies have recently taken over control of the region's most important refineries: in Lysychansk (TNK), Odessa (LUKoil), and Mazeikiiai (Yukos). They also hold a substantial influence over the activities of most of the other ones, including plants in Kremenchug (Tatneft), Kherston (formally controlled by Kazakhoil, and managed by the Russian Alians group), and in Mozyr (Slavneft).

¹³ Countries of the region import large amounts of gas from Russia. In 2002, the total volume of their imports exceeded 50 billion cubic metres (Source: IEA, 2003). They also import ever larger amounts of Russian oil (according to data of the Russian customs authority, in 2002, the five countries together imported more than 40 million tons of oil worth approx. US\$ 5.2 billion, i.e. ca 18 percent of Russia's total oil exports).

¹⁴ See, for example: Kabinet Ministrov Respubliki Belarus, *Postanovleniye ob osnovnykh napravleniyakh energeticheskoy politiki Respubliki Belarus na period do 2010 goda*, 5 marta 1996 g. N168, Minsk (<http://pravo2000.by.ru/baza19/d18373.htm>).

¹⁵ *Programma socyalno-ekonomicheskogo razvitiya* (<http://president.gov.by/rus/programm/pr1.html>).

¹⁶ Interfax, 21 Apr. 2000.

¹⁷ See, for example, the address by President Alexander Lukashenko on 7 November 2002. (<http://www.president.gov.by/rus/president/news/archive/november2002/4-8/news0711-3.html>).

¹⁸ Interfax, 24 Sep. 2003.

¹⁹ See *Week in the East*, CES, 24 Jul. 2003, *Kolejne chłodne lato w stosunkach białorusko-rosyjskich*; *Week in the East*, CES, 10 Apr. 2003, *Białoruś–Rosja: ciąg dalszy prywatyzacyjnej rozgrywki*.

²⁰ Svetlana Borzdina, *Ni gaza, ni rubla* (<http://www.gazeta.ru/2003/09/08/nigazanirubl.shtml>).

²¹ The following Russian companies were interested in acquiring shares in the Belarusian petrochemical industry: LUKoil, Itera, Sibur, Surgutneftegas and Slavneft. The Belarusian Ministry of Economy presented the privatisation terms of the four leading establishments of this sector, being Naftan, Polimer, Azot and Khimvolokno, on 3 June 2003 in Minsk. It offered minority 43-percent stakes, among other assets. The Russians found these terms to be unsatisfactory and Sibur withdrew from the tender. See *Week in the East*, CES, 10 Apr. 2003, *Białoruś–Rosja: ciąg dalszy prywatyzacyjnej rozgrywki*.

²² In early September 2003, Russian media reported on a letter sent by the Gazprom CEO Alexei Miller to the leaders of Beltransgaz. In that letter Miller said he was withdrawing from the plans to establish the consortium and intended to revise his concern's price policy towards Belarus as of January 2004. According to Russian commentators, Gazprom made this move in response to Minsk rejecting the Russian variant of the agreement on the introduction of a joint currency, the Russian Ruble, in Belarus as of January 2005.

²³ For example, as early as 1994, Poltavaska Hazonaftova Kompania was established. Today, it is the largest private-owned gas producer in Ukraine, and its strategic investor is JP Kenny, an affiliate of the British JXK Oil&Gas. In 2001, the US-based AES Corporation became the strategic investor of several district electricity distributors as a result of privatisation competitions.

²⁴ Ukraine financed this project from its own funds.

²⁵ Including the absence of contracts with suppliers and consumers of oil and the distant prospect of extending the pipeline to Płock as projected by the EAOTC lobbyists.

²⁶ The concern also controls the domestic oil market (e.g. through shares in Ukrnafta, the country's largest oil producer), including the transit of oil (it does so by managing 100 percent of shares in the state-owned Ukrtransnafta). Ukrtransnafta was established in 2001 as a result of the merger of two state-owned oil transport businesses – the Lviv-based Druzhba and Pridniprovsky Magistralny Naftoprovody of Kremenchug. It manages the Ukrainian oil pipeline system, including the Odessa–Brody pipeline.

²⁷ Among potential Western partners, Ruhrgas and Gaz de France have shown most interest in the project. However, negotiations concerning the establishment of the consortium continue mainly between Russia and Ukraine.

²⁸ See: Joanna Hyndle, Miryna Kutysz, *Lithuania, Latvia and Estonia's Aspirations to Integrate with NATO and the EU in the Context of these Countries' Relations with Russia* (Dążenia Litwy, Łotwy i Estonii do integracji z NATO i UE a stosunki tych krajów z Rosją), CES Studies, number 4, May 2002.

²⁹ In January 2002, Estonia cancelled the power plant sale agreement as it concluded that political motives for this transaction, which could have been the largest privatisation deal, should not override economic uncertainties concerning the sale.

³⁰ Oil in Lithuania is produced on a small but growing scale by the Lithuanian-Danish Minijos Nafta, the Lithuanian-Swedish Genciu Nafta and by Geonafta, a company controlled by the Naftos Gavyba consortium established by two Lithuanian companies, Arada of Switzerland and Petrobaltic and Energopol Trade of Poland. An oil exploration licence covering the Klaipeda territory was also granted to Manifoldas, a company controlled by the Russian-Lithuanian Stella-Vitae.

In April 2002, Latvia granted the Norwegian-US TGS-NOPEC a 5-year licence for oil exploration in the Baltic Shelf. In May 2002, the Ministry of Economy in Riga announced a tender for a 30-year exclusive exploration licence covering the whole of Latvia's Baltic Shelf. (Odin Energy was the only company that responded to the tender). Source: *Baltic Sea Region*, Energy Information Agency, and *An Energy Overview of the Republic of Lithuania*, US Department of Energy.

³¹ For example, Russia offers Belarus the lowest gas prices (presently, approx. US\$ 30 per 1 thousand cubic metres). Prices offered to Ukraine are higher (US\$ 50), and the Baltic States pay the highest rates (approx. US\$ 80). Interfax, 24 Sep. 2003.

³² Apparently, this was the case of the leading Russian companies that pressed Kyiv strongly and concordantly over 'temporary' use of the Odessa–Brody pipeline for the transport of Russian oil in the last months of 2003. According to commentators, diverting the pipeline's direction would be the beginning of the end of the idea to transport Caspian oil to Europe and launch the CIS' first major transport connection independently of Russia. There are opinions that it is doubtful if transporting Russian oil *via* the several hundred kilometres longer route from Brody to Odessa would be cost-effective. Another example of acting against the interests of Russian companies, but consistent with Russia's long-term strategy in the region, is Moscow's decision to stop exporting oil *via* the Ventspils terminal. According to Aivars Lembergs, one of Russia's leading business partners in Latvia, Russian oil companies are losing several million dollars a day on this account. Commentators believe this to be the necessary cost of the strategy intended to force Latvia to allow Russian companies to privatise the terminal.

³³ One example of such contradictory signals is Kyiv's undecided position on the future of the Odessa–Brody pipeline. Negative signals include the problems of Britain's JP Kenny whom local partners tried to exclude from the jointly established in 1994 business, Ukraine's largest private gas producing company. The British Prime Minister Tony Blair had to intervene to protect JP Kenny's interests in 2001. See *Week in the East*, CES, 12 Apr. 2001, Sąd broni praw własności największego na Ukrainie inwestora brytyjskiego.

Chapter 4.

Foreign investments in the oil and gas sectors of CIS energy producers

Iwona Wiśniewska

Following the collapse of the USSR, the newly created states opened to Western investors. However, slow transformation and unfavourable domestic conditions prevented significant foreign direct investments (FDI) inflows. As of end-2001, the CIS region as a whole attracted around US\$ 50 billion FDI, comparing to around US\$ 130 billion in Central and Eastern Europe¹. The bulk of investments in the CIS area went to Russia, Kazakhstan and Azerbaijan. These countries were attractive to foreign investors for their natural wealth, especially their crude oil and natural gas reserves. From investors' point of view, the energy wealth of this region might prove essential to the energy security of the Western markets. Development of a raw material base in the CIS territory may guarantee stability of oil and gas supplies through the diversification of mining sources, and through limiting the significance of the instable Persian Gulf region for the global oil markets. At the same time, CIS deposits may ensure a continuity in supplies as the natural reserves in other world regions (including the North Sea) are depleting, while the rich gas resources in this region supported the prospect for the implementation of EU plans to reduce "black energy" (coal and oil) consumption and replace it with natural gas.

As a consequence, the CIS region has attracted interest of the largest world oil and gas companies, and key players in the international political scene (USA, EU and the like). Yet, in many cases, the interests of the parties engaged have turned out conflicting², and the economic benefits have been intermingled with political targets. This has had a negative impact on the development of oil and gas projects in the region.

1. Investment climate in energy resource rich countries

The realisation of the plans to boost³ production and exports of energy raw materials in the CIS region will largely depend on the influx of foreign capital as domestic funds cannot fully satisfy the needs of this sector⁴.

All the CIS countries have gone through 10 years of turbulent economic and political changes. Particularly worth mentioning are the significant transformations of the legislative base,

aimed at creating laws that would be more transparent and attractive to investors, which have taken place during the last three years. Such changes, however, have failed to set clear and stable rules for running businesses.

The most serious barriers to the influx of investments to these countries are: the instable legislative base, strong links between the economy and the politics, insufficient security of private property rights, weak law enforcement, contradictory legal regulations, corruption and crime. Additional impediments include: long distances to sale markets (of oil and gas), geopolitical position, lack of financing sources and concerns about long-term economic and political stability. Predictable rules of business activity are the precondition for capital influx. This is particularly important in the case of long-term (approx. half a century) and capital-intensive investments as oil and gas sector projects, which require setting clear conditions of investment implementation. One method of limiting the risk of projects in the CIS region is to sign the so-called PSA (Production Sharing Agreement), which is a contract between an investor and a government defining conditions of operating the business. Agreements of this kind, each concerning a particular natural resource project, are concluded between governments and investors (either foreign or domestic). They determine stable conditions of deposit development and exploitation, and of profit allocation. These agreements are long-term (25–40 years), and they intend to ensure predictable conditions for project implementation. Tax rules are subject to individual negotiations for each individual project⁵.

All of the oil and gas producers in the CIS region have applied agreements of this kind to their natural resources sectors and offered similar conditions⁶. However, only a few countries, above all Azerbaijan and Kazakhstan, have deemed PSA beneficial for themselves and have decided to use PSAs on a wider scale. As a result, these countries have attracted relatively more investments than Russia or Turkmenistan, which pursue a rather discouraging (in the case of Turkmenistan, extremely discouraging) policy towards foreign investors.

1.1. The situation of foreign investors in Russia

The conditions of investing in Russia as specified in numerous legislative acts, have formally given investors much freedom in their actions. Already in 1991, under the Investment Code, foreign capital gained the same rights as Russian investors for their operations in Russia. Limitations on foreign investments were only implemented in some, yet important and attractive, economic sectors. For instance a limit (11%) was set on foreign ownership in Gazprom⁷, and it was decided that the oil export network in the Russian Federation could only be owned by state-owned Transneft. Apart from that, a prior permit was required, among other things, in the case of foreign investments in deposit development and in the case of all projects above certain threshold (50 mln roubles)⁸.

