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Kakhkharov, Jakhongir

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# UZBEK GAS FOR EXPORT: WILL POLITICAL MANEUVERING BETWEEN CHINA AND RUSSIA RESULT IN HIGHER EXPORT PRICE?

JAKHONGIR KAKHKHAROV

## Executive Summary

The main research question is “Will political maneuvering between China and Russia result in higher export price for Uzbek gas?” This is especially peculiar given the fact that many analysts consider the price that Russia pays for Uzbek gas is lower than a fair market price. Currently, the price of gas exports from Uzbekistan is US\$160 per 1,000 cubic meters. On the other hand Gazprom charges its European customers an average of US\$350 per 1,000 cubic meters.<sup>1</sup>

On July 1, 2008, Uzbekistan and Kazakhstan has begun laying their respective stretches of the Turkmenistan-China gas pipeline. The construction began at the settlement of Saet in the Bukhara region. The cost of the Uzbek stretch of the gas pipeline is estimated to be over USD 2 billion. The total cost of the 1,818-kilometer long gas pipeline Turkmenistan-China is about USD7 billion. If implemented, the Turkmenistan-China pipeline might undermine Russia’s ability to manipulate the Central Asian gas market and stir up energy competition between Russia and China. Some analysts argue that this would presumably secure higher profits for Uzbekistan, as well as give it a greater degree of political freedom. It should be noted that with estimated natural gas reserves of 66.2 trillion cubic feet (Tcf), Uzbekistan is the third largest natural gas producer in the Commonwealth of Independent States (after Russia and Turkmenistan) and one of the top fifteen natural gas-producing countries in the world.

According to the schedule approved by the decree of the Uzbek President, the first line of the gas pipeline and compressor station is expected to be completed by the end of 2009. According to schedule, the first stage will end in January 2010. The second line of the gas pipeline and two more compressor stations are expected to be launched by January 2012.

The project will be carried out in line with the inter-government agreement on principles of construction and exploitation of Uzbekistan-China gas pipeline with 530 km length. The Uzbek-Chinese Asia Trans Gas JV is the construction contractor of the project and it will implement the project with the help of foreign loans. The Company has to design, construct and further operate this gas pipeline. The co-founders of the joint venture are Uzbekneftgaz National Holding Company and Chinese National Petroleum Corporation (CNPC) with 50% share each.

Turkmenistan and Uzbekistan reached the agreement on building this pipeline in 2006. In 2007, the state-owned company Turkmengaz and CNPC signed an agreement on purchase-sale of natural gas. Turkmenistan took the obligation to supply 30 billion cubic meters of gas to China every year. Turkmen President Gurbanguly Berdymukhamedov said in June 2008 that the gas transportation to China via Kazakhstan and Uzbekistan would begin in 2009.

The 188 kilometer-long Turkmen stretch of the gas pipeline will be built by the Russian company Stroitransgaz. The cost of the project is Euro 395 million.<sup>2</sup>

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<sup>1</sup> The price for gas for European customers changes constantly. This is the price at the moment when the report was written.

<sup>2</sup> Uzreport.com. “Uzbekistan begins building its stretch of gas pipeline”, [www.uzreport.com](http://www.uzreport.com), July 1, 2008.

Vice Prime Minister of Uzbekistan Ergash Shoismatov, vice chairman of the NDRC and head of China's National Energy Bureau Zhang Gobao, as well as vice president of China National Petroleum Corporation (CNPC) Liao Yongyuan participated in the construction launch ceremony.<sup>3</sup>

Gazprom's reaction to this development was almost immediate. Gazprom expects the price of gas it buys from Central Asia to at least double next year, RIA Novosti reported quoting the Russian gas monopoly's CEO.<sup>4</sup> Alexei Miller discussed the trend for Central Asian gas producers to raise prices with Prime Minister Vladimir Putin. "Against the backdrop of high gas prices in Europe, the intentions of Central Asian countries to raise gas purchase prices seem absolutely well-founded. Therefore, we can expect the purchase prices in these countries to more than double in 2009 compared to the levels at which Gazprom has bought gas this year," Miller was quoted as saying by the governmental press service. He said the Gazprom-controlled Central Asia-Center pipeline system would be the most commercially attractive route for the deliveries of Central Asian gas to external markets and added that Gazprom could expand purchases in gas producing countries for subsequent sales on world markets.

Finally, during Russian Prime Minister Vladimir Putin's visit to Uzbekistan in the beginning of September 2008, Russia and Uzbekistan agreed to build a new pipeline through Uzbekistan to export Turkmen and Uzbek natural gas, and to switch to a European gas pricing formula. The price issue had earlier prevented the countries from finalizing the pipeline deal.

The deputy head of Uzbekneftegaz Shavkat Majidov said earlier in 2008 that Uzbekistan will increase the export of natural gas in 2008 up to over 16 billion cu m annually from the previous 14.7 billion cu m.

Some 12 billion cu m of gas will be dispatched to Russia in line with the contract with the Russian Gazprom, the remaining 4 billion cu m – to the neighbouring countries including Kazakhstan, Kyrgyzstan and Tajikistan. In 2007, some 10.5 billion cu m of gas was dispatched to Russia, 2.8 billion cu m to Kazakhstan and 750 million and 650 million cu m natural gas to Kyrgyzstan and Tajikistan.

The conclusion of the research is that alternative pipeline to China will strengthen the bargaining power of Turkmenistan and Uzbekistan and may result in higher export gas prices. However, given the fact that Chinese themselves are unwilling to match the price that Europeans are paying for gas, the increase will not be very significant. Therefore, Uzbekistan, as well other Central Asian countries, should continue their efforts to construct and participate in other alternative gas pipelines, such as Trans-Caspian, Nabucco, Trans-Afghan, and Iran-Pakistan-India pipeline projects.

