Conflict Studies Research Centre

Central Asian Series **07/16 E**

Structural Interdependence of Russia & Central Asia in the Oil and Gas Sectors

Dr Vladimir Paramonov
& Dr Aleksey Strokov

June 2007

Defence Academy of the United Kingdom

Structural Interdependence of Russia & Central Asia in the Oil and Gas Sectors

Dr Vladimir Paramonov & Dr Aleksey Strokov

Key Points

* The cooperation observed in recent years between Russia and the countries of Central Asia in the oil and gas sphere has its political origins in the following chain of events:
2000: the accession to power in Russia of Vladimir Putin;
2002: the creation of a gas alliance between Russia, Kazakhstan, Turkmenistan and Uzbekistan;
2003: the approval by the Eurasian Economic Community (EurAsEC) of the document "Principles of Energy Policy";
2006: Uzbekistan entry into EurAsEC.

* The fundamental economic basis for the development of cooperation between Russia and the countries of Central Asia, however, has been the legacy of structural interdependence between these countries in the oil, gas, water and electricity sectors bequeathed by the centrally-planned command economy of the Soviet Union.

* With the disintegration of the Soviet Union the central planning of economic activity disappeared, and nothing has yet been created in its place. The finely-tuned system of energy cooperation between the former soviet republics, developed over decades continues to be eroded, so that the structural interdependence between Russia and Central Asia in the oil and gas sectors is now much weaker than it was in Soviet times.

* In the future the development of cooperation between Russia and Central Asia in the oil and gas sectors will be influenced by competition between Russia and other external players, i.e. China, a number of Western countries and the international oil and gas companies.

* There is quite likely to be a clash of energy interests between Russia and China in Central Asia, and this could cause problems for international cooperation both in and around the region.

* In order to strengthen regional security and improve the effectiveness of international energy cooperation in Central Asia it would be useful to create a Shanghai Cooperation Organisation energy market, based on the grouping EurAsEC + China + Turkmenistan.

Contents

Structural Interdependence of Russia & Central Asia in the Oil and Gas Sectors

Dr Vladimir Paramonov & Dr Aleksey Strokov

Introduction

In recent years there has been a noticeable increase in contacts between the oil and gas sectors of Russia and those countries of Central Asia[1] which possess significant stocks of hydrocarbons and have the potential to export oil and gas: Kazakhstan, Turkmenistan and Uzbekistan.

In the history of cooperation between Russia and the Central Asian states on oil and gas matters, significant milestones were the creation in 2002 of a "gas alliance" between Russia, Kazakhstan, Turkmenistan and Uzbekistan, and the approval in 2003 by the international council of EurAsEC of the joint document "Principles of the Energy Policy of the member states of the Eurasian Economic Community".[2] From the political point of view, these events, along with the arrival of Vladimir Putin in power in Russia and the entrance of Uzbekistan into the EurAsEC in 2006, were the main factors leading to a breakthrough in cooperation in the oil and gas sectors.

From the economic point of view, however, these events were perfectly natural in view of the structural interdependence of the fuel and energy complexes of Russia and all the countries of Central Asia, inherited from the Soviet Union. The oil and gas industries of Russia and the Central Asian republics[3] were initially created as a unified whole. They developed in the following two directions:

- extraction, transportation and processing of natural gas;[4]
- extraction, transportation and processing of oil.[5]

1. Extraction, transportation and processing of natural gas

During the Soviet era the Central Asian gas pipeline system provided gas to many industrial sites in Russia and most industrial zones in Ukraine, as well as industries in their own region.

The main sources of gas extraction and supply were the Turkmen SSR (Soviet Socialist Republic) and the Uzbek SSR. The gas was supplied to various republics of the USSR as a standardised product. The quantity of gas produced in the Kazakh SSR at that time was relatively small (about 3 billion cubic metres in 1990). All the gas produced in that republic (mostly as a by-product from oil extraction) was designated for use in the republic.

In 1990 the quantities of natural gas produced in Turkmenistan and Uzbekistan were about 90.6 billion cubic metres and 45.5 billion cubic metres respectively.[6]

Structural Interdependence of Russia & Central Asia in the Oil and Gas Sectors
Conflict Studies Research Centre
ISBN 978-1-905962-14-3
June 2007

The quantities exported to countries within the Soviet Union were about 70.6 billion cubic metres from Turkmenistan and 10.8 billion cubic metres from Uzbekistan (i.e. Turkmenistan provided about 3/4 of the total and Uzbekistan about 1/5).

Turkmen and Uzbek gas was transported by two major pipelines: the "Central Asia - Centre" pipeline, designed to carry about 68 billion cubic metres per year, and the "Bukhara-Ural" pipeline, designed to carry about 19 billion cubic metres per year. There are still three basic groupings of interacting countries to consider:

- Turkmenistan - Uzbekistan - Kazakhstan - Russia - Ukraine;
- Turkmenistan - Uzbekistan - Kazakhstan;
- Turkmenistan - Uzbekistan - Russia - Kazakhstan - Kyrgyzstan - Tajikistan.