The way in which the privatisation of the Russian oil and gas sector was conducted significantly limited foreign investors' access to that process, and caused domination of this sector by Russian entities or companies registered in the so-called tax havens (predominantly of Russian ownership as well). Despite this, following years saw foreign investors entering the Russian natural resource market, among other measures through purchasing shares in enterprises in the secondary market or through participation in subsequent privatisations in the sector (as partners in joint ventures with Russians). Yet, the position of foreign companies was weak, and in many cases, being minority shareholders, they were unable to enforce their rights and have their say in the companies' management⁹. Regardless of their bad experience, foreign investors had not lost their interest in Russian oil and gas sector. As the situation in the country was stabilising, they continued their expansion to this market with increasing determination.

Currently, almost all foreign investments in the Russian oil sector operate under a licence granted for the development of an indicated field, and are subject to general taxation and legal regulations applicable in Russia. Foreign and domestic investors alike have to apply for export quotas and access to Transneft pipelines, pay export duties on the crude oil and oil products they export, etc. Additional risks include the tur-

bulent Russian political scene and frequent legislative innovations¹⁰. The Russian gas market, monopolised by Gazprom, does not leave too much room for private mining companies. Gazprom is reluctant to give access to its transport network to other companies, besides the rules of such co-operation remain extremely obscure.

The idea of introducing production sharing agreements into the Russian oil and gas sector emerged already in the 1970's. The first negotiations on PSAs were held with investors despite the lack of proper legal regulations. It was only the presidential decree of 1993 that permitted signing such agreements. The PSA issue was statutorily regulated as late as in 1996, and works on its amendment have continued since¹¹. As it stands, the PSA law has not really been implemented as other legal regulations were not adjusted accordingly. As a consequence, no agreement has been signed since the law on PSA was passed¹². The only three current PSA projects (Sakhalin-1, Sakhalin-2 and the Khariag field in the Nenets Autonomous Area) function on the basis of the 1993 decree. Numerous difficulties have appeared during the implementation of these projects¹³.

The particularly lengthy legislative process concerning PSAs partly resulted from heavy lobbying by political and business circles¹⁴, which opposed the introduction of PSAs as a popular practice. It is an increasingly more common view in Russia that offering special conditions to investors at the present stage of economic development is no longer necessary to attract investments. At the same time, Russian authorities argue that the example of existing PSAs discourages the government from signing subsequent contracts¹⁵.

The lack of Moscow's decision on the future of PSAs holds back the FDI influx into the oil and gas sector¹⁶. Many investors who bought licences for Russian deposits specified in the PSA law in the mid 1990's have been delaying their project implementation until authorities reach a final decision. The 2003 amendments¹⁷ to the law *de facto* limiting the possibility of signing PSAs in Russia to a minimum, may cause foreign companies to change their strategy and start investing according to the general rules. There is, however, also a risk that deposit licences which have not been used by their holders for a prolon-

ged period, could be withheld by the Russian Ministry of Natural Resources.

The main obstacle to foreign companies' operations in Russia is the state monopoly on transport on the RF territory. The need to obtain consent from Transneft or Gazprom to build alternative transportation networks (which in many cases is impossible) and the unclear mechanisms for getting access to existing pipelines cast doubts on the profitability of potential investments.

1.2. The situation of foreign investors in Kazakhstan

Kazakhstan was trying to create favourable conditions for foreign investors, especially in the raw material sector, already in the mid 1990's. The act of 2003, which currently regulates the investment law, has confirmed equal treatment of both domestic and foreign investors, while maintaining tax preferences and import duty exemptions for imported equipment in case there are no Kazakhstan-produced substitutes. The new law also guarantees the stability of the signed contracts execution conditions. However, the law has limited the access to international arbitration¹⁸ and failed to guarantee the respect of such verdicts.

Kazakhstan has a relatively liberal investment law, still, like Russia, it has set limitations on foreign ownership shares in some sectors of its economy, e.g. banking, telecommunications. It is also possible for the government to refuse foreign investors national treatment in the raw materials sector. Additionally, investors, similarly as in Russia, have been legally obliged to engage domestic contractors in the projects by purchasing goods and services from them. The largest enterprises in which foreign investors have stakes are monitored by state officials. Because the government supervision rules are usually unclear and time-consuming, this procedure delays investors' decision-making.

Foreign companies have been given the opportunity to conduct projects in the raw materials sector either under a licence for development of a given deposit (such activity is subject to the general tax and legal regulations) or under PSAs, which have to be approved by the highest authorities. The rather liberal approach of the

authorities to foreign investors dating back to the mid 1990's has tightened in the recent years. This is especially felt by consortiums which are implementing production sharing agreements. The government has decided that the state-owned concern KazMunaiGaz should be the majority shareholder (51%) in any new project. The authorities are also planning to change the tax law and increase tax levies on oil companies.

Kazakh authorities, similarly to the Russian ones, argue increasingly more often that PSA is not the best solution for Kazakhstan and that deposit development according to the general rules could yield much better results. No new PSAs are likely to be concluded in Kazakhstan.

Major impediments to investments in Kazakhstan include its geopolitical situation, which makes the raw materials less accessible to world markets – there is no direct link to major oil markets, and the Russian pipeline system must be used. From the point of view of foreign investors, one of the main barriers to profitability of prospective investments in the underdeveloped gas sector (Kazakhstan is currently not a significant net exporter of gas) is the transport monopoly held by Gazprom in this region. In the case of Kazakhstan, the only export route goes through Russia and, furthermore, Kazakh gas can only be processed at the Orenburg gas processing plant (Russia).

1.3. The situation of foreign investors in Azerbaijan

Azerbaijan began creating a rather liberal investment law already in the early 1990's. Foreign and domestic investors' rights were equalised. Still, specific restrictions were introduced on FDI inflow in sectors such as oil, power engineering and other important sectors which were reserved for state-owned monopolies. Investments in those industries were subject to approval by the government or even by the president himself, and could be realised in joint ventures with domestic partners only¹⁹.

Until the end of the 1990's, most enterprises in the Azeri oil and gas sector were joint ventures between foreign companies and the state-owned monopolist in the oil and gas sector, SOCAR, and they were governed by the general tax and legal

regulations. The situation changed in 2000, when the authorities decided to liquidate joint ventures in the oil and gas sector and replace them with production sharing agreements, claiming that PSAs were the most beneficial way of investing for both the investors and the state²⁰. Azerbaijan has no law to regulate the production sharing agreements issues; each agreement is individually negotiated and then ratified by parliament. Part of the privileges provided for by PSAs (including import duty exemptions) also apply to the subcontractors and suppliers of oil companies.

The Azeri authorities has opened their oil and gas sector to foreign investors, offering them substantial freedom of action. They strongly supported both deposit development and the extension of Caucasian transit routes. A serious obstacle²¹ in accessing some of the off-shore Caspian Sea fields is the unresolved status of this area. In 2002, Azerbaijan signed a delimitation agreement with Russia, yet essential questions concerning the division of the most disputed southern part of the waters have not been settled with Iran and Turkmenistan. Investors also face problems connected with the geopolitical situation of Azerbaijan, which has enormous significance, especially in case of development of the Caucasian transport routes. Although the governments of the countries involved are not causing any formal troubles for investors, the ethnic conflicts (e.g. the Nagorno-Karabakh or Abkhaz conflicts) pose a threat to the planned pipelines in this region.

Currently, the development of the Azeri gas sector is seriously hampered by the lack of export pipelines from the South Caucasus. The existing Russian routes provide for supplies to the region but not out of it.

1.4. The situation of foreign investors in Turkmenistan

Turkmenistan was trying to arouse foreign investors' interest in its natural resources, especially in natural gas, in the mid 1990's. It even included laws on production sharing agreements in its legislation, yet restrictions put on foreign investors discouraged them from involvement in this country. Investors have no access to the export network and thus no practical possibility

of exports. All pipelines belong to state-owned enterprises. Foreign companies can only sell raw materials in the domestic market at prices regulated by the authorities (which are much lower than global prices)²².

As a consequence of such actions, according to UNCTAD estimates²³, only approx. US\$ 1 billion was invested in this country by the end of 2001, 90% of which went to the gas and oil sector. The construction of the gas pipeline to Iran (in 1998) and the growth of gas output in the recent years were possible mainly thanks to state outlays and not to foreign capital. Additionally, Turkmenistan has limited access to consumers who are ready to pay global prices for its gas. The limitations put on gas transfer by Gazprom and the small capacity of the pipeline going to Iran – the only alternative to the Russian routes, impede the development of the Turkmen gas sector.

2. Foreign investments in the region

2.1. Russia

The rather unfavourable climate for investments which persists in Russia, has deterred inflows of FDI. By the end of 2002, cumulative inflows amounted to only US\$ 22 billion (Table 1), or US\$ 160 *per capita*, which compares to, respectively US\$ 45 billion and US\$ 1,200 in Poland. The main investors include American companies, which have laid out over US\$ 4 billion, and Cypriot companies²⁴, which have invested US\$ 3.6 billion. Large investment stakes also fall to Dutch, British and German capital.

Almost half of total FDI inflows (approx. US\$ 10 billion; as per end of 2002) went into the Russian oil and gas sector²⁵. Over US\$ 3 billion²⁶ of that amount was allocated for the Sakhalin projects,

and approx. US\$ 2 billion was spent on the construction of the Tengiz–Novorossiysk Caspian pipeline (CPC).

All the large global companies are present in the Russian market. Foreign investors mainly participate in the most capital-intensive projects, aimed at developing new deposits in Russia. This characterises both the Sakhalin investments and the potential investment by BP in the Kovykta gas field²⁷. Western companies also want to develop distribution networks for their own products in Russia, and sell technologies and facilities used by raw materials processing plants (refineries, petrochemical plants) or by enterprises producing equipment for the needs of the sector.

Even though Western capital has played a key role in the implementation of most of Russia's new projects (e.g. the Blue Stream gas pipeline or CPC oil pipeline), foreign involvement in the Russian oil and gas sector (mining, exports) remains small. Most of the projects which foreign companies take part in are currently in the initial phase of implementation. As the Sakhalin projects develop and BP's investments are made in TNK²⁸, the statistical data on foreign consortiums may improve. Yet, escaping Russian domination in this sector is rather impossible. It is the Russian corporations that have a lion's share in raw materials production and exports, and rather high oil and gas prices in recent years have enabled them to accumulate enough capital to make multibillion investments in the domestic oil and gas sector. In 2000–2002, Russian oil companies allocated more than US\$ 5 billion for investments annually, most of which remained in the domestic market²⁹. A great majority of such outlays have, however, been invested in deposits which are already being mined, and not in the development of new ones.

Table 1. FDI inflows to selected CIS countries, 1996–2002 (US\$ billion)

	End-1996 stock	1997	1998	1999	2000	2001	2002	End-2002 stock
Azerbaijan	1.0	1.1	1.0	0.5	0.1	0.2	1.1	5.5
Kazakhstan	4.0	1.3	1.2	1.5	1.3	2.8	2.6	15.4
Russia	7.9	4.9	2.8	3.3	2.7	2.5	2.4	22.6

Source: UNCTAD 2003

The BP has recently been one of the most active investors in the Russian market. The corporation has decided to strengthen its position in Russia through a joint-venture with the Tyumen Oil Company (TNK), the fourth largest oil company in Russia. Relatively large capital has also been invested in the Russian Federation by Shell, which is engaged in the Sakhalin project and which has a licence for the Salimskoye fields (in the Khanty-Mansi Autonomous Area).