To accomplish this research the author conducted interviews and surveys with representatives of Uzbekneftegas, commercial section of Russian and Chinese Embassies in Uzbekistan, representatives of Russian and Chinese oil&gas companies operating in Uzbekistan, accomplished a field trip to St. Petersburg, Russia to interview researchers and practitioners, agency, government representatives involved with oil&gas sector issues, policy makers, and think tanks.

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<sup>3</sup>Uzreport.com. "Construction of Uzbekistan-China gas pipeline starts", [www.uzreport.com](http://www.uzreport.com), July 1, 2008.

<sup>4</sup>Uzreport.com. "Central Asian Gas Purchase Prices to Double in 2009 – Gazprom", [www.uzreport.com](http://www.uzreport.com), July 8, 2008.

Chapter II of the report provides an overview of the gas sector of Uzbekistan and the role of the gas sector in the economic development of the country. Chapter III analyzes gas production and distribution system of the country. Chapter IV is devoted to the issue of natural gas pipelines. Chapter V tackles questions related to Uzbek gas exports. Chapter VI reviews factors influencing export gas prices and chapter VII draws conclusions.

## **II. Overview of the gas sector of Uzbekistan**

The history of Uzbek gas industry counts for less than a half-century. The first gas field in Kyzylkum desert was opened in 1953. The Ural – Bukhara and Central Asia – Center transcontinental pipelines were constructed in 1962 for delivery of gas to the industrial centers of Russia. During the 1980s, the country exported to Russia and Eastern Europe approximately 7 – 8 billion cubic meters of gas per year.

After Uzbekistan’s independence, the Government of Uzbekistan developed a new program for the development of the oil & gas industry, which included sharp increase of oil and gas condensate production, improvement of the oil refining and gas processing technologies and extension of the hydrocarbons reserves.

Uzbekistan has significant oil and gas reserves, but the country’s development as a major natural gas and oil exporter is constrained because of a lack of pipeline infrastructure. In 2002, Gazprom signed an agreement with Uzbekneftegas in which Russia committed to buy Uzbek gas until 2012 (about 10 billion cubic meters per year).<sup>5</sup> Despite existing agreements to export gas to Russia, Uzbekistan is keen to diversify its pipeline infrastructure away from Russia. So far, the Baku-Tbilisi-Ceyhan (BTC) oil pipeline and the South Caucasus (or Baku-Tbilisi-Erzurum) gas pipeline (SCP), constitute the only infrastructure for bringing Central Asian energy to the European market, which is not under Russian control.<sup>6</sup> As the middle-man monopoly player in the region, Russia enjoys leverage.<sup>7</sup> This leverage embodies itself in such a way that Russia is able to buy Central Asian energy cheaply and re-sell it at a much higher price in Europe.

Uzbekistan is one of the world’s top fifteen largest natural gas producers and the third largest producer among former Soviet states after Russia and Turkmenistan. Unlike in many gas producing countries, Uzbekistan’s gas resources and potential are relatively less explored. According to the Geology Committee of Uzbekistan, 60 per cent of the country is potentially rich in oil and gas. The Oil and Gas Journal estimates that Uzbekistan contains 594 million barrels of proven oil reserves. B. B. Urdashev, states that there are 190 hydrocarbon fields discovered in Uzbekistan<sup>8</sup>. There are 94 gas and gas condensate fields and 96 oil and gas, oil and gas condensate, and oil fields. 47% of discovered fields are in the process of exploitation, 35% are being prepared for developing, and exploration works in progress in the rest of the fields.

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<sup>5</sup> Laruelle, M., *Russia’s Central Asia Policy and the Role of Russian Nationalism*. Silk Road Paper, Central Asia & Caucasus Institute, Silk Road Studies Program, April 2008.

<sup>6</sup> Cornel, S., and Nilsson, N., “*Europe’s Energy Security: Gazprom’s Dominance and Caspian Supply Alternatives*”, Silk Road Paper, Central Asia & Caucasus Institute, Silk Road Studies Program, 2008.

<sup>7</sup> Bugajski, J., “*Energy Policies and Strategies: Russia’s Threat to Europe’s Energy Security*”, *Insight Turkey*, Vol. 8, No. 1, 2006, p. 146.

<sup>8</sup> B. B. Urdashev, “Energy Portrait of Uzbekistan and cooperation in the Framework of CIS”, *Journal “Neft, Gas and Biznes”*, #1, 2005

Following are listing of oil and gas rich regions within the country:

- Ustyurt (with 105,100 square meters of perspective land);
- Bukhara-Khiva (with 44,400 square meters of perspective land);
- Southern-Western-Gissar (with 4,100 square meters of perspective land);
- Surkhandarya (with 14,000 square meters of perspective land); and
- Ferghana (with 17,000 square meters of perspective land).

In February 2006, Cabinet of Ministers of Uzbekistan ordered to implement complex of measures on attraction of foreign investments to exploration of hydrocarbon materials. The national programme on development of gas pipelines in 2005-2010 envisages construction of 200 km of new export gas pipelines till 2010. The programme stipulates construction of 445 km of internal pipeline and reconstruction of 900 km of existing pipes. The programme, which was developed by Uzbekneftegaz, also envisages construction of Sarymay gas compressor station. The realization of the programme will allow Uzbekistan to increase gas export from 10 billion cubic meters in 2005 to 16 billion cubic meters in 2014, as well as meet internal demand.

Uzbek government also developed a programme aimed at increasing production of liquefied gas till 2010 and over US\$320 million will be invested to implement it. It is expected that the realization of programme will increase production of liquefied gas to 615,000 tons till 2010.