Table № 1 Comparison of natural gas production and trade between Russia and Central Asia

Country	Gas extracted, billions of cubic metres		Gas exported, billions of cubic metres		Gas imported, billions of cubic metres	
	1990	**2006**	**1990**	**2006**	**1990**	**2006**
Russia	630	660	-	-	65	18
Kazakhstan	3	15	-	-	7.8	1.8
Kyrgyzstan	-	-	-	-	3.6	0.5
Tajikistan	-	-	-	-	4.9	0.6
Turkmenistan	90.6	66	81.4	10	-	-
Uzbekistan	45.5	60		11	-	-

Turkmenistan - Uzbekistan - Kazakhstan - Russia - Ukraine

In the Soviet period, the main users of Turkmen and Uzbek natural gas were Russia and Ukraine, who between them received about 4/5 of the total volume exported to countries within the Soviet Union from Turkmenistan and Uzbekistan. In 1990 Russia received about 65.1 billion cubic metres of gas via Kazakhstan (about 79.7% of the combined exports from Turkmenistan and Uzbekistan). Part of this was retained for use in Russia, and part was sent on to Ukraine.

This has now changed slightly. Most Turkmen and Uzbek natural gas is still transported via the same pipelines to Kazakhstan, as it was in Soviet times. But now Russia purchases and accounts for gas bought from Turkmenistan and Uzbekistan separately. The gas from Uzbekistan is used in Russia, while part of the Turkmen production is sold on to Ukraine. Russia acts as intermediary in the trade in natural gas between Turkmenistan and Ukraine.

Turkmenistan - Russia – Ukraine
(price and transportation)
The present level of cooperation between Turkmenistan, Russia and Ukraine leaves a lot to be desired. The lack of a reliable, government-level coordinated system for the supply of natural gas between these states leads to frequent disagreements.

Russia, exploiting its position as the monopoly provider of pipeline export facilities, frequently offers terms for natural gas export which are unfavourable to Turkmenistan. Russia buys Turkmen gas at a price which is a fraction (20-33%) of

world level and sells it on to Ukraine at a slightly higher price, but still below the world level.

In 2006, for example, until September Gazprom was buying natural gas from Turkmenistan for 60 dollars per thousand cubic metres and selling it on to Ukraine for 95 dollars per thousand cubic metres (the world price in September 2006 was about 260 dollars per thousand cubic metres). In September 2006 Gazprom increased the purchase price for Turkmen gas from 60 to 100 dollars per thousand cubic metres. In 2007 the price of natural gas for Ukraine rose to 135 dollars per thousand cubic metres (while the world price in April 2007 was 274 dollars per thousand cubic metres).

Ukraine, for its part, is often unable to pay even the reduced price for its gas and often delays payment (or pays for it under a bartering arrangement). As a result, the purchase price for Turkmen natural gas over the whole post-Soviet period remains the subject of complex negotiations, which have sometimes (especially in the 1990s) led to difficulties in the relations between the states concerned.

Uzbekistan – Russia
(price and transportation)
Natural gas is bought from Uzbekistan by Gazprom at the same price as that from Turkmenistan. However, there are fewer transportation problems between Russia and Uzbekistan than between Russia and Turkmenistan. This is largely because Russia is a direct user of the gas from Uzbekistan rather than an intermediary for selling to third parties. Furthermore, the volume of gas exported by Uzbekistan is much lower than that from Turkmenistan, and indeed supplies of gas from Uzbekistan to post-Soviet Russia only started in 2004, after the start of the political rapprochement between the two countries.

Turkmenistan, Uzbekistan and Kazakhstan
(quantity of gas extracted and quantity exported)
The volume of gas extracted by the Central Asian countries, and the volume exported by them, has changed since 1990. In Turkmenistan both the quantity extracted and the quantity exported have reduced. In Uzbekistan the quantity exported is much the same as in 1990 but the quantity extracted has slightly increased. In Kazakhstan the quantity extracted has increased significantly since 1990. Kazakhstan does not yet export natural gas, but remains a transit country for transporting gas from Turkmenistan and Uzbekistan to Russia.

Figures for 2006 show that the natural gas extraction and export situation for the countries of Central Asia was as follows:

- Turkmenistan extracted about 66 billion cubic metres of natural gas and exported about 50 billion cubic metres (of which 32 billion cubic metres went to Ukraine, 10 billion cubic metres to Russia and 8 billion cubic metres to its neighbour Iran);

- Uzbekistan extracted about 60 billion cubic metres of gas, exporting more than 8 billion cubic metres to Russia;

- Kazakhstan extracted about 15 billion cubic metres, all of which went to satisfying domestic demand.

In general it can be said that the "gas interdependence" between Ukraine, Russia, Kazakhstan, Uzbekistan and Turkmenistan has reduced since Soviet days.

Firstly, in 1990 Russia and Ukraine between them accounted for about 60% of the combined output of Turkmenistan and Uzbekistan. Today the figure is about 40%.