2.2. Kazakhstan

According to UNCTAD data, by the end of 2002, Kazakhstan received US\$ 15.4 billion in foreign direct investments, which is approximately US\$ 900 *per capita*. The main investors were the United States (approx. US\$ 6 billion) and the United Kingdom (over US\$ 2 billion)³⁰. Kazakhstan owes such a relatively high FDI inflow (as compared to Russia) to the opening of its oil and gas sector to foreign investors and to offering them favourable business conditions. A majority of FDI, i.e. approx. US\$ 10 billion, went into the Kazakh oil and gas sector³¹.

Foreign investors' goal is to develop the Kazakh oilfields and extend its transportation pipelines. The already invested capital has contributed to increasing production levels in the recent years. In 2001, almost half of the oil output in Kazakhstan came from the fields exploited by international consortiums (mainly Tengiz). The share of foreign investors in the Kazakh oil output will grow in subsequent years as the currently developed projects enter the production phase (Table III).

Oil exports to global markets and further development of the sector are going to be supported by investments in the transportation infrastructure. The Tengiz field has already been linked to Novorossiysk on the Black Sea coast by CPC pipeline and a new oil pipeline has provided a connection for Karachaganak to this route. Transfer routes connecting the Kazakh pipelines with the Russian transfer system (e.g. Atyrau–Samara) are being expanded, too.

Western companies are also interested in investing in the Kazakh petroleum refining industry. One of the three existing refineries, in Shymkent, has already been bought by the Canadian Hurricane Hydrocarbons, while the other two – in Atyrau (currently being modernised by Japa-

nese companies) and in Pavlodar – are still state-owned.

The American oil and gas concern, ChevronTexaco, is the largest foreign investor in Kazakhstan. It participates in key Kazakh oil projects (Tengiz, Karachaganak, CPC), which has made it the largest oil producer in this country. The company's investments in Kazakhstan have exceeded US\$ 2 billion. The importance of the Italian ENI has grown throughout recent years. The company is engaged in the Karachaganak project (its total outlays will reach US\$ 1.6 billion) and in works on the Kashagan deposit in the Caspian Sea, which may prove a great success in the long term (according to initial research). ENI, like most oil concerns present in Kazakhstan, is a shareholder in the CPC consortium (Table III). The Kazakh market has also received more and more investments from the Chinese companies, which not only engage in field development, but are also planning to build a pipeline to their country. Interestingly enough, there is only one Russian company, LUKoil, which has invested approx. US\$ 1 billion³² in this market, thus placing itself among the key foreign investors in Kazakhstan. It exploits the Kumkol field jointly with Hurricane-Kumkol, has 15% stakes in Karachaganak, and together with the American Arco, it is a minor shareholder (5%) in the consortium which is developing Tengiz.

Even though, according to estimates, Kazakhstan has quite vast gas reserves, its export levels are low (Table VII). The investments made so far in this sector have only caused a slight growth in gas output. In 2002, KazRosGaz, a company founded by KazMunaiGaz and Gazprom, launched a programme for the modernisation and expansion of the Kazakh gas network, estimated for US\$ 0.5 billion. This investment is meant to help boost Kazakh gas production and to increase its transit capacity, so that it could be used for transportation of Turkmen and Uzbek gas.

2.3. Azerbaijan

Azerbaijan ranks third among the CIS countries in terms of the cumulated FDI inflows value. According to UNCTAD data as per end of 2002, their value reached US\$ 5.5 billion. In *per capita* terms this translates to around US\$ 700, much

above the level in Russia. The major investors include the United States and the United Kingdom, each with a 25% share of all investments. A great role is also played by Turkish, Norwegian and Russian capital. Azerbaijan, similarly to Kazakhstan, owes such a relatively intense inflow of foreign investments to the opening of its oil and gas sector to Western companies, for this sector has absorbed almost 85% of all FDI in Azerbaijan (approx. US\$ 4.6 billion).

Like in Kazakhstan, Western companies³³ began operations in the South Caucasus by expanding major oil pipelines. In the first stage of its activity in Azerbaijan, the consortium which Western companies participated in, modernised the oil pipeline going from Baku to the Georgian port of Supsa. This pipeline was the first not to pass through the Russian territory and it shortened the oil transfer route to the Black Sea. Direct access to the Mediterranean Sea and to global oil consumers can only be ensured by the Baku–Tbilisi–Ceyhan (BTC) pipeline project, which is being implemented by Western companies, with great support from the US Administration. Completion of this transport route is scheduled for late 2004. In the meantime, fields that will provide supplies for the pipeline are going to be prepared for exploitation. Western investors also hope that the BTC can in future be used to transport the Kazakh oil after a major boost in output there. In recent years, Western companies have been more and more readily investing in enterprises manufacturing goods and rendering services for the needs of the oil and gas sector. Such companies as the American Halliburton or Norway's Kvaerer are already there.

Thanks to foreign investments in the Azeri oil sector, the production levels of this raw material have risen. However, until 2002, more than half of the oil mined in Azerbaijan was produced by SOCAR.

Development of the gas sector is bound to be another step towards strengthening the presence of foreign companies in Azerbaijan. Although the country has quite rich gas reserves, its domestic demand is met by imports from Russia to a great extent. The key Azeri gas field, Shah Deniz (Table III), which is now being developed, may change the situation of Azerbaijan in the nearest years. Yet, investors will have to wait for

commercial gas mining until the pipeline going from Baku through Tbilisi to the Turkish Erzurum³⁴ is built. This should take place in 2006. The project is being implemented by corporations³⁵ which are also engaged in developing Azeri deposits. The pipeline could also be used in the future to export Turkmen gas.

So far, BP has been the largest foreign investor in Azerbaijan. The concern is the largest shareholder in the consortium which struck the Azeri “deal of the century”, concerning the Azeri–Chirag–Guneshli oilfield. BP's investments in the project as per end of 2003 are estimated at approx. US\$ 3.3 billion. The British company is also engaged in the construction of the pipeline going to Turkey (BTC). Apart from that, BP holds 25% of shares in the largest Azeri gas project, Shah Deniz.

3. Summary

Russia, Kazakhstan, and Azerbaijan – major producers of energy raw materials – have attracted bulk of FDI inflows to the whole CIS region, which nevertheless is not a lot in international comparison. Majority of investments went to the oil and gas sectors and in fact it was resource plenitude that attracted key global players to the region.

The investment inflows to particular countries have been largely determined by policies towards FDI. Russia, by far the largest and potentially the most tempting market, has attracted less investments than Kazakhstan or Azerbaijan if measured in *per capita* terms. This is the direct result of the privatisation of the oil sector in the early 1990's, the authorities' hesitations in defining conditions for investments in the raw materials sector, and the state monopoly over oil and gas transport, along with an unclear mechanism of access to the pipelines. As a consequence, the foreign share in the Russian energy raw materials production and exports remains insignificant. Additionally, such modest investments in the Russian domestic transport infrastructure pose a threat to the security of raw materials transport in the future, especially in light of the expected production boost.

Kazakh and Azeri authorities have adopted quite a different policy. These countries have decided

to open their raw materials sector to foreign capital, offering the companies much freedom of action. Foreign investors have contributed to the increase of crude oil output in these countries and to the development of their transport infrastructure, enabling exports of raw materials. However, the rather complicated geopolitical situation and domestic policy of these countries delay or even impede the realisation of investment projects.

The gas sector in the CIS is still being controlled by Gazprom, which, due to its transport monopoly and strong informal links with the Russian elites, is able to affect the development rate of this sector in the region. Breaking Gazprom's monopoly may prove extremely difficult, if not impossible, in the nearest years.

Most foreign investment projects in the three countries under discussion have only entered initial implementation phases. Achieving the peak output for these deposits is a matter of the next 5–10 years. Yet, further multibillion investments are needed to reach the goal.

To succeed, many enterprises in the Caspian region also need confirmation of the initial estimates of oil and gas stocks and, above all, good political will of the authorities governing the region. Foreign companies' plans to diversify the transportation network in CIS territory are at variance with Russian objectives. This conflict of interest may either cause delay in the projects' realisation or curtail their profitability.

Iwona Wiśniewska

¹ United Nations Conference on Trade and Development (UNCTAD), Statistical databases 2003.

² The main conflict of interests concerns the development of transport routes in the CIS area. Currently, the transportation network in the region is dependent upon Russian pipelines. It is in the Russian interest not only to preserve this monopoly, but even to tighten it, while foreign corporations and raw material consumers are determined to diversify these routes.

³ For example, the oil output in Kazakhstan is to increase almost threefold within the next 10 years.

⁴ During the last few years, the largest domestic investments in the energy sector have been made in Russia. Nevertheless such investments have failed to satisfy the investment needs of this sector. Annually, approx. US\$ 8–9 billion have been laid out in the oil and gas sector, while the estimated needs of the sector are approx. US\$ 15–17 billion; Neftianoy complex Rossii i yego rol v vosproizvodstvenno-m processie, www.rusenergy.com, 2003.

⁵ A Note on Production Sharing in Russia, Economic Survey of Europe, 1998/3, United Nations.

⁶ The Russian variant of PSA (functioning in a similar form in other post-Soviet countries) provides that an investor pays royalty, i.e. a fee to the state for using state-owned deposits (approx. 6–16% of the output). The output is then divided into two parts: one part (cost) is given to the investor to cover the mining expenses, and the other (profit) is shared between an investor and the state in compliance with the rules of a contract. An investor pays profit tax from his share. These are basically the sole fiscal levies imposed on an investor, who does not pay VAT, excise duties, export or import duties on goods, machines and services necessary for contract implementation. Yet, throughout the entire duration of the project, an investor has to purchase 70% of the necessary devices, machines and services from domestic producers and manufacturers. A Note on Production Sharing in Russia, *op.cit.*

⁷ Yet, Ruhrgas has managed to increase its shares in Gazprom without any legal problems by buying additional shares in the concern through a joint venture company. Russia Country Commercial Guide 2002, U.S. & Foreign Commercial Service, U.S. Department of Commerce.

⁸ Russia Country Commercial Guide 2002, *op.cit.*

⁹ *Ibidem.*

¹⁰ In 2002, for instance, the taxation system for the raw material sector was changed; a tax on natural resource production was imposed, which *de facto* increased the fiscal levies imposed on oil companies. For more information see the RF Ministry of Taxes <http://www.nalog.ru/news/anons02/0210.shtml>, See also: D. Doeh, O. Kravtsova, Yet Another New Oil and Gas Regime for Russia?, *Russian Energy & Mining Law Journal*, 1/2003.

¹¹ As a consequence of the amendments, the list of deposits which could be developed under PSAs has been changed repeatedly, and it was decided in spring 2003 that the PSA regime could *de facto* only be extended to such fields as: Shtokman and Prirazlomnoye (licence by Gazprom/Rosneft), Sakhalin-3 (Rosneft/ExxonMobil/ChevronTexaco) and Ko-

vykta (TNK-BP). See: *The Kiss of Death to PSAs, Russia Oil & Gas Yearbook, Renaissance Capital.*

¹² In addition to the legislative issues, the problems connected with signing PSAs also arose due to the limited capabilities of raw material transport out of Russia. Transneft, having monopoly over the transport network, was reluctant to sign long-term contracts.