It should be noted that the role of gas exports for Uzbek economy is very important. This is especially important given the structural changes taking place in the economy of the country. Uzbek government is paying very close attention to the development of textile sector and particularly to processing of locally produced raw cotton into cotton yarn. Tens of new textile mills are put into operations annually in the framework of the program to develop the textile sector of Uzbekistan. As textile mills become operational, less and less raw Uzbek cotton is becoming available for centralized state exports. Therefore, Uzbekistan needs gas export revenues to maintain the stream of centralized hard currency earnings, which are needed to support foreign exchange rate of the national currency.

### **III Gas production and distribution**

Uzbekistan produces natural gas from 52 fields in the country, with 12 major deposits--including Shurtan, Gazli, Pamuk, Khauzak--accounting for over 95 percent of Uzbekistan's natural gas production. These deposits are concentrated in two general areas: the Amu Dar'ya Basin and in the Mubarek area of the southwest part of the country. Uzbekistan has further plans to increase its gas output through the implementation of new projects. Before independence, Uzbekistan was a major supplier of gas to other Soviet republics. Uzbekistan annually produces more than 60 billion cubic meters of gas, nearly a quarter of which is exported to Russia, Kazakhstan, Kyrgyzstan, and Tajikistan. Nine and a half billion cubic meters of gas was exported to Russia in 2006 and about ten billion cubic meters in 2007.

The most notable natural gas fields are the Mubarak and Shurtan fields. Refineries at these fields process about 40 billion cubic meters per year, which removes sulfur and other impurities. Each year, these plants recover more than 330,000 metric tons of sulfur. Hydrogen sulfide and sulfide compounds contained in the gas and gas condensate are extracted and converted into sulfur at the Mubarak Gas Processing Plant. The Shurtan Gas Plant operates one of the largest zeolot units in the world. To increase the volume of sulfur exports, the Government plans to involve foreign investors in projects to granulate and package up to 100,000 metric tons of sulfur per year.

The gas fields of Uzbekistan contain ethane, propane, butane and other components from which polymers (polyethylene, PVC) can be obtained. These components can be economically extracted in the Shurtan and Mubarak fields. The gas in these regions has ethane concentrations of 1.4 to 8.1 percent and propane-butane concentrations of 2.1 to 5.6 percent.

Uzbekistan plans by 2020 to increase natural gas exports by 170 percent to 20 billion cubic meters from 7.3 billion cubic meters in 2002. The country will seek USD1.5 billion in investment to develop its export gas pipeline system and reconstruct domestic pipelines by 2010.

Natural gas will mainly be exported through the existing trunk pipelines. Exports in the Central Asia-Center system will increase to 17 billion cubic meters by 2020 from 5 billion cubic meters in 2007. Uzbekistan also plans to increase natural gas exports to Kazakhstan, from 740 million cubic meters to 1.45 billion cubic meters, to Tajikistan from 500 million cubic meters to 700 million cubic meters, while exports to Kyrgyzstan will remain at 1.13 – 1.15 billion cubic meters a year. As noted above, Uzbekistan and China have signed an agreement regarding the construction and exploitation of a 530-kilometer long gas pipeline in 2007. The agreements were reached in April 2007 during meetings with a visiting Chinese delegation headed by Chinese development and reform minister Ma Kai, who met Uzbek President Islam Karimov and other government officials. Uzreport.com with reference to press-uz.info reported the capacity of the proposed pipeline at 30 billion cubic meters of gas annually and added that the construction will also include two compressor stations.<sup>9</sup> Eager to diversify its energy sources China has actively courted the region's resource rich nations over the last few years as it seeks power for its rapidly developing economy.

Another new development in this area which has relevance to gas exports of Uzbekistan is the Caspian gas pipeline project for which Russia, Turkmenistan and Kazakhstan are arranging principles of the implementation of it.

With that aim in view, the leaders of the Turkmen Turkmengas state concern, the Russian Gazprom gas giant and the Kazakh KazMunaiGaz company met on June 18, 2008 for the first session of the three-party coordinating committee for promoting the gas pipeline project and updating the existing interstate gas transportation networks.

The initiative to build a gas transportation network along the Caspian coast came from Turkmen President Gurbanguly Berdymukhamedov in the spring of 2007, when a Turkmen-Russian-Kazakh summit meeting took place in the city of Turkmenbashi.

The leaders of three former Soviet republics signed a joint declaration on the construction of a Caspian gas pipeline, as well as a joint declaration on the development of gas transportation networks in Central Asia. Uzbekistan also joined the second declaration.

In December 2007, an intergovernmental agreement was signed in Moscow, supported by the feasibility study of the project. The reconstruction of the existing pipeline and the construction of a new one will make it possible to bring the capacity of the gas transportation system to 20 billion cubic meters of natural gas a year.

Like the existing pipeline, the new one will run along the Caspian coast. The Turkmen section

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<sup>9</sup> Uzreport.com. Business Information Portal. *“Uzbekistan and China to Build Gas Pipeline - Report”*, [www.uzreport.com](http://www.uzreport.com), May 1, 2007.

(Belek-Garagobogaz-border with Kazakhstan) will be about 290 kilometres long, the press service of the Turkmen government said.<sup>10</sup>

Caspian gas pipeline project is a competitor of the Trans-Caspian pipeline advocated by the West. Unfortunately, the vision of a trans-Caspian energy corridor linked with Turkmenistan remains unfulfilled because of dispute between Azerbaijan and Turkmenistan.<sup>11</sup>

There are a number of gas field development projects under way in Uzbekistan currently. One of the major foreign players in the Uzbek gas production sector is Russia's LUKOIL. LUKOIL officially started up output from a major gas field in Uzbekistan on November 29, 2007 in a project expected to contribute one fifth of the Central Asian state's gas output. Khauzak is part of the wider Kandym-Khauzak-Shady-Kungrad project, developed jointly by LUKOIL, with a 90% stake, and Uzbek state energy company UzbekNefteGaz which controls the rest. A 2004 production sharing agreement will last 35 years.