Secondly, a significant proportion of the gas from Turkmenistan (about 12% of the total extracted) is exported to its next-door neighbour Iran, and thus does not fall within the "Turkmenistan - Uzbekistan - Kazakhstan - Russia - Ukraine" network.

Thirdly, in contrast to Soviet days, exports from Turkmenistan and Uzbekistan are now considered separately. This has led to the virtual disappearance of links between Ukraine and Uzbekistan on natural gas supplies.

In the future both Turkmenistan and Uzbekistan plan to increase their exports of natural gas to the foreign market. In 2010 Turkmenistan plans to increase the volume of gas extracted to an annual figure of 120 billion cubic metres and the volume of gas exported to more than 100 billion cubic metres. The exported quantity will be distributed as follows: about 60% to Russia,[7] about 30% to China[8] and about 10% to Iran. After 2010 Turkmenistan plans to increase the quantities of gas extracted and exported substantially, so that by 2020 they will reach 240 and 170 billion cubic metres respectively.

Uzbekistan plans to maintain its present level of gas extraction at 60-65 billion cubic metres until 2010, and to increase the proportion exported, mainly at the expense of domestic consumption. It is proposed to increase the quantity exported to 20 billion cubic metres, with domestic consumption reducing from the present 49 billion cubic metres to about 43 billion cubic metres.[9]

Russian gas and oil companies are also planning to increase the quantity of natural gas imported from Turkmenistan and Uzbekistan: to annual levels of 70-75 billion cubic metres from Turkmenistan and 12-15 billion cubic metres from Uzbekistan. To achieve these levels Gazprom is planning to increase the capacity of the "Central Asia - Centre" pipeline to 80 billion cubic metres a year. As the other pipeline in the region, the "Bukhara - Ural" pipeline, has a capacity of about 19 billion cubic metres a year, the overall pipeline capacity for the Central Asian gas transportation system will rise to 100 billion cubic metres a year.

It is not yet clear, however, that Turkmenistan will be able to increase its levels of gas extraction and export at the rate proposed, starting in 2010. If the quantity extracted does not enable the quotas for Russia and China to be met, Turkmenistan will face a difficult problem: which customer to satisfy? This could cause problems for cooperation in the energy sector for the entire region, not only between Russia and Turkmenistan but also between Russia and China.

Turkmenistan - Uzbekistan - Kazakhstan

In the Soviet era, the structural interdependence between Uzbekistan, Kazakhstan and Turkmenistan was characterised by the need for close coordination to support the efficient operation of a unified Central Asian gas transportation system.

Kazakhstan not only guaranteed the transit of natural gas but was also a consumer of it. In 1990, for example, about 7.8 billion cubic metres of natural gas were supplied to Kazakhstan, representing 9.6% of the combined exports of Turkmenistan and Uzbekistan to republics within the Soviet Union.

Kazakhstan is still an important transit route for gas from Turkmenistan and Uzbekistan. Its dependence on imported gas from these countries has reduced considerably, however, as extraction of its own gas has markedly increased since the Soviet era. In 2006 the volume of gas extracted in Kazakhstan was about 15 billion cubic metres, a five-fold increase over 1990. Turkmenistan no longer supplies Kazakhstan with natural gas. Uzbekistan still supplies it, mainly to the two border provinces of Yuzhno-Kazakhstan and Shymkent.

In 2006 Uzbekistan delivered about 1.8 billion cubic metres of natural gas, comprising about 16% of the quantity exported. These days, in contrast to the Soviet era, the supply of gas from Uzbekistan to Kazakhstan and the price paid for it is the subject of negotiations between the two governments. The absence of a well-integrated gas supply system means that from time to time there are interruptions to the supply in the border provinces of Kazakhstan, as well as other differences of opinion on the question of cooperation in the energy sector.

In general, the interdependency in the gas sector between Turkmenistan, Uzbekistan and Kazakhstan has not really changed very much. Kazakhstan's role as a transit route is likely to be enhanced in the future. While the prospects for the construction of the Trans-Afghanistan and Trans-Caspian gas pipelines remain uncertain, the Kazakhstan route is the only option for exporting gas both from Turkmenistan[10] and Uzbekistan.

Of no less significance is the fact that Kazakhstan itself is planning to join the ranks of the leading exporters of natural gas. The growth in its extraction capacity means that it is already not far from being independent in gas. There are still problems to be overcome, however before it can become a gas exporter.

One of these is that there are few modern facilities in Kazakhstan for processing by-product gas, and most of the gas produced in the country is a by-product from the oil extraction industry. For this reason about 25% of natural gas in Kazakhstan is burnt off in flares (in 2006 the flared gas amounted to 5 billion cubic metres out of a total of 20 billion cubic metres). There are also still inadequate facilities for refining extracted gas to bring it up to commercial standards.

