

ENERGY POLICY**ASSESSMENT OF
CENTRAL ASIA'S OIL AND
GAS RESERVES AND
THEIR BUDDING SALES MARKETS
(THE EU AND CHINA)**

Rustam MAKHMUDOV

*Independent Researcher
(Tashkent, Uzbekistan)**Introduction*

In recent years, significant funds have been invested in creating and improving new sources of energy (wind and solar energy, the production of bio fuel, and so on), however most experts admit that there is still no alternative to oil and natural gas. Moreover, the importance of oil and gas resources will continue to increase even more in the next few years, particularly after the accident at Japan's Fukushima-1 Nuclear Power Plant, which has revitalized the problem of nuclear energy safety. The world (particularly Europe) has been calling loud and clear for the operation of nuclear power plants to be halted and the use of nuclear energy to be eliminated altogether. If the use of nuclear energy declines, global oil and natural gas consumption will most

certainly increase, as its steady rise in past decades already confirms.

According to the forecast of the International Energy Agency (IEA), in 2010, the amount of oil consumed by the world economy rose by 2.8 million barrels and reached a level of 87.8 million barrels a day. In 2011, this index is expected to exceed 90 million barrels for the first time in history.¹ Of course, this figure is slightly lower than the earlier forecast due to the global financial-economic crisis of 2008-2009.

¹ See: "K kotsu goda potreblenie nefi v mire postavit novyy rekord," available at [<http://top.rbc.ru/economics/10/02/2011/541284.shtml>].

The future of the global energy industry is being increasingly linked to natural gas, which is considered to be a more environmentally pure fuel and the reserves of which are still far from exhausted. According to the report of America's Exxon Mobil, "the consumption of natural gas will increase three times faster compared to oil and coal, since the developing countries will be trying to bring electricity to the homes of billions of people. At the same time, the rich states will begin replacing their aging coal plants with gas plants."² According to the report, compared to the 2000 level, natural gas consumption in the world will almost double by 2030, and its share in the world energy balance will increase to 26% (in 2005, this figure amounted to 21%).³

The optimistic forecasts relating to gas consumption are largely based on the data of geological surveys. In particular, in terms of growth rates, the world's known reserves of natural gas are more than twice as high as the oil reserves. Whereas before 1970, the ratio of the world's known oil and natural gas reserves (in terms of oil equivalent) amounted to approximately 70:30, by 1990, this ratio had shifted to 55:45; and in 2009, these indices became essentially equal (50:50). If the proven gas reserves in the world are viewed in cubic meters, at the end of 2009, for example, they amounted to 187.43 trillion; at current consumption rates, this amount would last for 63 years.⁴

The forecasts of oil and natural gas consumption and reserves point to the need to augment their production, both in the traditional supplier regions, as well as in new areas that are just as important for the global economy. Three countries of Central Asia (CA)—Kazakhstan, Turkmenistan, and Uzbekistan—primarily apply to the latter. By augmenting its proven oil and natural gas reserves, exporting raw hydrocarbons, and

putting new pipelines into operation, CA is progressively becoming an indispensable element of the global energy industry and the economic and political security system. The increase in the CA's energy role is also associated with the fact that in many key supplier regions, greater political instability has been noted in the past decade, particularly in the Persian Gulf, the Middle East, and North Africa. Whereas in 2003, the American military campaign in Iraq provoked a sharp hike in the price of oil and natural gas (by August 2008, the cost of one barrel amounted to 147 dollars), today Libya (which is a major supplier of light oil and gas to the European market), Yemen, Syria, Egypt, Tunisia, and Bahrain have been swept by disintegrating trends. Such leading OPEC exporters as Saudi Arabia and the Islamic Republic of Iran have also been threatened, whereby the latter is still experiencing tension with the West over the Iranian nuclear program. Such processes not only pose a threat to oil and natural gas suppliers from the traditional oil-producing regions of the world, but also increase the political risks for investors.

If the situation becomes aggravated in the above-mentioned regions, CA could step in to become an alternative supplier of these energy resources. It should also be noted that an increase in the CA's role might also be promoted by depletion of the oil and gas reserves in the traditional production areas, for example, in the North Sea, which plays an extremely important role in Europe's energy supply.