Partners in Khauzak, near the Turkmen border in south-western Uzbekistan, share output on a parity basis at the field. Khauzak is due to reach maximum capacity by 2012-2013 and produce more than 11 billion cubic meters of gas. LUKOIL said Khauzak is the biggest investment project in Uzbekistan with a total of \$350 million already committed. Total investments are expected to exceed \$3 billion. Operators plan to drill over 160 production wells at the field, and build over 1,500 km (932 miles) of pipelines as well as a gas processing plant with a capacity of 10 bcm per year in Kandym deposit. The plant will have unique equipment and capacity on gas processing. Lukoil will process 10-12 billion cubic meters of gas annually as of 2012-2013.

In addition, in February 2008, Lukoil Overseas has reached an agreement with SoyuzNefteGaz to acquire a controlling interest in a group of companies that includes SoyuzNefteGaz Vostok Limited, which is a party to the PSA for the fields in Southwest Gissar and Ustyurt Region in the Republic of Uzbekistan. There are eight fields on the contract area with C1 reserves of about 100 billion cubic meters approved by the State Reserve Commission of the Republic of Uzbekistan. The design volume of production approximates 3 billion cubic meters per year. The plan is to achieve this level in 4 years. Gas will be exported through Gazprom's pipeline network. PSA a party to which is SoyuzNefteGaz Vostok Limited was signed on January 23, 2007 for 36 years and came into effect on April 23, 2007. Investments required for implementation of the project will exceed \$700 million.

Russian Gazprom plans to sign a production sharing agreement with the UzbekNefteGaz (Uzbek Oil and Gas) for the gas fields in Ust-Yurt region in 2008. UzbekNefteGaz and Gazprom are planning to sign the second PSA for gas fields in Ust-Yurt region for the period of 25 years. The signing date has been changed several times: it was first planned to sign it in 2005, then the signing was postponed to 2006.

Gazprom's pilot project in Uzbekistan was the revival of the exploitation of the Shahpahta gas field on the PSA conditions. The PSA on the project entered into force on April 14, 2004. In May 2006, Gazprom completed the construction of the Shahpahta field with total investments of USD 21 million. It now plans to extract 500 million cbm of natural gas annually. The agreement on strategic partnership in gas production was signed between Gazprom and UzbekNefteGaz in

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<sup>10</sup> Kazinform reported quoting the press service of the Turkmen government on June 20, 2008.

<sup>11</sup> Cornel, S., and Nilsson, N., "*Europe's Energy Security: Gazprom's Dominance and Caspian Supply Alternatives*", Silk Road Paper, Central Asia & Caucasus Institute, Silk Road Studies Program, 2008, p. 149.

December 2002. The agreement envisages long-term gas procurement plans for 2003-2012, Gazprom's participation in the extraction of natural gas on the territory of Uzbekistan on the PSA conditions, as well as cooperation in the development of gas-transport infrastructure of Uzbekistan and transportation of Central Asian gas across the country's territory. The agreement on the main principles of running the geological surveyance of the blocks of Ust-Yurt region of Uzbekistan was signed between UzbekNefteGaz and Gazprom on 25 January 2006. In December 2006, UzbekNefteGaz issued Gazprom licenses granting it the right to use parts of subsurface for geological surveys in seven blocks of Ust-Yurt region, including Aktumsuk, Kuanish, Agiin, Nasambek, West-Urgin, Akchalak, and Shahpahta. The total area of blocks comprises approximately 38,100 sq.m., and the estimated deposits of natural gas – 1 trillion cbm. The programme of geological surveys works is envisaged for five years. The total volume of investments in the project is estimated at USD 400 million, including USD 260 million for the first three years. In January 2007, Gazprom launched the active phase of geological survey works in Ust-Yurt region of Uzbekistan.

Below is statistical data related to oil&gas production in Uzbekistan that illustrates Uzbekistan's oil&gas potential.

Table 1. Production statistics<sup>12</sup>

	2002	2003	2004	2005	2006	2007 Jan-Sep
<b>Liquid hydrocarbons, thousand tons</b>	7198	7134	6580	5500	5412	4700
Oil, thousand tons	4058	4387	4013	3465	2480	2300
Gas condensate, thousand tons	3140	2747	2567	2035	1470	1400
Natural gas, BCM	57672	57481	59864	59564	62000	
Gasoline, thousand tons	1575	1424	1373	1400	1368	1057
Diesel fuel, thousand tons	1699	1512	1555	1437	1437	1067
Kerosene, thousand tons	428.2	387.5	390	353.1	358.9	240.5
Furnace fuel oil, thousand tons	58.7	148.1	204.7	155		
Heating oil, thousand tons	1628	1532	1212	971.7	895.6	541
Petroleum asphalt, thousand tons	327.9	324	314.9			
Lubricants, thousand tons	139.1	174.8	233.3	226.5	255.9	225
Natural gas refinement, BCM	38.666	40.240	-			
LNG production, thousand tons	119.5	166.1	-	210.8	223.1	174

#### IV. Natural Gas Pipelines.

The entire system of natural gas main pipelines, transmission, transit and storage is owned and operated by Uztransgaz, a division of Uzbekneftgaz. Uztransgaz also sells gas directly to large consumers (wholesale customers) and the gas distribution company that services residential and commercial customers.