Notwithstanding these problems, Kazakhstan plans to increase its gas extraction to 45 billion cubic metres by 2015, of which about 25 billion cubic metres would go for export. At the moment it is not clear whether Kazakhstan will prefer to export its gas to Russia, via the "Central Asia - Centre" and "Bukhara - Ural" pipelines or to be connected to the planned "Turkmenistan - Kazakhstan - China" pipeline. Like Turkmenistan, it will probably have to make the difficult decision to choose either Russia or China.

Turkmenistan - Uzbekistan - Russia - Kazakhstan - Kyrgyzstan - Tajikistan

During the Soviet era there was an effective organisation, developed over the course of several decades, for sharing energy resources between Russia and the countries of Central Asia. This applied not only to the petroleum and gas sectors, but also to coal, fuel oil and electrical energy in general.[11] The essence of this arrangement was the rational and mutually-advantageous exchange of the hydroelectric resources of Kyrgyzstan and Tajikistan[12] for the non-renewable fuel resources of the other republics.

In winter Kyrgyzstan and Tajikistan were provided with enough gas from Turkmenistan and Uzbekistan, coal from Kazakhstan and fuel oil from Russia to operate their power stations and provide heating for populated areas. Kyrgyzstan and Tajikistan reduced their hydroelectric energy output, building up the reserves of water in the reservoirs. In 1990, for example, Tajikistan was supplied with about 5 billion cubic metres of gas (about 6.2% of the total quantity exported by Turkmenistan and Uzbekistan) and Kyrgyzstan was supplied with about 3.6 billion cubic metres (4.5% of the total quantity exported by Turkmenistan and Uzbekistan).

In summer the supplies of natural gas, coal and fuel oil to Kyrgyzstan and Tajikistan were considerably reduced, and these two republics increased their hydroelectric generation effort to full capacity. In this way they could produce enough electricity both for their own needs and to provide energy to Uzbekistan, Turkmenistan, a number of regions in Kazakhstan, and even Russia. Furthermore, Uzbekistan, Turkmenistan and some provinces of Kazakhstan (Yuzhno-Kazakhstan and Kyzylorda) were supplied with water from Kyrgyzstan and Tajikistan during the summer, mainly for agricultural irrigation.

With the disintegration of the Soviet Union this energy plan, developed over the course of several decades, was destroyed. Turkmenistan and Russia no longer contribute to it, and the consequences are felt today principally by Uzbekistan, Kyrgyzstan and Tajikistan, and to a lesser extent Kazakhstan and Turkmenistan.

Nowadays natural gas for Kyrgyzstan and Tajikistan comes only from Uzbekistan, and Kazakh coal and fuel oil are exported only to Kyrgyzstan. There are occasional deliveries of fuel oil from Russia to Tajikistan.

With Turkmen gas taken out of the energy budget of both Kyrgyzstan and Tajikistan, the quantity of natural gas supplied to these republics has been reduced by almost an order of magnitude in comparison with that supplied in Soviet times. In 2006 Uzbekistan delivered about 0.57 billion cubic metres of gas, i.e. about 5.4% of its total exported gas, to Tajikistan and about 0.51 billion cubic metres (about 4.8% of its total exported gas) to Kyrgyzstan.

Furthermore, energy supplies from Uzbekistan, Kazakhstan and Russia to Kyrgyzstan and Tajikistan are no longer regulated systematically, as they used to be, but are subject to negotiations between the leaderships of the individual countries. And the supply of natural gas from Uzbekistan to Kyrgyzstan and Tajikistan plays a major role in the energy provision for these two countries in winter, as their thermal power stations rely mainly on natural gas and less on coal and fuel oil.

Negotiations between Uzbekistan and Kyrgyzstan, and between Uzbekistan and Tajikistan, are frequently difficult, as both Kyrgyzstan and Tajikistan lack sufficient hard currency to be able to pay for the Uzbek gas. Uzbekistan frequently interrupts the supply of gas because of delays in the payment for it. As Kyrgyzstan and Tajikistan have very few alternatives, apart from hydroelectric, both countries are often on the verge of an energy famine.

The two countries are therefore forced to use hydroelectric resources during the winter, resulting in the flooding of some of the agricultural land in Uzbekistan,[13] the Yuzhno-Kazakhstan and Kyzylorda provinces of Kazakhstan and a number of areas in Turkmenistan. Furthermore, at the end of winter there is a shortage of water for the summer irrigation of agricultural land. All this leads not only to financial losses,[14] but periodically to difficulties in inter-government relations.

The rational programme of energy exchange between republics which existed formerly has been destroyed, and the negative consequences of this are felt particularly in the Central Asian region. These consequences not only complicate the question of regional cooperation but they have the potential to lead to conflict. Tajikistan, and even more so Kyrgyzstan, because of their shortage of hard currency, frequently offer to pay for Uzbek gas by means of a barter accounting system. Failing that, they insist that Uzbekistan and Kazakhstan pay for the water for their agricultural needs, and expect them to pay at a constant rate, in winter and summer alike.[15]

Uzbekistan, for its part, insists that the water in rivers which cross national borders should be considered as a natural resource, rather than an economic one, in accordance with international practice. One of Uzbekistan's main arguments is that river water is a naturally-renewable resource and that no costs are involved for anyone, while natural gas is a non-renewable resource and there are costs associated with its extraction.