Judging by everything, Saudi Arabia is reaching the peak of its potential; according to Wikileaks, in ten years, the country could reach a production level of 12 million barrels a day, although it is unlikely to reach 12.5 million barrels.⁵

The increase in raw hydrocarbon consumption in the EU and China shows quite reliably that they will become the main importers of Central Asian oil and gas in the future.

² "V ozhidanii gaza," available at [<http://www.vz.ru/economy/2011/1/27/464186.html>].

³ See: *Ibidem*.

⁴ See: "Mirovye zapasy prirodnogo gaza," *Dolgikh "Natural Gas Research,"* available at [<http://dolgikh.com/index/0-39>].

⁵ See: "Wikileaks: Saudovskaia Araviia zavyschaet dannye o svoikh zapasakh nefi na 40%," 9 February, 2011, available at [<http://top.rbc.ru/economics/09/02/2011/540527.shtml>].

1. Comparative Analysis of Central Asia's Oil and Natural Gas Reserves

For the past two decades, the data on oil, natural gas, and gas condensate reserves in CA have been rather contradictory. This may largely be associated both with the opening of new and the depletion of old fields, as well as with economic, investment, and political considerations.

No one doubts that there are large reserves of raw hydrocarbons in Kazakhstan, Turkmenistan, and Uzbekistan; it would be interesting to compare contemporary economic assessments of the corresponding fields with the indices of previous years.

According to British Petroleum, the data on oil and gas reserves, production, and consumption in Kazakhstan, Turkmenistan, and Uzbekistan at the end of 2010 looked as follows⁶ (see Table 1):

Table 1

The Hydrocarbon Resource Base and Its Use in Three Central Asian Countries

Country	Kazakhstan	Turkmenistan	Uzbekistan
Oil			
Proven reserves, <i>billion barrels</i>	39.8	0.6	0.6
Production, <i>thou. barrels/day</i>	1,682	206	107
Consumption, <i>thou. barrels/day</i>	260	120	101
Natural Gas			
Proven reserves, <i>tcm</i>	1.82	8.10	1.68
Production, <i>bcm</i>	32.2	36.4 (59.5)	64.4
Consumption, <i>bcm</i>	19.6	19.8	48.7

In turn, the CA countries present the following data:

Kazakhstan	
Recoverable oil reserves amount	to 5 billion tons or 31.4 billion barrels (calculated at 1 barrel = 159 liters).
Recoverable gas reserves amount	to 3 tcm.
Hypothetical oil reserves amount	to 17 billion tons (107 billion barrels).
Total geological reserves of hydrocarbons in Kazakhstan's sector of the Caspian Sea amount	to 12-17 billion tons (2/3 of all the Caspian's hydrocarbon resources).

⁶ See: *BP Statistical Review of World Energy*, June 2010, available at [www.bp.com/statisticalreview/].

Hypothetical gas reserves amount	to 8 tcm.
Oil and condensate production amounts	to approximately 65 million tons a year.
Gas production amounts	to 27 bcm a year.⁷

Uzbekistan

Geological oil reserves amount	to 5 billion tons (31.4 billion barrels).
Proven oil reserves amount	to 530 million tons (3.3 billion barrels).
Geological reserves of natural gas amount	to more than 5 tcm.
Proven natural gas reserves amount	to 3.4 tcm.
Oil production amounts	to 3.5 million tons a year.
Gas production amounts	to more than 60 bcm.⁸

Turkmenistan

<u>Hypothetical</u> natural gas reserves amount	to 15-20 tcm.
<u>Hypothetical</u> oil reserves amount	to 1.5-2 billion tons (9.4-12.5 billion barrels).⁹

Gas production in 2010 amounted to approximately 47 bcm (due to the drop in export in the Russian vector), more than 22.5 bcm of which were sent abroad. Russia remained the largest buyer of oil and gas last year (11 bcm).