The pipeline system is designed to serve both domestic and foreign destinations, as well as to transit Turkmen gas. The total length of main gas pipelines is 13.28 thousand km (recalculated as single string), consisting mostly of 1,000, 800, and 700 mm lines with maximum design

<sup>12</sup> Sources: State Statistic Department of Uzbekistan and estimates of the author.



operating pressure of 5.5 Mega Pascals (MPa). Larger diameter lines (1,200 mm and 1,400 mm) have a maximum design operating pressure of 7.5 MPa and are mostly part of the system serving export destinations (Central Asia-Center, Bukhara-Urals, and Gazli-Shymkent pipelines). These larger diameter systems are located in the north and northwest part of the country. There are altogether 24 compressor stations with 42 plants, equipped with some 250 compressor units of various design (turbine, reciprocating, etc.). In 2000, Uzbekneftegaz's Uzneftegazmash Joint-Stock company (Chirchik) established a joint venture with Dresser-Rand (USA) to provide maintenance of compressors and pumps and manufacture spare parts.

Uztransgaz has ten sub-divisions that operate parts of the system, such as the Bukhara Gas Fields (BGF) - Tashkent, the Djarjak-Bukhara-Samarkand-Tashkent (DBST), the Mubarek-Kagan, the Shurtan-Mubarek, the Kelif-Mubarek, the Kelif-Dushanbe, etc., lines.

A distinctive feature of the gas transport system of Uzbekistan is that it has been designed to serve neighboring states (Southern Kazakhstan, Kyrgyzstan, and Tajikistan). Uzbekistan exports gas to these countries. In addition, Turkmenistan uses the gas transport system of Uzbekistan to export its gas. In recent years, the gas pipeline system has delivered about 45-50 bcm to domestic consumers, some 9-10 bcm Uzbek gas to foreign customers and 35-40 bcm of Turkmen gas in transit to foreign destinations.

Uztransgas also owns and operates the main gas pipelines that have been built as separate facilities capable for delivering low-sulfur gas (the Shurtan-Tashkent Thermal Power Station and the Mubarak-Navoi lines) to power generating plants and major industrial consumers in the country.

Figure 3 illustrates the outlay of major pipelines in and around Uzbekistan.

**Figure 3: Gas transportation system of Uzbekistan.**



Source: Inogate.

Since 2002, Uzbekneftegaz has developed a special “strategic relationship” with Gazprom. The understanding is that Gazprom will arrange for and operate the system that transports across Uzbekistan Turkmen gas purchased by Gazprom (2 trillion cubic meters until 2028), whereby Gazprom will invest in the doubling of transit capacity (to 90 bcm/year).

The Uzbekneftegaz-Gazprom cooperation brings clear advantages to Gazprom, as it would be able to control the flow of Central Asian gas to foreign markets and secure gas supplies needed

to continue supplying Russian and European customers without investing in frontier gas fields beyond the polar circle. This agreement essentially assures that Gazprom will continue as the single most important foreign partner of UNG in gas exports, export pipelines and upstream gas projects until 2010 and beyond, with a market share in exports of Uzbek gas exceeding two-thirds.

In other developments, a few years ago, Uzbekneftegaz has completed the construction of the second stage of the Gazli-Nukus trunk gas pipeline in the northwest of Uzbekistan, worth \$50 million. The throughput capacity of the second stage of the 66-km 1,220-mm pipeline is 30 million cubic meters a day. Zeromax Group (Switzerland) was the general contractor. The construction of the new line was part of the holding's strategy to boost natural gas exports in the northern direction. In particular, the two completed stages of the pipeline boosted gas exports to 7 bcm a year. The first, 350 km stage was commissioned in 1997 and is part of the Central Asia-Centre and Bukhara-Ural gas transportation systems.

## **V. Uzbek Gas Exports**

Uzbekistan is a net exporter of natural gas. Most of the exports, which run at about 15-20% of production (about 10 billion cubic meters per year), end up in the FSU. Uzbek gas is particularly important for Kyrgyzstan, Tajikistan and the southern regions of Kazakhstan, which do not have other suppliers. The government of Uzbekistan is interested in increasing exports of gas and is considering various options for this purpose.

Since 2002, Uzbekneftegaz has developed a special strategic relationship with Gazprom, which culminated in the final approval by the Presidents of Uzbekistan and Russia on December 6, 2004 of the Uzbekneftegaz-Gazprom agreement for strategic cooperation reached in 2002. The agreement foresees cooperation in various ways:

- The increase of exports of Uzbek gas to Russia from 5 bcm in 2003 to 10 bcm by 2010;
- The cooperation between Uzbekneftegaz and Gazprom in the exploration and production of hydrocarbons on production sharing terms in the Ustuyrt plateau region;
- The transportation across Uzbekistan of Turkmen gas purchased by Gazprom (2 trillion cubic meters until 2028), whereby Gazprom will act as the operator of Turkmen gas transit in Uzbekistan and will invest in the doubling of transit capacity (to 90 bcm/year) by 2007;
- The possible sale to Gazprom as a strategic foreign investor of 44% of the shares of Uzbektransgaz.

In line with the strategic cooperation agreement with Gazprom, export contract arrangements have undergone several changes over the recent years. From 1997 until early 2001, Uzbekneftegaz exported gas to northern destinations (South Kazakhstan, Russia, and the Ukraine) via the Switzerland-based Gaspex S.A. In early 2001, a consortium consisting of Itera, the Donbass Industrial Union, Debis (Germany) and Zeromax won a tender for the export of gas from Uzbekistan and the contract with Gaspex S.A. was discontinued. The export price was set at \$40/1000 cubic meters and payment was to be carried out in forex (50%) and in kind (by supplying goods and services – 50%). The consortium, led by Itera, intended to deliver the gas to the Ukraine. Supplies to other northern destinations had to be renegotiated with the national oil and gas companies of the relevant country.