Kyrgyzstan and Tajikistan plan to increase their production and export of electrical energy significantly by modernising existing hydroelectric plants and building new ones. They plan to export electricity not only to Russia and the countries of Central Asia but also to the Western provinces of China and even to Pakistan. The leaders of Kyrgyzstan and Tajikistan see this plan as vital to their interests, as the supply of electrical energy is one of the few spheres in which these countries can compete on the world market. The parlous state of the economies of these two countries means, however, that the construction and commissioning of new hydroelectric generating stations will only be possible with the involvement of foreign investors.

Nowadays Kyrgyzstan and Tajikistan see Russia as the main foreign investor in the hydroelectric energy sector, but they also have hopes of investment from China.[16] Kyrgyzstan is planning to commission the Kambaratinsk hydroelectric power station, which will have a designed capacity of 1940 MW, and this will increase the total electricity generating capacity of Kyrgyzstan by 60%.[17] Likewise Tajikistan is planning the Rogunsk hydroelectric plant with a projected capacity of 3600 MW and the Sangtudinsk plant with a planned output of 670 MW. These two power stations will more than double Tajikistan's present electricity-generating capacity.[18]

In theory, a major expansion of generating capacity in Kyrgyzstan and Tajikistan and an increase in the export of electricity from these countries could make a significant contribution to the resolution of present problems of international energy exchange. The hydroelectric generating potential of these two countries is enormous: even in the Soviet era less than 10% of it was used. For this reason cooperation in the hydroelectric industries of Kyrgyzstan and Tajikistan could be the subject of international interest, involving not only Russia and China but also the countries of South Asia, especially India and Pakistan.

In practice, however, this is only likely to happen in the context of economic integration in Central Asia and the presence of effective mechanisms for the development of multilateral cooperation in the economic sphere as a whole. This context does not exist at the moment.

Thus in spite of the political will of the leaderships of the four countries (Uzbekistan, Kazakhstan, Kyrgyzstan and Tajikistan) to try and resolve by dialogue the present contradictions in the hydroelectric sector, these problems could be a time bomb as far as regional cooperation is concerned. In the absence of an

integrated system for cooperation in the energy sector, and with the extreme weakness of the processes of economic reconstruction, the hydroelectric problems will probably never be resolved. The resolution of this problem is made yet more difficult by the fact that there is not a clear definition of the status of transborder rivers in international law.

2. Oil extraction, transportation and refining

Oil-producing countries in Central Asia are Kazakhstan, Turkmenistan and Uzbekistan. In the Soviet era the quantities of oil extracted by these countries was insignificant compared with the quantity extracted in Russia. The combined total amount extracted by Kazakhstan, Turkmenistan and Uzbekistan in 1990 was 27 million tonnes, while the amount produced by Russia was 550 million tonnes.

Thus the main producer of oil in the former Soviet Union was Russia. Two other republics of the Union, Turkmenistan and Azerbaijan, were independent for oil, but the rest imported Russian oil and petroleum products. There was and still is interaction between three of the republics - Russia, Kazakhstan and Uzbekistan - on questions of oil transportation and refining, which can be described in terms of two basic schemes: Russia - Kazakhstan, and Russia - Uzbekistan.

Table № 2 Comparison of oil extraction in Russia and the Central Asian countries and oil exports between them

Country	Oil extracted, millions of tonnes		Oil exported, millions of tonnes		Oil imported, millions of tonnes	
	1990	2006	1990	2006	1990	2006
Russia	550	530	24.9	2.8	-	-
Kazakhstan	14.8	64	14.8	6.1	18.4	2.6
Turkmenistan	8	10	-	-	-	-
Uzbekistan	4	6	-	-	6.5	0.2

Russia - Kazakhstan

During the Soviet era, the oil refineries of Kazakhstan processed mainly Russian oil (from the West Siberian oil fields), as they were designed to refine oil with a low content of sulphur and paraffins, whereas the oil extracted in Kazakhstan had high concentrations of these substances. In 1990 Russia supplied Kazakhstan with about 18 million tonnes of oil for refining (comprising about 3.3% of the total of Russian oil extracted) and Kazakhstan delivered about 14.8 million tonnes, i.e. virtually all the oil it extracted) to Russia.

This exchange scheme between Russia and Kazakhstan is still in operation today, in principle, but the quantities involved have reduced to about a quarter of their previous levels. In 2006 Russia supplied Kazakhstan with 2.6 million tonnes of oil, and Kazakhstan delivered about 6.1 million tonnes to Russia. This illustrates both the considerable reduction in cooperation between Russia and Kazakhstan on oil refining matters and the preference of the oil and gas companies of both countries to direct their efforts to exporting to the external market.