¹³ For instance, the authorities of the Nenets Autonomous Area deemed unreasonable some of the costs assessed by the investors (in 2001–2002) working on the Khariag field. The dispute has been referred to a court of arbitration. See: Dmitry Simakov, Alexandr Tutushkin, SRP vnov stradayet, *Vedomosti*, 23.06.2003.

¹⁴ Before the amendments were put to vote in spring 2003, Yukos, the second largest oil company in Russia, was oddly remarkably engaged in the anti-PSA campaign. For more detail see: A. Nedogonov, Yukos vs. SRP, www.rusenergy.com, 12.02.2003.

¹⁵ According to the Ministry of Economy, the state's tax revenue from such projects as well as the level of their engagement in the projects of domestic entrepreneurs, manufacturers or employees are insufficient. During 1994–2002, fiscal revenues from the three projects amounted to some US\$ 260 million.

¹⁶ For instance Shell received a licence for development of Salimskoye field in 1993, yet the company was holding back with its works until 2003, when its illusions about the possibility of signing a PSA on this deposit were dispelled. The concern decided it would invest in the project approx. US\$ 1 billion on the general conditions. Yet, it appeared that it had to first dissuade the Ministry of Natural Resources from taking away its licence. For more information see: A. Tutushkin, Shell vlozhit 1 mld US\$ v Sibiri, *Vedomosti*, 17.09.2003.

¹⁷ *The Kiss of Death to PSAs, Russia Oil & Gas Yearbook, Renaissance Capital*, or J. Kogtev, SRP: zhizn posle smerti, www.rusenergy.com, 19.05.2003.

¹⁸ For more details see: *Country Commercial Guide Kazakhstan, Fiscal Year 2004*, U.S. Department of Commerce, July 2003.

¹⁹ For more details see: *2003 Azerbaijan Country Commercial Guide*, U.S. Department of Commerce 2002.

²⁰ *Azerbaijan Country Analysis Brief*, U.S. Energy Information Administration, June 2003.

²¹ In July and August 2001, Teheran resorted to threats of a military solution to the problem of exploitation of the disputable field by Azerbaijan. For more information see: *Week in the East*, CES 14.03.2002, *Napięcia w rejonie Morza Kaspijskiego*.

²² *Turkmenistan Country Analysis Brief*, U.S. Energy Information Administration, May 2002.

²³ Such data should be handled with great caution because of their low reliability.

²⁴ This is mostly reinvested Russian capital.

²⁵ Author's own estimates based on data given by www.rusenergy.com and Interfax.

²⁶ *Sakhalin Investment Administration Agency*, www.rusenergy.com, 12.03.2003.

²⁷ The licence for the Kovykta field is held by Russia Petroleum, 33% of whose shares are held by BP and 29% by TNK. Currently, a report on the technical and economic feasibility of the project's realisation is being prepared.

²⁸ TNK and BP commenced the process of merging their Russian and Ukrainian assets in September 2003. TNK International owns: shares in the following Russian oil companies: TNK (97%), ONAKO (92%), Sidanko (57.7%), Slavneft (50%) and Russia Petroleum (29%). BP owns: 25% Sidanko, 33% Russia Petroleum, apart from that it holds shares in the projects Sakhalin-4 (49%) and Sakhalin-5 (49%), and 75% of shares in the PetrolComplex filling station network (Moscow and Podmoskovye). BP is going to pay TNK more than US\$ 7 billion in the next three years.

²⁹ Y. Bushuyeva, V. Volkov, Neftianiy giganty ekonomiat, *Vedomosti*, 24.01.2003.

³⁰ *Country Commercial Guide Kazakhstan, Fiscal Year 2004*, *op.cit.*

³¹ *Ibidem.*

³² Quote Vagit Alekperov, president of LUKoil, Interfax 2003.

³³ Practically only one Russian company is present in the Azeri oil sector, LUKoil, which by the end of 2002 had invested approx. US\$ 0.5 billion. The company, among other things, is involved in the Yalama deposit and owns filling stations. LUKoil has recently withdrawn from the Azeri, Chirag, Guneshli fields and does not take part in the BTC building consortium. Gazprom holds a strong position as a gas supplier in Azerbaijan.

³⁴ In Erzurum, the BTC route will be included in the Turkish transfer network, which is already linked to European gas pipelines.

³⁵ Technical and economic feasibility studies for the project have been conducted so far.

Chapter 5. Oil and gas wealth – the impact on development prospects of CIS countries

Wojciech Paczyński

Increasing oil revenues do not imply increasing wealth.

– Svein Gjedrem, governor, Norwegian Central Bank

Our country is rich, but our people are poor.

– Vladimir Putin, president of Russia¹

In this paper we look at the impact from the energy resource wealth to development prospects of Commonwealth of Independent States (CIS) countries. We present evidence on the importance of oil and gas sectors for the selected CIS economies and highlight the chances and risks to economic growth and social progress that are related to the abundance of oil and gas. The discussion concerns both long term trends and short term policy dilemmas. The major conclusion is that while vast deposits of energy commodities create a chance for faster growth and reduction of poverty they also generate a number of problems for economic and social policies. Given the current condition of state institutions and political situation in CIS countries one should be very cautious in presenting overly optimistic scenarios. Despite the positive short-term outlook, there is a risk that some resource rich countries might fail to make best use of the wealth hidden below their soil.

The introductory section briefly describes the evidence from resource-rich countries indicating that oil wealth turned out to be a curse rather than blessing in a number of cases. In the second part the role of commodities sector in the economies of Russia, Kazakhstan and Azerbaijan is discussed and some ensuing policy challenges are presented. Concluding part considers development outlook of the analysed countries.

1. The “resource curse” – historical evidence

The deposits of natural resources should be normally expected to boost wealth and to countries where they happen to be located thus bringing them prosperity. Yet, the development experience of countries with significant natural resource reserves is disappointing. One does not observe a positive relationship between abundance of oil, gold, diamonds, etc. and economic growth. If anything, there seem to be evidence that countries blessed by nature on average perform worse than countries without any sizeable natural resource deposits. The blessing can in fact become a curse. Certainly, there is a substantial variation in experience of particular countries. One success story often referred to in literature is

diamonds-rich Botswana which has had the highest rate of *per capita* growth of any country in the world for the last 35 years². However, the examples of catastrophic development outcomes in countries with natural resources deposits, particularly oil, seem to be more typical³. Several hypotheses were proposed trying to explain such outcomes.

The first such hypothesis is commonly referred to as “Dutch Disease”. The basic mechanism can be described as follows. An increase in resource-based revenues of the country (from oil and gas exports) leads to increased income in the country and consequently higher demand. Part of that demand boost is concentrated on the domestic non-tradeables. This results in an increase of prices of non-tradeables relative to tradeables (since the price of tradeables is fixed internationally), that is an appreciation of the real exchange rate. Consequently, domestic production resources (labour) are shifted from the domestic tradable sector (non-resource industry) towards the sector producing non-tradeables (primarily services). As a result domestic tradable sector shrinks⁴.

For this story to explain the overall poor growth performance of energy-rich countries one needs some additional assumptions such as more pronounced increasing returns in manufacturing relative to the resource related sectors or higher productivity growth in manufacturing relative to other sectors. There are still many controversies whether the “Dutch Disease” mechanism can indeed be considered an important mechanism behind the resource curse evidence⁵.

Yet another set of explanations highlights the impact of volatility of commodity prices as an important factor hindering growth. Indeed, one of the standard stylised facts of commodities is that their prices tend to exhibit higher volatility than prices of manufactured goods and that if anything this volatility has increased in the last two decades or so⁶. Terms of trade shocks stemming from international commodity prices’ fluctuations certainly pose a challenge to macroeconomic policies but the whole mechanism should rather be seen as acting on top of other channels.

One hypothesis that has received increased attention recently is that the abundance of natural resources tends to have a detrimental effect on the quality of state institutions that in turn appear to be important determinants of economic development. Empirical evidence seems to confirm the negative impact from fuels and other mineral resources to the quality of institutions. Other natural resources (e.g. agricultural ones) do not appear to impair on the quality of institutions. Fuel minerals are particularly likely to create conditions for lobbying for and allocation of the rents. This might be due to the fact that such resources are location-specific, involve large initial investments but are characterised by low labour and other costs of operations once the infrastructure is already in place. The secure rights to infrastructure (oil or gas fields themselves and transportation infrastructure) are a vital condition for securing revenues to finance initial investments⁷.

2. FSU country studies

In this section we highlight some specific macroeconomic issues in selected energy rich CIS countries that could help in relating the “resource curse” literature to the specific situation of these post-communist economies and form a basis for an outlook presented in the concluding section.

2.1. The relative size of the oil and gas sector

The precise estimation of the share of the oil and gas sector in the economies of Russia, Kazakhstan and Azerbaijan is difficult, though there is little controversy that it is very substantial. The major problem in estimating the numbers is that there are strong links with other sectors providing supporting goods and services (e.g. constructions works). This can be clearly illustrated by the examples of Kazakhstan and Azerbaijan where the oil sectors are at the early stage of development and thus demand high investment. The relative boom in construction, transportation and other services largely owes to demand created by oil and gas investment projects and fluctuates along the timing of specific development phases. For example building

of the Baku–Supsa pipeline brought the construction sector's share in Azerbaijani GDP to well above 10% in 1998–1999 before it fell to 6% of GDP in 2001.

No reliable estimate of the oil and gas share in total value added in the economy was available for Russia. In Kazakhstan, IMF estimates indicate that the share of oil sector in the broad sense in total value added increased from below 10% in 1998 to close to 20% in 2000–2001 and above 20% in 2002⁸. In Azerbaijan, rising oil exploration and exports (1998–1999) and increase in the global prices for these commodities (2000–2002) brought the sector's share in the whole economy up from 11% in 1998 to around 30% in 2000–2002 (Table 1). Given the development of new projects the upward trend is very likely to continue in Azerbaijan and Kazakhstan. Russia has more mature oil and gas sector and one should expect that price fluctuations will have a major impact on the share in total value added.

An expansion of oil and gas sectors was one of the major driving forces of economic growth drivers in all three analysed countries during 1999–2003. Again, the precise estimates are difficult to obtain for Russia⁹. In Kazakhstan, oil sector exhibited very high rates of growth, expanding by some 140% in 1998–2002, compared to over 20% in the non-oil sector. Still, non-oil sector contributed slightly more to overall GDP growth over that period than did the oil sector. In Azerbaijan, non-oil part of the economy was in recent years expanding faster than the (narrowly defined) oil sector. However, once we exclude the services sector (booming in response to demand from developing oil projects) it is evident that non-oil industry has been on the decline.

Clearly, the share of the sector in the total value added is not the only indication of the importance of energy commodities for the whole economy. Other important indicators are provided by the commodity structure of foreign trade, by the composition of fiscal revenues and an impact on macroeconomic policies, in particular monetary policy.

2.2. Foreign trade structure

Oil and gas currently dominate in the export structure making up between 50% (Kazakhstan) and above 90% (Azerbaijan) of total exports of the analysed countries. As illustrated in Table 2 these shares have increased dramatically since mid-1990s as a result of a combination of three processes: rising commodity export volumes, falling or stagnant other exports and an increase in international oil prices that occurred in 2000–2003¹⁰.