In 2003, Gazprom essentially took over from Itera, either directly or via the Uzbekneftegazarian-based Eural TG. Itera closed its representative office in Uzbekistan at the end of March 2004, when Itera's accreditation in Uzbekistan expired. The company does not have other projects in the republic. In Kyrgyzstan, Kyrgyzneftegaz does not produce enough oil or gas to cover local demand. Most of its gas comes in from Uzbekistan and is distributed via Kyrgyzneftegaz's 600-km gas pipeline network. Uzbekistan is also a gas supplier in Tajikistan.

The government of Uzbekistan is interested in boosting its natural gas exports to Europe. Several options are under consideration. Under one option, the existing major gas pipelines crossing Uzbekistan are to be renovated with the help of Gazprom, which became the operator of the entire Central Asia-Center gas pipeline system. An alternative is to export Uzbek gas by transit routes via Turkmenistan, Azerbaijan, Georgia, Ukraine, Turkey, Iran and the Caspian Sea. However, this alternative may only become realistic if offtake could be secured beyond Turkey, and if the gas producing countries along the proposed pipeline route (Turkmenistan, Azerbaijan, Iran) agree to let Uzbek gas in the pipe.

To the east, Uzbekistan is actively promoting a project to export gas to China. Gas from Uzbekistan will help PetroChina, the operator of the West-East pipeline commissioned in late 2004 in China, meet long-term demand for fuel if additional reserves are not found in the Tarim Basin. Turkmenistan is also interested in exporting its gas to China using the pipeline. This would bring additional benefits to Uzbekistan in terms of transit fees paid for transit of Turkmen gas.

The position and policy of Russia is very important in achieving fair price for Uzbek gas. In general, Russia has a special role in the world energy market due to its transcontinental geographical location and natural resources.

Exemplary in this respect is the strategy of Russia itself to diversify its export pipelines to Western Europe. In addition to pipelines thorough Ukraine, Belarus, and Poland, Russia has been constructing pipelines under Baltic and Black seas. This was done in order to achieve security in delivery of gas to EU and prop up the price for the Russian gas. By constructing these pipelines Russia also effectively fended off the competition from Iran and Central Asia. Since Russia has been constantly trying to diversify its gas pipelines, the EU was less proactive in search for other alternative sources of natural gas (e.g. Iran and Central Asia). As a result, Russia is the main source of gas for EU and supplies 150 billion cu m. of natural gas annually.

Like Russia or other Central Asian countries, doubly-landlocked Uzbekistan is keen to develop alternative export routes in order obtain higher price for its natural gas. The efforts in this direction were intensified after it turned out the "fair market price" Uzbekistan and Turkmenistan will receive from Gazprom for natural gas exports in 2009 may only be a fraction of what Western Europe pays for imports.

Earlier in 2008, Gazprom announced it would pay Central Asian natural gas producers "fair market prices" starting 2009. A specific price, however, was not set at that time, prompting speculation that Turkmenistan and Uzbekistan would seek in excess of \$300 per thousand cubic meters (tcm). Initial indicators suggest that Ashgabat and Tashkent won't be getting anywhere close to that amount.

On April 10, officials at LUKoil spouted off that Uzbekistan would be offered \$210/tcm. LUKoil issued a statement on April 15 disavowing the earlier comment about the \$210/tcm price, characterizing it as idle banter by "individual employees of the company." The statement went

on to emphasize that Gazprom and its Tashkent-based counterpart Uzbekneftegaz would set the price “proceeding from the existing price for energy on the European market.”<sup>13</sup>

Gazprom held its annual meeting of shareholders on June 27, 2008, which could not ignore the delicate issue of Russia's middleman role in selling Central Asian gas to Ukraine through which 80% of the sales of Russian gas go to Western Europe. Last spring Uzbekistan, Kazakhstan and Turkmenistan declared that they would themselves supply gas to Gazprom at average European prices (this year Ukraine has been buying Central Asian gas from Gazprom at a much cheaper price, US\$179.5 per 1,000 cubic meters).

During the meeting discussion it was stated that if agreements with the Central Asian countries are based on the average European price this year, the cost of gas for Ukraine would be more than US\$400 per 1,000 cubic meters. It should be noted that Russian Prime Minister Vladimir Putin, in his talks with Ukrainian Prime Minister Yulia Tymoshenko on June 28, 2008 was much more diplomatic. Both agreed European prices for Ukraine should be introduced gradually.<sup>14</sup>

Also in July of 2008 Russian presidential aide declared that Russia is prepared to buy Turkmen natural gas at market prices and there is no need for Turkmenistan to implement energy projects with other countries, RIA Novosti reported. Finally, during Russian Prime Minister Vladimir Putin's visit to Uzbekistan in the beginning of September 2008, Russia and Uzbekistan agreed to build a new pipeline through Uzbekistan to export Turkmen and Uzbek natural gas, and to switch to a European gas pricing formula.

Turkmenistan is considered a potential natural gas supplier for the Western-backed Nabucco pipeline project designed to bypass Russia and pump up to 30 billion cubic meters of natural gas annually from Central Asia to Europe via Azerbaijan, Turkey, Bulgaria, Romania, Hungary and Austria.

"After gradual transition to world prices, which are inevitable, the issue of orienting these gas flows to other countries will be taken off the agenda. If Turkmenistan raises the price, the profitability of gas supplies to Russia or through Russia increases," Sergei Prikhodko told a briefing on the eve of Russian President Dmitry Medvedev's visit to the energy-rich Central Asian state.<sup>15</sup>

Gazprom purchases 50 billion cubic meters of natural gas from Turkmenistan annually under an agreement that expires at the end of 2008. Starting from 1 January 2009, the price of natural gas from Turkmenistan will be determined by the market. The price formula from 2009 will be set by a long-term contract expected to expire in 2028.