Cooperation between Russia and Kazakhstan has actually improved a little in the area of transportation of oil. Russia allows Kazakhstan to export oil via the pipelines on Russian territory provided that the oil can be mixed with a prescribed amount of Russian oil. This is because the oil from fields in Western Kazakhstan

(except that from the Tengiz field) generally has a high content of viscous paraffins which make it more difficult to pump through pipelines, especially in winter. The Kazakh oil is therefore diluted with lighter Russian oil to give it the optimum viscosity before it enters the pipelines.

Kazakhstan plans to expand its capacity considerably, in terms of both extraction and export. The energy policy of the country calls for growth in hydrocarbon extraction specifically with a view to exporting to the world market rather than for developing domestic production. The Kazakhstan Ministry of Energy and Mineral Resources plans to increase the annual quantity of oil extracted to 120 million tonnes by 2015, with the quantity exported rising to 100 million tonnes a year.

It is also significant that Kazakhstan is stressing the importance of cooperation with Russia in opening up new oil fields. Russia has its own interest in the development of new oil fields in Kazakhstan, so it is likely that the two countries will cooperate in this activity.

While seeking to increase its oil exports, Kazakhstan is also trying to reduce its dependency on Russian pipelines by finding alternative routes. At present more than 90% of the oil from Kazakhstan is piped through pipelines on the territory of Russia,[19] but in the future Kazakhstan plans to transport its oil for export via two other routes, not using Russian territory.

By 2015 it is planned to pump not less than 20 million tonnes annually (20% of the total exported) to China, via the recently commissioned Atasu - Alashankou pipeline.[20] It is also planned to deliver at least 25 million tonnes annually (25% of the total exported) to Europe via the Baku - Tbilisi - Ceyhan pipeline[21] (Kazakhstan has already committed itself to supplying Europe with an annual 7.5 million tonnes of oil via this pipeline).[22] The remaining 55 million tonnes (55%) of Kazakhstan's exported oil would be shipped via Russia.

It is not yet clear, however, that Kazakhstan will be able to extract the planned quantity of oil by 2015 in order to satisfy all this demand. As is the case with the future plans for exporting gas from Turkmenistan and Kazakhstan, there is a growing potential conflict of interests between Russia, China and the international companies involved in the oil and gas industries of Kazakhstan.

Russia - Uzbekistan

In the Soviet era, Uzbekistan was a consumer of Russian oil, which was transported by rail via Kazakhstan. Although Uzbekistan was classed as an oil-producing republic within the Soviet Union, the amount it extracted (about 3.5 million tonnes in 1990) was not sufficient to cover its own needs, so it had to import additional supplies. In 1990 Uzbekistan was supplied with about 6.5 million tonnes of oil from Russia, constituting about 1.2% of Russia's total oil production.

This arrangement has undergone considerable changes. After the disintegration of the Soviet Union Uzbekistan began to increase its own oil extraction, with a view to becoming independent for oil. By 1996 the extraction of oil in Uzbekistan had reached 8 million tonnes a year, and between 1997 and 2003 Uzbekistan did not import any oil. In 2004, however, oil extraction in Uzbekistan began to decline, and now Uzbekistan is buying oil from Russia again, and, to a lesser extent, from Kazakhstan. The amounts imported, however, are still significantly lower than they were in Soviet times. In 2006 Uzbekistan only purchased about 0.2 million tonnes of oil from Russia.

In the future it must be expected that Uzbekistan will increase its extraction of oil, leading to a total cessation of oil imports. As the achievement of energy independence is one of the main aims of the economic strategy of Uzbekistan, the country's leadership has made the location and exploitation of new hydrocarbon deposits one of its top priorities. The national energy company Uzbekneftegaz is working closely with energy companies from Russia and other countries in the effort to locate new gas and oil fields.

In 2005 Uzbekneftegaz signed an agreement with the Lukoil Overseas of Russia, Petronas of Malaysia, KNOK of Korea and the National Petroleum Corporation of China, to form a consortium of investors to carry out geological surveys for exploitation of the oil and gas deposits in the Uzbek part of the Aral Sea. The 35-year agreement provides for Uzbekistan to take 50% of the oil produced and for the other members of the consortium to have 10% each. The first stage of the work, lasting three years, will be the geological surveys. Then will follow a large number of feasibility studies looking at various commercial options for output-sharing. Stage 2 will continue the process of exploitation of the new oil and gas fields.

Conclusions

In general the structural interdependence of Russia and the countries of Central Asia in the energy sector is much reduced now compared with Soviet times. The reduced volume of trading in oil and gas between these countries is a reflection of this, and the previous well-developed cooperation plan between republics has been wholly or partly destroyed.

The main reason for this is clearly that with the disintegration of the Soviet Union the whole system of organising economic activity in the unified state, with its command economy, disappeared. It has not yet been replaced by a new system or an effective method of regulation of international economic relations based on market principles.