As the above data show, the difference in proven oil and natural gas reserves is quite significant in some cases. Only in the case of Kazakhstan, with respect to proven oil reserves, are British Petroleum's assessments higher than the Kazakhstan indices. With respect to the rest, all three countries give figures that are significantly higher than the data of the British company, which is known for its conservative assessments.

In order to trace the dynamics in the change in assessments of oil and gas reserves, the data of the Energy Information Administration (U.S.) for 2004 are given below.

As can be seen from the data of the tables, the current assessments of the CA countries have increased with respect to certain parameters, which is explained by new fields going into operation.

For example, the offshore fields in the Kazakhstan area of the Caspian Sea (Kashagan) had an enormous influence on the increase in oil reserves in Kazakhstan.

⁷ See: "19th Kazakhstan International Exhibition and Conference on Oil and Gas," available at [<http://www.mioge.ru/RU/world/kioge/>].

⁸ See: "15th International Conference and Exhibition of the Oil and Gas Industry," available at [http://www.expo-plus.ru/index_print.php?id=9153].

⁹ See: "TGC 2011—2nd International Gas Congress of Turkmenistan and International Exhibition on its Occasion," available at [<http://www.turkmenexpo.ru/db/exhibition/view/7513/>].

Table 2

Approximate Oil Reserves in CA (2004)

	Proven Reserves <i>billion tons</i>	Potential Reserves <i>billion tons</i>	Production <i>million tons</i>
Kazakhstan	3.6	12-13	59.4-69
Turkmenistan	0.1-0.237	12	9-10
Uzbekistan	0.0948	4	6.58
Sum Index	3.94	26-27	75-85

Table 3

Approximate Natural Gas Reserves in CA (2004)¹⁰

	Proven Reserves <i>tcm</i>	Potential Reserves <i>tcm</i>	Production <i>bcm</i>
Kazakhstan	2-2.5	10	20
Turkmenistan	3	21-23	55
Uzbekistan	2.5-3	5	59
Sum Index	8.7-9.7	37-39	134-135

Survey of the fields near the town of Iolatan has had a significant impact on the improvement in Turkmenistan's gas indices. According to Gaffney, Cline & Associates, the reserves of the South Iolatan-Osman and Yashlar fields amount to between 4 and 14 tcm of gas and 300 million tons of oil (South Iolatan is one of the four largest gas fields in the world).

As for Uzbekistan, development of its oil and gas industry is closely related to carrying out geological exploration on the shelf of the Aral Sea and the Ustiurt Plateau.

As already mentioned above, when presenting oil and gas reserve assessments, the geopolitical component must be taken into account; many countries are in the habit of deliberately hiking some indices in order to strengthen their geo-economic position and attract foreign investments.

2. Assessment of the Prospects for the EU Oil and Gas Market

The amounts and long-term nature of investments in oil and gas exploration and production in CA, as well as the building of new pipelines, are calculated in terms of several parameters depending on the prospects for raw hydrocarbon consumption by the largest continental markets, of which the

¹⁰ The calculations were based on data taken from annual reviews of energy markets of the world's countries prepared by the Energy Information Administration (U.S.).

EU and PRC are two of the leaders. The importance of this aspect significantly grew after the beginning of the global financial-economic crisis that began in August 2008 and had a serious impact on the world economy.

Potential Pluses for CA Exporters in the EU Market

The further prospects for increasing oil and gas export from CA in the northerly and westerly vectors largely depend on the situation in the EU energy market, which along with the U.S. and China is the leading energy consumer in the world (the EU countries consume a total of 1.9 million tons of oil a day).¹¹

The further drop in production in the regions that are the main oil and gas suppliers to the EU (primarily in the North Sea), along with the increase in energy consumption in Europe, which will mean an increase in imported hydrocarbons, also verify that exports to Europe will rise. According to the current forecasts, by 2021, oil and gas production in the North Sea compared with the 2005 level will fall by 75% (less than 1 million barrels a day will be produced). Great Britain is already feeling the brunt of the drop in hydrocarbon production, which began importing natural gas in 2004 and became an oil importer in 2007.¹²

It should be noted that the CA countries are striving to occupy the vacated niche; for example, Kazakhstan and Russia, along with other shareholders in the Caspian Pipeline Consortium, are exerting active efforts to increase the oil pipeline's throughput capacity. On 15 December, 2010, the consortium members signed documents in Moscow to promote an increase in the system's throughput capacity.