In all three countries export volumes of energy commodities are expected to be rising during the next several years, particularly in Kazakhstan (doubling of export volumes expected between 2002 and 2009) and Azerbaijan (in this case the peak in production is expected around 2008–2010). The development of international prices cannot be predicted but the consensus appears to be that average oil prices should fall from very high levels observed in 2000 and early 2001 and then again from late 2002 up till present (late 2003). There are no reasons to expect reduced volatility of prices. In particular one cannot exclude a deep and prolonged drop in prices, such as the one observed in 1998 and early 1999. Consequently, revenues from oil and gas exports will inevitably remain uncertain. From the perspective of the whole economies it is particularly important that other non-commodity

Table 1. Structure of GDP in Azerbaijan, 1998–2002 (% of GDP)

	1998	1999	2000	2001	2002
Industry & construction	35	39	42	43	46
Of which: oil and gas sector	11	20	30	32	29
Agriculture	18	18	16	15	14
Other	47	43	42	42	40

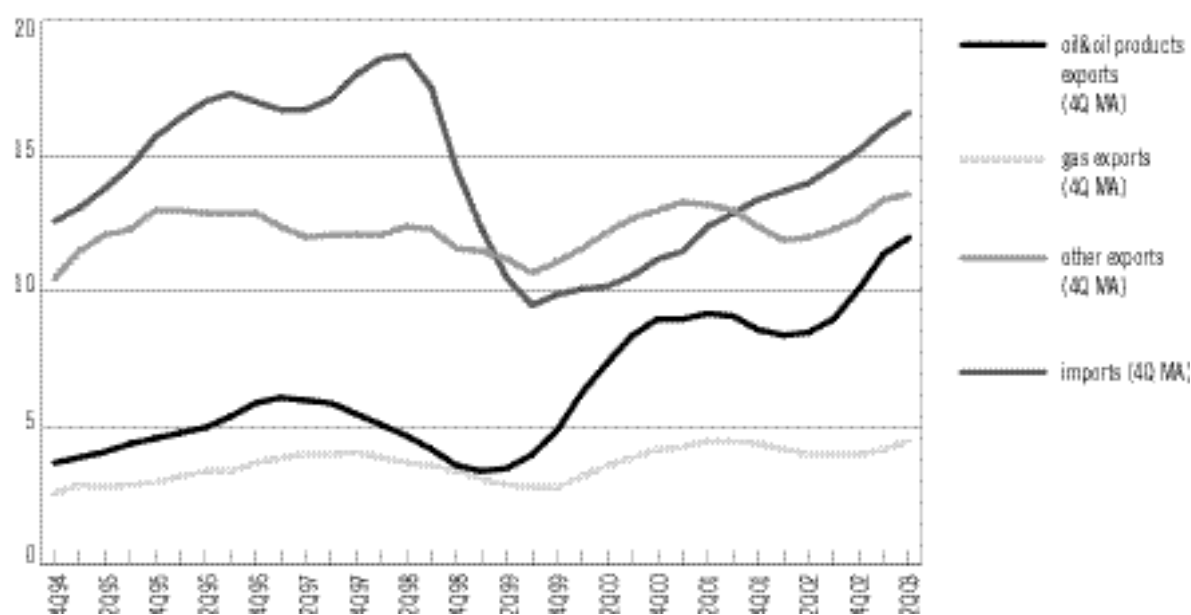
Source: IMF, Azerbaijan country reports (various issues).

sectors maintain their competitiveness. In this respect the evidence from 1995–2003 is generally disappointing (see Table 2). Figure 1 presents the developments in Russia. It is striking to see the value of non-energy exports being stagnant (in US\$ terms) over the whole 1994–2003 period despite the major swings in the real effective exchange rate of the rouble. Some increase visible in late 2002 and early 2003 is in part simply

explained by the depreciation of the dollar versus the euro.

The situation in Kazakhstan and Azerbaijan was similar. The overall growth in exports can be solely attributed to the growth in the value of oil and oil product exports. An unfavourable business climate remains one of the major reasons behind such weak results.

Figure 1. Russia's quarterly exports – four quarter moving averages, 1994–2Q 2003 (US\$ billion)



Source: Own calculations based on CBR balance of payment data.

Table 2. Commodity structure of foreign trade, 1995–2002 (US\$ billion)

	1995	1996	1997	1998	1999	2000	2001	2002
Russia								
Merchandise exports	82	90	87	74	76	105	102	107
Of which: oil&gas exports	30	38	38	28	31	53	52	56
Of which: other exports	52	52	48	47	45	52	50	51
Merchandise imports	63	68	72	58	40	45	54	61
Kazakhstan								
Merchandise exports	..	..	..	5.9	6.1	9.5	9.1	10.2
Of which: oil&gas exports	..	..	..	1.7	2.2	4.4	4.5	5.2
Of which: other exports	..	..	..	4.2	4.0	5.0	4.7	5.0
Merchandise imports	6.7	5.6	6.9	7.6	7.7	6.7	5.6	6.9
Azerbaijan								
Merchandise exports	0.68	0.79	0.81	0.68	1.03	1.80	2.05	2.31
Of which: oil exports	0.34	0.55	0.48	0.45	0.80	1.52	1.84	2.05
Of which: other exports	0.35	0.24	0.33	0.23	0.22	0.28	0.21	0.26
Merchandise imports	0.96	1.34	1.38	1.72	1.43	1.54	1.47	1.82

Source: IMF Country reports, various issues (Kazakhstan and Azerbaijan) and Central Bank of Russia.

2.3. Budget structure, fiscal policies and quasi-fiscal operations

Oil and gas related revenues constitute an important part of budget revenues in the analysed countries. In 2001–2002, on average they made 23% of the total in Kazakhstan, 39% in Russia and 50% in Azerbaijan. These figures should be treated with caution and no simple cross-country comparisons are possible since the differences to some extent stem from diverse classifications and one-off events (e.g. large bonus payments).

Such high shares clearly imply high sensitivity of total fiscal revenues and fiscal position to the global oil prices. In Russia, recent estimates indicate that on average the 1 US\$/bbl change in international oil prices affects fiscal revenues to the tune of 0.4–0.45% of GDP¹¹. Some tax changes introduced in 2002 and modifications proposed in 2003 could lead to a further strengthening of the relationship between oil prices and budget revenues. At present, the tax burden on the oil and gas industries is much heavier than in

other sectors of the economy. Such a policy, while possibly giving some support to non-oil economy, could also worsen the risks of macroeconomic destabilisation. In Kazakhstan and Azerbaijan where large oil-related money is a new phenomenon its management is particularly difficult. For instance, Kazakhstan has apparently continued with too tight fiscal policies in 2002–2003 when non oil deficit was small and falling despite major financing needs in the spheres of health, education and social safety nets.

The volatility of oil related budget revenues pose a challenge to the conduct of fiscal policies in the medium term. An oil fund could be used as a tool for smoothing the stream of revenues or for intergenerational transfers of oil money. Such funds have been established in Kazakhstan (mainly to fulfil the first function) and Azerbaijan (mainly for intergenerational transfers). Still, there are some problems in the functioning of the funds. For example, there is no law governing the Azerbaijani fund which has so far operated purely on the basis on presidential decrees. Despite IMF's suggestions the authorities reject

Table 3. Structure of budget revenues, 1998–2002 (% of GDP)

	1998	1999	2000	2001	2002E	2003P
Russia (federal budget)						
Total revenue			15.4	17.6	17.1	17.7
Total oil revenue			5.5	6.5	7.0	8.0
Total non oil revenue			9.9	11.1	10.1	9.7
non oil balance			-4.7	-3.7	-5.8	-5.1
Kazakhstan (general budget)						
Total revenue		17.5	21.7	25.6	22.6	
Total oil revenue		1.0	3.3	6.6	4.4	
Total non oil revenue		16.5	18.4	19	18.2	
non oil balance		-6.0	-4.1	-3.9	-3.0	
Azerbaijan						
Total revenue	19.5	18.1	20.7	21.4	27.8	
Total oil revenue	3.8	4.2	7.5	9.4	15.5	
Total non oil revenue	15.7	14.0	13.2	12.0	12.3	

Notes: E – estimate, P – projections.

In Kazakhstan oil revenue consists of CIT, royalties, PSA and bonus payments and local taxes. Volatility of oil revenue item partly reflects the timing of large bonus receipts (e.g. these were high in 2001).

In Azerbaijan, the jump in revenues (concentrated on the oil part) between 2001 and 2002 is largely attributable to the explicit inclusion of SOCAR energy related subsidies on the expenditure part of the budget and corresponding entry of tax credit for SOCAR energy subsidies on the revenue side (in 2002 these amounted to 5.4% of GDP).

Source: IMF, country reports (various issues).

ted the necessity for introducing legal regulations. Given the potential instability on the domestic political scene the vulnerability of such a solution is obvious – even though the creation of the fund has clearly brought much more transparency to managing the oil wealth and the fiscal policies in general.

The energy sectors are at the early stages of reform in all three countries. In particular, domestic prices of oil, gas, products thereof, electricity, etc. are generally much below levels consistent with functioning markets. This clearly creates distorted incentives for economic agents and has led to unusually high energy intensity, suboptimal technology choices, too high and wasteful consumption, too low investment in energy infrastructure, exploration and conservation and distorted decisions concerning investments in transport infrastructure (pipelines)¹². Artificially low domestic prices mean that energy companies continue to function as quasi-fiscal institutions, providing implicit subsidies to households and enterprises. Such quasi-fiscal activities of energy companies give rise to certain distortions and inefficiencies in economies and act as additional detriments to reforms since low energy prices are a substitute for social safety nets¹³. They also cause difficulties for the conduct of fiscal policies and might add to risks of macroeconomic destabilisation. In particular the observed changes in the registered fiscal stance might not provide a viable description of the reality if they are accompanied by (difficult to measure) amendments in quasi-fiscal operations of the energy sector.

To get an idea of the scale of the problem one could look at the example of Azerbaijan where total energy sector (including oil, gas and electricity) revenues have been lowered by as much as 27% of GDP in 1999 due to implicit subsidies primarily taking the form of mispricing. The energy sector reforms implemented more recently appear to have been successful in bringing more transparency and reducing the size of fiscal and quasi-fiscal subsidies from the sector to an estimated 11% of GDP in 2002 and expected even lower figure in 2003. In particular, the domestic fuel prices were largely brought to estimated long-run international levels and 2003 budget inclu-

des explicit subsidies for companies to buy oil from SOCAR at international prices¹⁴.

2.4. Monetary and exchange rate policy dilemmas

Large oil and gas export revenues imply an improvement in the balance of payment position and should normally induce appreciation of domestic currencies. While this is expected to lead to more efficient allocation of resources and to allow for spreading oil benefits to the population, domestic manufacturing sector might find itself in a difficult position as domestically produced goods are becoming more expensive relative to goods produced abroad. Manufacturing sector thus needs to improve its competitiveness by rising productivity, cutting costs or lowering margins. While this is a typical market situation affecting companies in all countries a vital prerequisite for success is a business friendly environment. The problem of the three analysed countries is that local conditions for entrepreneurial activities are very difficult, to say the least.