The collapse of the unified economic entity that was the Soviet Union has been catastrophic for the refining industries of all the post-Soviet states. This had a negative knock-on effect on the oil refining industry in Russia and other states in the region by reducing the previous levels of technological contact between the energy companies of the various countries, who now directed their attention more to exporting hydrocarbons. So not only has there been a decline in refining capacity, but more of the hydrocarbons are now being exported to foreign countries.

It would not be an exaggeration to say that such interdependency as there is between the petroleum industries of Russia and the other states in the region is still determined mainly by the economic and geographical ties between the Central Asian states and by Russia's monopoly position when it comes to transporting oil and gas out of the region. The system of interdependence in energy, inherited from the Soviet Union, will probably decline even more in the future. This will make it less likely that the present privileged position of Russia in the oil and gas industries of Central Asia will be maintained.

Firstly, the structural interdependence between Russia and the countries of Central Asia is only being restored slowly, and there are no signs of this process speeding up.

Secondly, cooperation between Russia and Central Asia in the oil and gas sector is inadequately supported by international cooperation in other branches of industry (for example industries using hydrocarbons and hydrocarbon derivatives). This is another reason for the noticeable decline in structural interdependence.

Thirdly, international interest in the region is increasing, due to the growing demand for hydrocarbons, not only in neighbouring China but in a number of Western countries and developing countries. This is likely to put more pressure on the competition for hydrocarbons in Central Asia and their transportation routes.

The oil and gas sector of the countries of Central Asia will therefore gradually fall more and more into the sphere of interest of other leading players on the regional stage. The main contenders for participation in hydrocarbon extraction and transportation, as well as Russia, are China, the European countries and the leading energy companies. Kazakhstan and Turkmenistan, the main hydrocarbon exporting nations in Central Asia, are already tending to redirect their exports of hydrocarbons towards China. This tendency is likely to lead to a conflict of energy interests between China and Russia in Central Asia.

Russia has an interest in widening access to the Central Asian hydrocarbon deposits and transporting them across Russian territory. The rapidly developing China is just as interested, if not more so, in tapping the hydrocarbon potential of the region for the development of industry in its Western provinces.

This probable conflict of energy interests between Russia and China in Central Asia could cause problems for the multilateral format of cooperation in and around the region, as both Russia and China have considerable potential to affect the processes of development of the whole of Central Asia. It would therefore be wise for Russia, China and the other countries of the region to set about trying to construct a common energy market, to establish clear rules of play and to create effective mechanisms for resolving disputes and difficulties in matters of international energy cooperation.

A number of attempts to analyse and comprehend this problem have already been made and are worthy of note: the science and business conference "The Central Asian Energy Market: trends and prospects" held in Tashkent in December 2005 and the round table discussions on "Prospects for creating an Energy Club within the Shanghai Cooperation Organisation" held in Tashkent on 25 February 2007, organised by the Centre for Political Studies, Tashkent, with the support of the SCO secretariat. At these events consideration was given to the idea of creating an "integrated market, serving the SCO area".[23]

Endnotes

[1] "Central Asia" is taken to mean the area in the central part of Eurasia comprising the following five states: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan. These states all came into being following their declarations of independence from the USSR in 1991.

[2] Confirmed by decision of the international council of the EurAsEC on 28 February 2003. In this document the parties expressed their intentions to work jointly towards the rational use of energy resources and the creation of a common fuel and energy complex by the countries of the Community, based on increasing the functional efficiency of energy systems, the development of the transit facilities of the EurAsEC member states and the

creation of favourable conditions for increasing the level of international energy exports. Source: EurAsEC official site (http://www.evrazes.com).

[3] At that time this region was called Central Asia and Kazakhstan.

[4] Extracted natural gas is processed in gas processing plants before being supplied as a commercial product via gas pipelines. The main operation performed on it is cleaning, i.e. the removal of contaminants such as sulphur, dust, moisture and other substances. The commercial-standard gas is then used for conversion to electrical energy in thermal power stations and in the chemical industry for derivation of a number of chemical products. In the post-Soviet states, natural gas is used mainly for electricity generation, whereas in developed Western countries it is mainly used in the chemical industry.

[5] Oil after extraction is subjected initially to a similar process to natural gas, i.e. it is cleaned of sulphur, solid particles, water and other substances. Further refinement is in the form of fractional distillation, from which various petroleum products are obtained, including furnace oil (which is the residual fraction). Furnace oil is used either in thermal power stations for electricity generation or for further refinement by the cracking process, producing other petroleum products. In the former Soviet Union and the post-Soviet states furnace oil was and still is used mainly for electricity generation, whereas in developed Western countries it is used primarily in industry for conversion into other petroleum products.

[6] From here onwards statistical information on the production and export of hydrocarbons in Russia and the Central Asian republics relating to 1990 is taken from the following studies by the World Bank: Kazakhstan - Transition of the State. Washington DC, June 1997; Turkmenistan, Washington DC, May 1994; Uzbekistan - Plan of Economic Reform. Washington DC, September 1993. Information on the production and export of hydrocarbons in Russia and Central Asia relating to 1996 is based on official information from the national statistics organisations of the countries concerned.