Turkmenistan and Uzbekistan are receiving \$150/tcm and \$160/tcm respectively in the second half of 2008. Although the 2009 pricing deal might still leave Gazprom a 30% margin, it also involves a lot of risk for Gazprom. “The key problem is, that 85% of Gazprom's energy exports to EU states go through Ukraine. The new price for Ukraine is estimated at about \$300/tcm, up from present \$179, and that can send that nation's industrial sector into coma. Ukraine will likely increase transit fees for Russia's energy exports to EU to compensate for the price hike. It will, subsequently, significantly raise the price for Europe and give the latter yet another incentive to look for alternatives to Gazprom.”<sup>16</sup>

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<sup>13</sup> [www.eurasianet.org](http://www.eurasianet.org) April 21, 2008

<sup>14</sup> RIA “Novosty”, July 3, 2008

<sup>15</sup> RIA “Novosty”, July 3, 2008

<sup>16</sup> [www.eurasianet.org](http://www.eurasianet.org). April 21, 2008

This probably explains the relatively “low” starting price of \$210/tcm that is likely to be offered to Uzbekistan. A similarly “low” offer will probably be made to Turkmenistan. Kazakhstan will get more for its natural gas, because it will not have to pay for transit. This way, Gazprom can keep the final price for Europe tolerable, and prevent deterioration of its positions in the European market. It also gives Gazprom a price advantage over the Chinese competition that, reportedly, pledged to pay \$195/tcm. The price of about \$210/tcm would be consistent with forecasts made by Russia’s Ministry of Economic Development (MED) for European prices.

According to MED forecasts, Gazprom should get an average of \$355.5/tcm in Europe in 2009, a figure that is lower than \$381/tcm the conglomerate is receiving in 2008. Gazprom’s own forecasts are even lower, standing at about \$316/tcm. Gazprom also expects energy prices to start declining somewhat in 2010. “We call \$210 a ‘low price’, but it actually is very high,” says the Tashkent-based analyst. “Central Asian states were offered just \$25/tcm just half a decade ago. They have managed to use competition between Russia, China and the West to increase the price by almost ten fold. They are likely to continue diversifying their export options through new pipelines, like Trans-Caspian Pipeline, to increase this competition.” Until there is a deal, nothing is set. And even then, the export price is still subject to upward revision.<sup>17</sup>

Fluctuations in supply and demand are only part of the calculus. Another major factor is the United States, which is continuing with an aggressive lobbying effort to get Turkmenistan, Central Asia’s most important supplier, to join the trans-Caspian pipeline project, which would circumvent Russia.

Turkmenistan, according to official sources, intends to boost natural gas production to 250 billion cubic meters (bcm) per year by 2030. This year, production is projected to be 81.5 bcm. The intensive interest on the part of the United States could, at the very least, give Ashgabat leverage to keep driving higher the price Gazprom pays. If the Turkmen projections prove accurate, Central Asian experts believe that Russia could even give its blessing to limited Turkmen and Uzbek participation in a trans-Caspian pipeline.

In light of these developments the pipeline connecting Turkmenistan, Uzbekistan, and Kazakhstan to China - dubbed the Trans-Asia Gas Pipeline (TAGP) – could become further argument for increasing exports price for the Central Asian (including Uzbek) gas.

According to a decree issued by Uzbek President Islam Karimov, Uzbekneftegas and a subsidiary of the China National Petroleum Corp. (CNPC) have an equal share in the venture. The JV was due to complete a feasibility analysis, as well as define the final pipeline route.

Nevertheless, according to Vladimir Milov, the President of the Institute of energy policy of Russia, many bypass pipeline projects, such as Trans Caspian and Nabucco, are questionable from the economic view point and clearly politically motivated. Most of these projects wouldn’t go ahead if Russia took more constructive stance with respect to international cooperation in gas. In other words, if Russia’s policy changes towards to more constructive stance, the necessity to build expensive bypass gas pipelines will naturally disappear.<sup>18</sup>

However, the Russian policy especially in the example of the Caspian pipeline consortium indicates quite contrary. Therefore, the current situation stimulates politicians to support bypass pipeline projects despite their economic inefficiency.

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<sup>17</sup> [www.eurasianet.org](http://www.eurasianet.org). April 21, 2008

<sup>18</sup> “Liberal View Point on Energy Resources”, interview with Vladimir Milov in “Economic Review” magazine #2 (101), 2008, pp 44-49

It seems that the same is true regarding the point at issue - exports of gas from Uzbekistan to China. China ties up the price for gas with the price of coal because it can easily substitute these two resources with each other. That is why China agrees to buy gas at prices significantly lower than Western Europe is paying for it. As noted above, according to some analysts, China is ready to pay only \$195 for Central Asian gas. Even this considered as a high price given the fact that China has alternative choice of relatively cheap coal of its own production. Some analysts consider such a high price as a payment for allowing CNPC participation in the developing Turkmen gas fields.

Another pipeline that China was considering in order to diversify its energy sources was gas pipeline from Russia. Interviewed analysts agree that China doesn't need two gas pipeline projects. China needs only one gas pipeline in addition to reliable source of its own coal. Therefore, looking at two optional pipelines – the Russian and Central Asian - they opted for just one of them and it seems that their choice is the Central Asian pipeline. Apparently, China received more attractive offer from Central Asians (Uzbekistan and China). China gained access to gas development projects in both Uzbekistan and Turkmenistan and is able to control the whole chain of deliveries from the very beginning to the end, whereas Gazprom never wanted to offer such conditions for Chinese in Russia.