The authorities in all three countries fearing that appreciation of real exchange rate would hamper manufacturing sector choose the strategy of *de facto* exchange rate targeting rather than going ahead with structural reforms. The nominal exchange rates of the rouble, tenge and manat were steered by interventions of the central bank (on both sides of the market, but usually taking the form of preventing the appreciation pressure, i.e. buying foreign currencies). These strategies proved successful to the extent that nominal exchange rates have remained in the planned territory. The major problem with such a policy is that one loses the effective control over money stock and thus on inflation. Interventions of the central banks (particularly large in Russia) meant the rapid monetary expansion and were the major factor fuelling inflation¹⁵. Inflation fell to visibly lower levels in Azerbaijan and Kazakhstan due to a combination of several factors. Fiscal policies in Kazakhstan were tighter than in Russia (non-oil deficit was declining in recent years, in contrast to Russia) and the oil fund helped in absorbing part of oil revenues. Also, the financial sector reforms

have stimulated high growth of monetisation in Kazakhstan. Finally, since the oil and gas sectors are still at the early stage of development in Azerbaijan and Kazakhstan absorption of revenues from energy commodities is facilitated by large investment needs and investment related imports.

The last three years saw broadly stable or even depreciating real exchange rates of the three oil exporting countries. Over the longer horizon this is clearly unsustainable and would also be inefficient. If the authorities continue with controlling the nominal exchange rates, the pressures for real exchange rate appreciation will lead to higher inflation. A return of the real exchange rate to the equilibrium territory *via* an adjustment of prices would be more costly to the economy than a nominal appreciation¹⁶. This view seems to be gaining some understanding in the authorities of the three countries (particularly in Kazakhstan) and over a medium term horizon one should expect strengthening of domestic currencies (in both nominal and real terms). This should act as yet another incentive for structural reforms aimed at boosting the competitiveness of the non-energy sector.

3. Development prospects of energy rich FSU countries

Abundance of energy resource might be a problematic thing but this does not indicate that countries with rich oil reserves should be expected to perform weak at all times. The historical evidence clearly indicates that their growth performance is strongly positively linked to the international oil market. Oil exporting economies were able to save more and grow faster than other developing countries in the period when oil was growing fast (1960–1980)¹⁷. In this light, it is not surprising to see economies of Azerbaijan and Kazakhstan expanding by above 10% annually in 2000–2003, with Russia recording only slightly lower growth figures.

Given the existing energy resource potential and infrastructure (including projects currently being implemented) the oil and gas sectors in all three countries should be expected to expand fur-

ther in the coming years. In the case of Kazakhstan and especially Azerbaijan it will almost certainly imply a visible rise in the importance of the energy resource sector relative to the rest of the economy. Such a trend is also likely to appear in Russia though, given its initial conditions, Russia clearly has much better chances of developing strong non-oil sectors of the economy.

It remains uncertain whether the three countries will be able to maintain strong overall economic growth and even if so whether this will benefit all strata of the societies. Optimistic short-term prospects (particularly in Azerbaijan and Kazakhstan where new projects enter the production phase) do not guarantee the long run success. Even in the best scenario the oil sector is set to remain volatile, mirroring the developments in the world oil prices. Consequently, the strength of the non-energy sector and effective macroeconomic policies are vital for smoothing personal incomes, employment and private consumption. These are also crucial for a gradual reduction of the currently widespread poverty¹⁸.

Weakness of state institution, deficiencies in the functioning of democracy and other unfavourable political developments appear to constitute the major risk to development prospects of all energy rich FSU countries. It is striking to compare the numerous examples of failure in oil-rich developing countries where centralisation of power, corruption and lack of efficiently functioning state resulted in wasting of the enormous oil wealth with the current trends observed in FSU. Azerbaijan and Kazakhstan have had the same leaders since independence, in Russia the only change that was due to Yeltsin's health problems. Importantly, the specific nature of the oil business makes foreign investors (in countries where they play a major role, i.e. Azerbaijan and Kazakhstan) to prefer political stability (and stability of their contracts) over functioning democracy and thus make the political development more difficult. It is very instructive to look at the reaction of major foreign investors in Azerbaijan to an attempt to secure the succession of power from president Heydar Aliev to his son in summer 2003. The experience of many other countries also indicates that the presence of oil will make building of efficient state institutions mo-

re difficult and this in turn will negatively impact economic growth prospects of these countries.

There are several mechanisms that will likely impair institutional development of the countries considered¹⁹. First, since extraction of natural resources such as oil is very easily taxed, the incentives to tax the rest of the society are lower, the society has less incentive to control what the state does with the taxes and the government has financial means to limit its democratic control (by buying off critics, providing grants to certain groups or direct repression). “The revenues a state collects, how it collects them, and the uses to which it puts them” does indeed “define its nature”²⁰. Second, modernisation of the states will likely be slowed down as post-communist elites who hold power in all major FSU oil exporting countries appear to concentrate on extracting rents from easy sources such as oil and do not invest in building efficient state institutions²¹. All powerful agents (ruling elite and foreign investors) have incentives to strengthen the state but not necessarily the societies. Thirdly, the social structure is affected as rents from natural resources such as oil accrue to a small factions of the society and vertical social relationships emerge in which the majority is reliant on assistance decided by the ruling elite rather than the horizontal relationships of equality and competition between many small producers of some goods²².

Countries do not choose their resource endowments and while oil and gas offer a great potential for social and economic development (the example of Norway and other countries) it is by no means easy to manage the wealth. States of the former Soviet Union share – to various extents – some characteristics that make this management particularly difficult. On the other hand, compared to many developing countries they are initially richer, have better educated societies and an experience of expanding large manufacturing sector. These factors should act to their advantage. Given the importance of efficiency of state institutions for development prospects it appears vital that existing laws concerning economic activity are made as simple as possible, thus making the policy management

relatively easy. Some recent reforms e.g. in Russia (simplification of the tax system) seem to be going in the right direction. Only simple, transparent and stable legal environment will make the implementation of existing regulations possible and thus conducive to social and economic development.

Wojciech Paczyński

¹ Citations are taken from the following sources (respectively): Caspian Revenue Watch, *Caspian Oil Windfalls: Who Will Benefit*, Open Society Institute (2003); Thorvaldur Gylfason, *Resources, Agriculture and Economic Growth in Economies in Transition*, *Kyklos* 53 (2000).

² See Dani Rodrik, *In Search of Prosperity: Analytic Narratives on Economic Growth*, Princeton University Press 2003. Still, the AIDS is a major problem in the country. According to UN, *World Development Report 2003* 40% of adult population is HIV positive.

³ For recent evidence see e.g. Xavier Sala-i-Martin and Arvind Subramanian, *Addressing the Natural Resource Curse: an Illustration from Nigeria*, NBER Working Paper 9804 (2003) and Catholic Relief Services, *op. cit.*

⁴ W. Max Corden and J. Peter Neary, *Booming sector and de-industrialisation in a small open economy*, *Economic Journal*, 92 (1984) is an example of a classical reference.

⁵ In a recent paper Ricardo Hausmann and Roberto Rigobon, *An Alternative Interpretation of the “Resource Curse”: Theory and Policy Implications*, NBER Working Paper 9424 (2002) present the evidence that the “Dutch Disease” hypothesis does not fit the data well and propose an alternative macroeconomic model explaining the resource curse.

⁶ Cf. P. Cashin and C.J. McDermott, *The long-run behaviour of commodity prices: Small trends and big variability*, IMF Working paper WP/01/68.

⁷ For recent evidence see Xavier Sala-i-Martin and Arvind Subramanian, *op. cit.* and Jonathan Isham, Michael Woolcock, Lant Pritchett and Gwen Busby, *The Varieties of Resource Experience: How Natural Resource Export Structures Affect the Political Economy of Economic Growth*, Middlebury College Economics Discussion Paper No. 03-08 (2003).

⁸ Cf. IMF, *Kazakhstan country report No. 03/211*.

⁹ The problem is that in Russia, in contrast to Kazakhstan and Azerbaijan, domestic market for oil and gas is large relative to exports and domestic prices are administratively kept at artificially low levels. Under such circumstances export performance (largely depending on international prices) is a major factor affecting overall GDP growth.

¹⁰ There are substantial differences in dynamics of production and export volumes between the three countries. See Table V.

¹¹ Cf. IMF, *Russia country report no. 03/146*.

¹² See John D. Dodsworth, Paul H. Mathieu and Clinton R. Shiells (2002), *Cross-Border Issues in Energy Trade in the CIS Countries*, IMF Policy Discussion Paper PDP/02/13, International Monetary Fund: Washington DC (2002). See also chapter *Export potential of the post-Soviet region*.

¹³ It should be, however, noted that such safety nets provide particularly poorly targeted (or untargeted) assistance and thus cannot be viewed as efficient social policy tool. On the other hand, given the weaknesses of institutions responsible for social policies and in particular social assistance, it might be difficult to achieve a major improvement in efficiency of social assistance, at least in the short run. For this reason international financial institutions have usually been advising gradual increasing of energy prices along with strengthening of assistance to the poor.

¹⁴ Cf. IMF, *Azerbaijan country report No. 03/154*.

¹⁵ For a detailed analysis see Marek Dąbrowski, Wojciech Paczyński and Łukasz Rawdanowicz, *Inflation and Monetary Policy in Russia: Transition Experience and Future Recommendations*, CASE Studies & Analyses no. 241, Warsaw (2002). The problem is deepened by a lack of efficient sterilisation instruments.

¹⁶ There appears to be a consensus that domestic currencies of the three countries were undervalued as of 2002–2003. See Nikola Spatafora and Emil Stavrev, *The Equilibrium Real Exchange Rate in a Commodity Exporting Country: The Case of Russia*, IMF Working paper WP/03/93 (2003) for estimations of Russia’s equilibrium real exchange rate.

¹⁷ This is not a trivial observation. The “Dutch disease” hypothesis would imply that the opposite relationship is likely to be present. See Ricardo Hausmann and Roberto Rigobon, *op. cit.*

¹⁸ According to World Bank projections for Azerbaijan, assuming an average 6.3% growth of non-oil GDP over 2001–2010 would allow for a reduction in the number of the poor from 50% to 36% of the population. If non-oil GDP expands at an average rate of 4% in that period one should not expect the poverty rate to fall below 44%. See World Bank, *Azerbaijan Republic Poverty Assessment*, Report No. 24890-AZ (2003).

¹⁹ See Isham et al., *op. cit.*

²⁰ Terry Karl, *The Paradox of Plenty: Oil Booms and Petro-States*, University of California Press (1997).

²¹ Cf. Daron Acemoglu, Simon Johnson, and James Robinson, *The colonial origins of comparative development: an empirical investigation*, *American Economic Review* 91 (2001) who consider the mortality of settlers in developing countries as a determinant of their behaviour and in turn of the ensuing structure of the state.

²² See Isham et al., *op. cit.* The story is similar to historical developments in South America where, in contrast to the North, crops were grown on large plantations, de-colonization occurred late and property rights were weak.

Attachment 1

The Russian fuel sector

1. Oil sector structure

The Russian oil sector is almost entirely privatised. The state owns now only one oil company, Rosneft (100% of shares) and minority shares in several other companies (including in LUKoil – 7.6% of shares). Approx. 150 companies of various sizes, including several Gazprom-controlled mining enterprises, operate in this sector. Nevertheless, it is the seven giants that decide on its condition and development: LUKoil, Yukos, Surgutneftegas, Tyumen Oil Company (TNK), Sibneft, Rosneft and Tatneft. All are joint-stock companies, with small or large foreign capital share (except for the state-owned Rosneft). They all form vertically integrated structures, which have their own mining and processing enterprises (refineries, petrochemical plants) and filling station networks. As a general rule, they also have financial (banks, investment funds, insurance companies) and scientific bases (research and project centres) as well as their own means of transportation (including tanker fleets, rail tanks stock) etc.