[7] An agreement on cooperation in the gas sector was signed by the governments of the Republic of Turkmenistan and the Russian Federation in Moscow in 2003.

[8] Via a pipeline due to be commissioned in 2009. A general agreement on the construction of a pipeline from Turkmenistan to China and the sale of natural gas was signed by the governments of the Republic of Turkmenistan and the People's Republic of China in Beijing in April 2006. The construction of the pipeline was to be financed by China. This project for the construction of the pipeline was ratified by the Chinese Ministry of Economic Planning in September 2006.

[9] Uzbekistan has much less scope than Turkmenistan to export natural gas, because of the high level of domestic demand, due partly to the presence of energy-consuming industries like the major branches of the ferrous and non-ferrous metals industries.

[10] Whether most of the gas exported from Turkmenistan goes to Russia or China, it will still have to pass through the territory of Kazakhstan.

[11] During the last 20 years of the Soviet Union, the fuels used for electricity generation in thermal power stations were mainly natural gas and fuel oil, and to a lesser extent coal.

[12] Kyrgyzstan and Tajikistan both have vast hydroelectric resources but practically no stocks of non-renewable fuels. There are virtually no hydrocarbon deposits and only limited coal stocks in these countries.

[13] This problem affects mainly Uzbekistan and Kazakhstan, and to a lesser extent Turkmenistan.

[14] Experts estimate that the total annual losses incurred in the Central Asian countries due to the winter flooding of agricultural land and the shortage of water in the summer amount to 770 million US dollars.

[15] In 2001 the Kyrgyzstan parliament passed a law called: "International use of water resources and facilities". Under this law, the principle of "payment for water" is introduced into the relations between Kyrgyzstan and other countries.

[16] China has a material interest in the availability of cheap hydroelectricity from Kyrgyzstan and Tajikistan for its Western provinces.

[17] At present the company *Unified Energy System of Russia* is carrying out a feasibility study for completion of the Kambartinsk hydroelectric power station, and the government of Kyrgyzstan is planning to put out a request to tender for this project in 2008.

[18] During President Putin's visit to Tajikistan in 2004, a contract was signed between the government of Tajikistan and the *Unified Energy System of Russia* for the construction of the

Sangtudinsk power station and an agreement with the company "Russian Aluminium" for the construction of the Rogunsk power station.

[19] Via the Caspian Pipeline Consortium's pipeline system, which runs from the oil fields of Western Kazakhstan via the territory of Russia to the oil terminal at the port of Novorossiisk (Russia), via the Atyrau - Samara pipeline, or by sea from the port of Aktau to Makhachkala and then via the Makhachkala - Novorossiisk pipeline.

[20] The 962 km Atasu - Alashankou pipeline was opened in December 2005. It is planned to pump initially 10 million tonnes a year to China via this pipeline, rising later to 20 million tonnes a year.

[21] Companies from various countries which have invested in the construction of the Baku - Tbilisi - Ceyhan (BTC) pipeline are bidding for the Kazakh oil which will be pumped through it. For this pipeline to be profitable, it has to pump at least 50 million tonnes of oil a year, and Azerbaijan is not in a position to satisfy this demand by itself.

[22] An agreement between the government of the Republic of Kazakhstan and the government of the Republic of Azerbaijan was signed in Almaty in June 2006, under which Kazakh oil would be transported to the world market via the Caspian Sea and Azerbaijan (the BTC pipeline). It is planned to transport the Kazakhstan oil by tanker to the oil terminal at Sangachal (Azerbaijan), from where it would be piped to the Turkish Mediterranean port of Ceyhan.

[23] Karimova G. I. Trends and prerequisites for the creation of a unified energy market in the SCO area // The Central Asia Energy Market: trends and prospects. Proceedings of international science and business conference, Tashkent 6-7 December 2005. Tashkent, Patent-Press, 2006. Pp 22-26.

Vladimir Paramonov and Alexey Strokov are independent analysts in Uzbekistan.

Translated by Mervyn Brown

Want to Know More ...?

See:

The Central Asia Energy Market: Trends and Prospects. Proceeding of international sciences and business conference, Tashkent 6-7 December 2005. Tashkent, Patent-Press, 2006.

Magazine of the Association of "KazEnergy", http://www.kazenergy.com/en/magazine

"Current State of Bilateral Relations of Central Asian Nations in the Field of Energy Resources. Problems and Ways of Their Solution", of Asia.Strategy Foundation, http://www.asiastrategy.ru/?about

Disclaimer

ISBN 978-1-905962-14-3

Published By:

Defence Academy of the United Kingdom

Conflict Studies Research Centre
Defence Academy of the UK
Watchfield
Swindon
SN6 8TS
England

Telephone: (44) 1793 788856
Fax: (44) 1793 788841
Email: csrc@da.mod.uk
http://www.defac.ac.uk/csrc

ISBN 978-1-905962-14-3