## **VI. Factors Influencing the Exports Price for Uzbek Gas**

During the interviews conducted by research assistants, representatives of “Shurtangaz” (the largest gas-chemical complex in Central Asia) emphasized the two most important factors influencing the export price of the Uzbek gas are geographical location and absence of alternative pipelines. Geographical location of Uzbekistan is unfavorably characterized by the proximity of major gas suppliers - Turkmenistan, Kazakhstan, Iran and Russia and two small and insolvent customers Tajikistan and Kyrgyzstan. On the other hand, the absence of alternative pipelines to wealthy customers except for the one transiting Russian territory leads to monopoly of the sole customer – Gazprom. In turn, as we know, any monopoly leads in price distortions.

Responding to the question about actions to be taken to achieve a fair price for exported Uzbek gas, Shurtangaz representative pointed out to the need to search for alternative customer (the most interesting being China) and to invest in construction of gas pipelines in neighboring countries (in the north-east and south). Another alternative that was mentioned is to increase the share of natural gas processed into chemical products with higher value added. In other words, decrease exports of gas and domestic consumption utilizing alternative sources of energy and increase exports of ready made products produced of natural gas with higher value added.

Talking about the market price for Uzbek gas, the respondent underlined that the fair market price for Uzbek gas should be at least 1.5-2 times higher than the current price (\$160 per tcm).

Slightly different opinion on the matter was expressed by the representative of Ahangaran (Ahangaran is a city in Tashkent province) Gas Supply Branch (AGSB). According to AGBS, the decisive factors in shaping prices for Uzbek gas is exploration, mining, processing, modernization of technologies and increase in quality of gas. In other words, Uzbekistan needs to increase the production and improve the quality in order to achieve higher price for its gas. AGBS also of the opinion that in order increase the customer base for of exported Uzbek gas it is necessary for it to meet the world quality standards, there is a need to develop infrastructure,

decrease transit fees, and secure timely delivery of gas to customers. AGSB representative stated that the price for exported Uzbek gas must be lower than the world price taking into account transit fees in order for it to be competitive.

A professor at the Geology Faculty of the National University of Uzbekistan noted that the price of exported Uzbek gas depends on the cost of production and procurement prices set by off-takers, such as Russia, Kazakhstan, Kyrgyzstan, China and Ukraine. In order to achieve higher and fair price for Uzbek gas there is a need to accomplish direct deliveries of gas to the end consumers omitting intermediaries. To expand the export market for Uzbek gas it is necessary to increase mining, to sign long term fixed price direct contracts with importers, and search for alternative customers of Uzbek gas (e.g. India and Pakistan). The professor of the Geology Faculty also pointed out that the price for exported Uzbek gas should be around \$250-300 tcm.

A professor at the Faculty of Economics of the National University of Uzbekistan expressed the opinion that the current export price of Uzbek gas doesn't reflect its real cost. Wholesale price for gas in the world is about \$250-350, whereas retail price in Europe is \$450-540. The current export price of Uzbek gas is shaped based on the absence of alternative transportation routes and Russia's monopolistic position in transiting Uzbek gas. The higher price for exported Uzbek gas could be achieved by developing new routes for transportation of Uzbek gas. All pipeline projects are closely connected with political situation and that is why there are many problems with their implementation. Some of the alternative pipeline projects, that might be especially beneficial for Uzbekistan, are Trans-Afghan and Nabucco pipeline projects. According to the professor of the Faculty of Economics, another alternative way to achieve higher price for Uzbek gas is to increase the production of liquefied gas. In this respect, the experience of Qatar could be of interest for Uzbekistan. The most salient advantage of producing liquefied natural gas (LNG) is that the transportation of LNG much easier and doesn't depend on pipelines. It could be transported via sea, railroads, or roads. The professor of the Faculty of Economics noted that the fair price for Uzbek gas should around \$300-350 taking into account transit fees.

## **VII. Conclusion**

Gas producing countries of Eurasia (Russia, Iran, Turkmenistan, Kazakhstan, and Uzbekistan) are jammed between two major groups of consumers in Europe and South East Asia. Both regions need energy to fuel their economic development. Therefore, gas producing countries of Eurasia are on target of major interests of potential consumers of gas.

Economic resources obviously constitute one of the primary stakes of Russia's presence in Uzbekistan. Uzbekistan possesses significant gas potential and exports gas to either neighboring countries or to Europe via the Gazprom system of gas pipelines. There are many alternative pipeline projects that have been discussed that would diversify the pipeline routes and consumer base – Trans Afghan pipeline, Trans Caspian pipeline, Caspian pipeline, Iran-Pakistan-India pipeline, Nabucco (from Iran to Turkey and further to the Western Europe), and finally Central Asia – China pipeline. Majority of these pipeline projects very difficult of implements because of either security or political considerations. As of now, the most feasible and realistic seems to be the Central Asia-China pipeline. However, even this project is not without some salient drawbacks.

First of all, China is not willing to pay the prices for Central Asian gas that would match the price the European customers are already paying. Given its alternative resources of coal, China has a strong negotiating position in this respect.

Second, the Central Asian countries should agree on concerted efforts with respect to the usage of the pipeline. In other words, suppliers of gas (Uzbekistan, Turkmenistan, and Kazakhstan) should agree on each others share in the Chinese export market.

Majority of interviewed analysts agree that alternative pipeline to China will strengthen the bargaining power of Central Asians vis a vis Russia. However, it seems doubtful that this will dramatically change the situation given the fact that Chinese themselves are not “lucrative” customers willing to pay the highest price for Central Asian gas. Therefore, Uzbekistan should continue its efforts to participate in other alternative pipelines such as Trans Caspian, Iran-Pakistan-India, Trans Afghan, and Nabucco to further solidify their negotiating position.

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