Apart from these, the Russian Federation's oil sector structure includes the state-owned transport company, Transneft¹, which is the sole owner of and decision-maker for the entire pipeline network and almost all oil terminals in Russia. The company also acts as the general coordinator of oil exports. Transneft pipelines² carry 99% of all crude oil mined in Russia (e.g. in 2002, approx. 373 million tons). Leaving the monopoly in the hands of Transneft is, for Moscow, one of the most effective ways to control the domestic oil sector.

2. Gas sector structure

The Russian gas sector is monopolised. Gazprom, which is the dominating and currently tightly state-controlled company, has a nearly 90%-share in Russian gas production (the remaining little more than 10% are mined by independent enterprises and oil companies). The Russian gas monopoly is centralised. It comprises mining companies, gas purification, proces-

sing and condensation plants, transport enterprises, which manage the export routes and local gas pipeline mains, trading companies, scientific institutes and construction organisations. Gazprom holds 100% of shares in most of them. The whole structure is managed from its Moscow-based headquarters. Moreover, the monopolist holds majority share blocks (over 50%) in 44 enterprises that co-operate with the gas industry: chemical and petrochemical plants, metal ore enrichment plants, steelworks and pipe manufacturers, machine industry plants, etc. The concern holds stakes of less than 50% shares in 69 corporations and companies, including banks, the mass media, exchanges, insurance companies, shopping centres, foreign companies, and above all in enterprises specialising in gas transport and trade in most European countries – Gazprom's contractors.

Gazprom owns almost the whole of the gas pipeline network in the Russian Federation (149 thousand of the 150 thousand km stretch) as well as its infrastructure: underground tanks, compressor stations, etc.

Enterprises owned by the monopolist hold licences for reserves holding a total of approx. 30 trillion cubic metres of natural gas. Apart from that, the concern is the sole coordinator of gas exports and the only gas exporter to Central and Western Europe.

¹ All the data on Transneft – www.transneft.ru. Transneft is a joint-stock company. As a result of the limited privatisation 25% of its stocks (non-voting shares) were distributed among its employees, and the other 75% are still owned by the state.

² The Russian oil transport system includes, among others, an approx. 49 thousand km long network of pipelines, reserve containers of a nearly 13 million cubic metres capacity and 387 oil intermediate pumping stations (data from the 2002 annual report).

Table I. – Gazprom: selected equity investment outside the Russian Federation by mid 2003

Company	Host country	shares %	Activity
GHW	Austria	50	gas trading
Belgazprombank	Belarus	34.99	banking
Brestgazoapparat	Belarus	51	gas equipment manufacturing
Topenergo	Bulgaria	50	gas trading and transit
Eesti Gaas	Estonia	30.6	gas trading and transport
Gasum Oy	Finland	25	gas distribution and transport
North Transgas Oy	Finland	50	gas pipeline construction under the Baltic Sea
FRAgaz	France	50	gas trading
Prometheus Gaz	Greece	50	marketing and construction
Peter-Gaz	Holland	51	gas trading
Stella-Vitae	Lithuania	30	gas trading
Lietuvos dujos	Lithuania	pursues to buy 34% shares	gas distribution (monopolist)
Kaunas electric power plant	Lithuania	51 (due to rise to 99)	electric power production
Latvijas Gaze	Latvia	16.25	gas trading and transport
Gazsnabtransit	Moldavia	50	gas trading and transport
Ditgaz	Germany	49	gas trading
Verbundnetz Gas	Germany	5.3	gas transport and marketing
Wingas	Germany	35	gas transport and storage
Wintershall Erdgas Handelshaus	Germany	50	exclusive trader until 2012 for all the gas exported by Gazexport (RF)
Zarubezgas Erdgashandel	Germany	100	gas trading
Europol Gaz	Poland	48	gas transport
Gas Trading	Poland	35	gas trading
WIROM	Romania	25**	gas trading
JugoRosGaz	Serbia and Montenegro	50	gas trading and transport
Progress Gas Trading	Serbia and Montenegro	50	gas trading
Slovrusgaz	Slovakia	50	gas trading and transport

Table I. – Gazprom: selected equity investment outside the Russian Federation by mid 2003 (2)

Company	Host country	shares %	Activity
Tagdem	Slovenia	7.6	gas trading
Gamma Gazprom	Turkey	45	gas trading
Druzhovskiy zavod gazovoy aparatury	Ukraine	51	gas equipment manufacturing
Institut Yuzhniigiprogaz	Ukraine	40	research institute
Borsodchem	Hungary	25*	petrochemical plant
DKG-EAST Co. Inc.	Hungary	38.1	oil and gas equipment manufacturing
General Banking and Trust Co. Ltd.	Hungary	25.5	banking
Panrusgas	Hungary	40	gas trading and transport
TVK	Hungary	13.5*	petrochemical
Interconnector	United Kingdom	10	Bacton (UK) – Zeebrugge (Belgium) gas pipeline operator
Promgaz	Italy	50	gas trading and marketing
Volta	Italy	49	gas trading and transport

Sources: World Investment Report 2001, UNCTAD, news agencies 2003.

* Financial investments through Milford Holdings Ltd. (Ireland)

** Controlled through Wintershall Handelshaus.

Table II. – Russian oil companies: selected equity investment outside the Russian Federation by mid 2003

Oil company	Company	Host country	shares %	Activity
LUKoil	LUKArco	Azerbaijan	54	60% in Yalama oilfield
	LUKAgip	Azerbaijan	50	10% in Shah Deniz gas field
	LUKoil–Belarus	Belarus	N/A	oil products transport, petrol stations
	AO LUKoil–Neftochim-Burgas	Bulgaria	58	refinery, petrochemicals, tanker terminal, heat and power plant, pipelines Burgas–Sofia and Burgas–Varna
	LUKoil Eesti	Estonia	100	petrol stations
	Karachaganak Integrated Organization	Kazakhstan	15	oil and gas field “Karaczaganak” development
	LUKArco	Kazakhstan	54%	5% stake in oil field Tengiz; 12,5% stake in Caspian Pipeline Consortium (CPC)
	LUKoil-Kumkol	Kazakhstan		LUKoil develops oil field Kumkol, Hurrigan (Canada) is its partner in this project
	LUKoil Baltija	Latvia	N/A	oil products transport, petrol stations
	AO Petrotel-LUKoil	Romania	51	refining
	Beopetrol	Serbia	79.5	petrol stations
	OOO LUKoil – Odessky NPZ	Ukraine	100	refining
	ZAO Lukor	Ukraine	50	chemicals and petrochemicals
	Getty Petroleum Marketing Inc.	USA	100	1300 petrol stations
Yukos	Petrol A.D.	Bulgaria	51	petrol stations
	Mazeikiu nafta	Lithuania	53.7	refinery, tanker terminal in Butinge
	Kvaener	Norway	22	engineering group
	Transpetrol	Slovakia	49	oil pipeline and distribution system
Tyumen Oil Company (TNK)	AO „LiNOS”	Ukraine	67	refining
SIBUR	Borsodchem – Moravske Chemicke Zavody	Czech Republic	97.5 held by Borsodchem	chemicals
	Borsodchem	Hungary	25	petrochemicals
Tatneft	ZAO Ukrtatnafta in Kremenchug	Ukraine	40	refining

Sources: News agencies and oil companies' websites.

Table III. – The largest oil and gas projects in Azerbaijan, Kazakhstan and Russia

Name of the field Consortium	Partners (% share)	Additional information: estimated value of investment, its schedule, etc.
Azerbaijan		
Azeri, Chirag and Gunashli (oil) Azerbaijan International Operating Company, AIOC, PSA signed in 1994	BP – operator, 34.1%; Unocal (USA) – 10.2%; Impex Co. (Japan) – 10%; SOCAR – 10%; Statoil – 8.6%; ExxonMobil – 8%; TPAO (Turkey) – 6.8%; Devon Energy (USA) – 5.6%; Itochu (Japan) – 3.9%; Amerada Hess (international consortium) – 2.7%	Growth of production from this field thanks to foreign investment, peak of production projected for the end of this decade; estimated investment – \$13 bln
Shah Deniz (gas) PSA signed in 1996	BP – operator, 25.5%; Statoil – 25.5%, SOCAR – 10%; LUKAgip – 10%; TotalFinaElf (France) – 10%; OIEC (Iran) – 10%; TPAO – 9%	The field has already been explored; its development is in progress; exploitation due to start around 2006; estimated investment: US\$ 4.5 billion
Yalama PSA signed in 1997	LUKArco – operator, 60%; SOCAR – 40%	US\$ 2.5 billion
Baku–Tbilisi–Ceyhan Pipeline	BP 30.1%, SOCAR 25%, Unocal 8.9%, Statoil 8.7%, TPAO 6.5%, Agip 5%, TotalFinaElf 5%, Itochu 3.4%, Inpex 2.5%, Phillips 2.5%, AmeradaHess 2.4%	Pipeline construction is in progress; due to be completed in 2004; estimated investment: US\$ 3 billion
Kazakhstan		
Karachaganak (oil, gas) Karachaganak Integrated Organization (KIO) PSA signed in 1997	ENI (Agip-Italy) – 32.5%; BG – 32.5%; ChevronTexaco – 20%; LUKoil – 15%	Field already being mined; output due to double by the end of this decade; estimated investment: approx. US\$ 15 billion
Kashagan (oil) Agip Kazakhstan North Caspian Operating Company (Agip KCO), PSA signed in 1997.	ENI-Agip – operator, 16.67%; BG – 16.67 (intends to withdraw from the project); ExxonMobil – 16.67%; TotalFinaElf – 16.67%; Royal Dutch/Shell – 16.67%; Inpex (Japan) – 8.33%, Phillips – 8.33%	Oil mining should start in around 2007; already over US\$ 2 billion invested; investment to absorb another US\$ 7 billion in 2003–2006
Tengiz (oil) Joint Venture TengizChevrOil (TCO) founded in 1993	ChevronTexaco – 50%; ExxonMobil – 25%, KazMunaiGaz – 20%; LUKArco – 5%	Field already being mined; output supposed to double by 2010; estimated investment: approx. US\$ 20 billion
Tengiz – Novorossiysk pipeline Caspian Pipeline Consortium (CPC)	Russian government – 24%; Kazakh government – 19%; ChevronTexaco – 15%; LUKArco – 12.5%; Rosneft-Shell – 7.5%; ExxonMobil – 7.5%; Oman – 7%; Agip – 2%; BG – 2%; KazMunaiGaz – 1.75%; Oryx (USA) – 1.75%	Pipeline made available for mining in 2002; approx. US\$ 2.6 billion invested; entire estimated investment value, including second pipeline: US\$ 4 billion

Table III. – The largest oil and gas projects in Azerbaijan, Kazakhstan and Russia (2)

Name of the field Consortium	Partners (% share)	Additional information: estimated value of investment, its schedule, etc.
Russia		
Kovykta (gas) Russia Petroleum, The project is going to be realised under PSA, though no agreement has been signed as of yet	BP – operator, 31%; Interros (Russia) – 24%; Irkutsk Oblast – 14%; Vitra Holdings Co. – 13%; Tyumen Oil – 18%, Gazprom strives for being admitted to the project	A feasibility study (technical and economical) of the project due by mid 2004; initial estimated investment: approx. US\$ 12 billion, of which 7 billion for a gas pipeline going towards Japan or China
Chayvo, Odoptu, Arkutun-Dagi (gas, oil) Sakhalin – 1 PSA signed in 1995.	Exxon Neftegaz Ltd. – operator, 30%; SODECO (Japanese consortium) – 30%; Rosneft – 20%; ONGC Videsh Ltd. (India) – 20%	\$ 12 bln projected investment until 2010 (\$ 1 bln invested until 2001). Production is to start in 2006
Piltun-Astokhskoye, Lunskeye Sakhalin – 2 (oil, gas) Sakhalin Energy Investment Co. Ltd. PSA signed in 1994	Royal Dutch/Shell – operator, 62.5%; Mitsui (Japan) – 25%; Mitsubishi – 12.5%	Total cost (est.) \$ 10 bln, until 2002 over \$ 2 bln invested, production has started in 1999
Khariag (oil) PSA signed in 1995.	TotalFinaElf – operator, 50%; Norsk Hydro – 40%; Nenets Oil Company – 10% (the project is due to be joined by LUKoil, which is to buy 10% from each foreign investor; transaction formalities are in process)	Post-soviet field, rehabilitated right now, production is going on
Shtokman (gas)	Gazprom – 50%; Fortum (Finland); Conoco (USA); TotalFinaElf, Norway's Norsk Hydro	Talks on feasibility study, estimated cost – \$ 15–25 bln
Zapolarnoye (gas)	Gazprom (Royal/Dutch Shell is interested in participating in the project)	2001 – production has started until 2002 \$ 1 bln invested
Blue Stream Gas Pipeline	ENI – 50%, Gazprom – 50%	\$ 3,3 bln, completed in 2002
Baltic Gas Pipeline	Gazprom has signed a preliminary agreement with the Finnish Fortum; Ruhrgas, Shell and Wintershall are considering joining the project.	In 2001 Gazprom released feasibility study. Estimated investment \$ 7–8 bln
Yamal Gas Pipeline (second line)	Gazprom, Beltransgaz, EuroPolGaz	First pipeline completed in 2001, Gazprom delays the construction of the second pipeline (its cost – 2 bln USD)

Sources: U.S. Energy Information Administration, Interfax, FSU Energy 2003.

Table IV. – Natural gas and crude oil reserves in the former USSR area

	gas, trillion m ³	% world	oil, billion t	% world
Azerbaijan	0.85	0.5%	1.00	0.7%
Kazakhstan	1.84	1.2%	1.20	0.9%
Russia	47.57	30.5%	8.20	5.7%
Turkmenistan	2.01	1.3%	0.10	0.1%
Ukraine	1.12	0.7%	0.00	0.0%
Uzbekistan	1.87	1.2%	0.10	0.1%
Former USSR	55.30	35.4%	10.60	7.5%

Source: www.bp.com, in billion m³

Table V. – Crude oil in the former USSR area – selected data

	1997	1998	1999	2000	2001	2002*
production						
Azerbaijan	9.1	11.4	13.8	14.0	14.9	15.3
Belarus	1.8	1.8	1.8	1.9	1.8	1.8
Kazakhstan	25.8	25.9	30.1	35.3	40.1	47.1
Lithuania	0.2	0.3	0.2	0.3	0.5	0.5
Russia	303.9	301.4	303.2	321.7	345.8	378.2
Turkmenistan	5.5	7.3	7.7	7.7	8.6	9.7
Ukraine	4.6	3.9	3.8	3.7	3.7	3.7
Uzbekistan	8.1	8.4	8.3	7.7	7.4	7.4
demand						
Azerbaijan	5.6	5.9	5.6	6.3	3.8	N/A
Belarus	8.8	8.6	7.6	6.9	7.3	N/A
Kazakhstan	8.6	8.6	6.7	7.4	8.9	N/A
Latvia	1.7	1.6	1.6	1.3	1.5	N/A
Lithuania	3.3	3.8	3.0	2.3	2.6	N/A
Russia	121.2	118.7	120.8	125.3	125.5	N/A
Turkmenistan	2.7	2.6	2.9	2.9	3.8	N/A
Ukraine	17.5	17.6	13.2	11.6	12.7	N/A
Uzbekistan	7.0	7.0	6.9	6.6	6.4	N/A
exports						
Belarus	0.4	0.4	0.4	0.4	0.4	N/A
Kazakhstan	17.0	18.3	23.8	29.2	32.5	N/A
Russia	126.9	137.2	134.5	144.4	162.1	N/A
Turkmenistan	1.4	1.6	1.5	1.5	1.5	N/A
Uzbekistan	0.9	0.8	0.6	0.0	0	N/A
imports						
Belarus	10.5	10.1	9.9	12.0	11.9	N/A
Kazakhstan	1.7	2.2	0.7	1.0	2.3	N/A
Lithuania	5.8	6.8	4.6	5.1	6.6	N/A
Russia	4.0	5.6	4.6	5.9	5.1	N/A
Turkmenistan	0.5	0.9	0.6	0.6	0.6	N/A
Ukraine	9.0	9.9	9.4	6.0	13.5	N/A

Data in million tons, * – estimated volumes

Source: Oil Information 2003, IEA

Table VI. – Oil imports from the former USSR area by OECD countries

	1998	1999	2000	2001	2002*
Austria	2.0	1.8	2.5	1.9	2.3
Belgium	3.2	4.5	5.4	5.1	9.1
Czech Republic	6.0	5.3	5.2	5.1	4.6
Finland	4.9	5.0	4.9	4.8	5.8
France	5.7	7.6	7.9	10.1	14.0
Germany	28.4	31.9	34.2	35.8	38.5
Greece	1.1	0.8	4.2	5.7	9.1
Hungary	6.1	5.8	5.8	5.6	5.0
Italy	11.3	14.6	16.1	19.5	18.7
Korea	0.5	0.5	1.6	2.4	2.6
Netherlands	1.4	3.2	4.5	6.8	7.7
Poland	12.8	14.0	17.5	17.3	17.2
Portugal	0.7	0.6	0.3	1.3	0.6
Slovakia	0.0	0.0	0.0	5.4	5.5
Spain	5.0	5.6	5.8	6.1	9.2
Sweden	2.2	2.3	1.4	1.1	3.7
Turkey	1.9	3.2	2.5	4.8	3.9
United Kingdom	2.1	0.7	2.3	2.9	3.9
USA	0.5	1.4	0.4	0.0	4.3

Data in million tons, * – estimated data,

Source: Oil Information 2003, IEA

Table VII. – Natural gas in the former USSR area – selected data

	1997	1998	1999	2000	2001	2002*
Production						
Azerbaijan	6.0	5.8	6.2	5.8	5.5	5.2
Belarus	0.2	0.3	0.3	0.3	0.3	0.3
Kazakhstan	8.1	7.9	10.3	12.0	11.6	11.2
Russia	570.5	590.7	590.8	582.7	580.3	595
Turkmenistan	17.3	13.3	22.9	47.2	51.6	53.8
Ukraine	18.1	18.0	18.1	18.1	18.3	18.8
Uzbekistan	48.8	54.8	55.6	56.4	57.4	57.4
Consumption						
Armenia	1.4	1.5	1.2	1.4	1.4	1.1
Azerbaijan	6.0	5.7	6.3	6.2	8.9	8.4
Belarus	16.6	16.3	16.8	17.2	17.4	16.8
Estonia	0.8	0.7	0.7	0.8	0.9	0.7
Georgia	0.9	0.8	0.9	1.0	1.2	0.8
Kazakhstan	8.7	8.7	8.4	10.5	10.3	9.9
Kyrgyzstan	0.9	1.0	0.6	0.7	0.7	0.6
Latvia	1.3	1.3	1.2	1.4	1.6	1.6
Lithuania	2.5	2.2	2.3	2.6	2.7	2.7
Moldavia	3.7	3.3	2.9	2.5	2.7	9.0
Russia	380.9	384.9	392.4	394.9	405.8	415.0
Tajikistan	0.8	0.8	0.8	0.8	0.6	0.5
Turkmenistan	11.4	10.8	13.2	13.5	14.2	14.4
Ukraine	79.1	70.9	76.9	76.9	74.3	73.4
Uzbekistan	41.8	50.3	51.0	50.8	51.7	52.1
Exports						
Kazakhstan	2.4	2.3	4.2	5.2	5.5	5.5
Russia	200.9	203.4	205.4	193.9	180.9	190.0
Turkmenistan	5.9	2.9	9.7	33.7	37.4	39.4
Ukraine	11.4	0.6	1.1	1.1	1.0	1.0
Uzbekistan	9.9	4.5	4.5	5.6	5.7	4.6
Imports						
Armenia	1.4	1.5	1.2	1.4	1.4	1.1
Azerbaijan	0.0	0.0	0.0	0.3	3.3	3.2
Belarus	16.2	16.0	16.6	17.1	17.3	16.6
Estonia	0.8	0.7	0.7	0.8	0.9	0.7
Georgia	0.9	0.8	0.9	1.0	0.9	0.8
Kazakhstan	3.0	3.1	2.8	4.2	4.3	4.2
Kyrgyzstan	0.8	1.0	0.6	0.7	0.7	0.6
Latvia	1.3	1.4	1.3	1.4	1.4	1.4
Lithuania	2.5	2.2	2.3	2.6	2.7	2.7
Moldavia	3.7	3.3	2.9	2.5	2.7	9.6
Russia	4.5	3.0	4.1	13.0	4.1	5.0
Tajikistan	0.7	0.8	0.7	0.7	0.6	0.5
Ukraine	62.4	53.5	59.9	59.9	56.9	55.5

Data in billion m³, * – estimated volumes, Source: Natural Gas Information 2003, IEA

Table VIII. – Gas imports from the former USSR area by European countries, 2002

	Russia	Turkmenistan	Uzbekistan	Kazakhstan
Czech Republic	7.1	0	0	0
Finland	4.5	0	0	0
France	10.9	0	0	0
Germany	33.3	0	0	0
Greece	1.6	0	0	0
Hungary	9.6	0	0	0
Italy	18.9	0	0	0
Poland	4.7	0	2.6	0
Turkey	11.6	0	0	0
Bulgaria	3.3	0	0	0
Romania	3.6	0	0	0
Slovakia	7.3	0	0	0
Croatia	1.1	0	0	0
Slovenia	1.0	0	0	0
Serbia and Montenegro	1.8	0	0	0
Armenia	1.1	0	0	0
Azerbaijan	0.0	2.5	0	0.7
Belarus	16.6	0	0	0
Estonia	0.7	0	0	0
Georgia	0.8	0	0	0
Latvia	1.4	0	0	0
Lithuania	2.7	0	0	0
Moldavia	9.6	0	0	0
Ukraine	29.0	25.3	2.6	0
Kyrgyzstan	0	0	0.5	0
Tajikistan	0	0	0	0.5
Russia	0	0	0	0
Iran	0	5.1	0	0

Data in billion m³, * – estimated volumes

Source: Natural Gas Information 2003, IEA