At present, the oil pipeline is operating at the peak of its capabilities, pumping 34,574,000 tons of oil (with a projected capacity of 28 million tons of oil a year). This amount of oil could only be pumped by using an anti-friction admixture.

There are plans to complete the project to expand the capacity of the CPC, which will be implemented in three stages, in 2014 (the system's capacity is to be raised to 67 million tons of oil a year); the total cost of the work is \$5.4 billion. After the CPC's throughput capacity has been expanded, oil will be pumped into the pipeline from the fields of Tengiz, Karachaganak, and Kashagan, as well as from Russia's Filanovsky field.¹³

Natural gas consumption and import of this energy resource to Europe will bode well for Turkmenistan, Uzbekistan, and Kazakhstan. The share of natural gas, which amounts to 24% in the total volume of primary energy consumption by the EU countries, will most likely increase; it is expected to reach 28% by 2020. If the program to replace oil and coal with natural gas, as an environmentally cleaner resource, continues, this figure could increase even more.

The prospects for expanding oil and gas export are also largely associated with a further decline in the popularity of nuclear energy after the nuclear disaster in Japan. For example, Germany and Switzerland plan to fully eliminate operation of the nuclear energy industry (Germany plans to do this before 2022). As of today, nuclear power plants account for 30% of the electricity produced in Europe.

¹¹ See: "Zapasy, proizvodstvo i potreblenie po stranam mira," available at [<http://www.ereport.ru/articles/commod/oilcount.htm>].

¹² See: V. Vukolov, "Kogda pogasnet posledniaia lampochka v Shotlandii," 2009, available at [<http://www.berg-privileg.com/archive/detail.php?ID=278>].

¹³ See: I. Vorotnoi, "KTK: Bolshoi nefti—bolshie moshchnosti, Astana," 24 December, 2010, available at [http://www.kmg.kz/press/market_news/analytics/4857].

As with oil, the drop in production in the North Sea will have a direct impact on the EU's increasing dependence on gas import. At present, imported deliveries cover more than 60% of Europe's gas needs and, by 2030, this index could rise to 81-89%.¹⁴

In 2010 alone, the EU's own gas production dropped by 4% (to 176 bcm) and amounted to only 34% of consumption; deliveries of Russian gas provided 23%, Norway (it is not a EU member) accounted for 19%, Algeria for 10%, and Qatar for 6% of European needs.¹⁵

Potential Risks

At the same time, CA suppliers to the European market could encounter potential risks. First, *the EU's economic prospects are still undetermined*, since it cannot be said with certainty whether it will be able to fully recover from the consequences of the global financial-economic crisis that began in August 2008. Despite the emergency measures adopted by the governments of several countries of the Eurozone (Spain, Ireland, Greece, Portugal, etc.), their economic and financial situation still arouses concern.

As the results of the 2008-2009 crisis show, there has been a significant drop in demand in the European gas market, which has had a very negative impact on suppliers. According to the data of Gazprom, the world financial and economic crisis led to a total drop in gas consumption in Europe in 2009 of 44 bcm (or 7%), this consumption amounting to 555 bcm.

The drop in gas consumption in Europe during the crisis proved to be a world trend, and this had a direct impact on the drop in production. According to the calculations of the gas association, in 2009, world gas production and its delivery volumes dropped by 3.4%, which is the lowest index in the past few decades. The greatest drop of 12.7% was seen in the CIS countries.¹⁶

Many experts believe it was the drop in gas consumption in Europe that caused the conflict that broke out between Russia and Turkmenistan over the explosion on the export pipeline via which gas was delivered to Gazprom. The Russian concern succeeded in entering a new contract, under which it pledged to purchase up to 30 bcm of Turkmen gas annually. In reality, this figure amounts to no more than 10.5 bcm (for comparison, before 2009, the purchase volume amounted to approximately 48 bcm). It should be noted that the price of fuel is determined in accordance with a special European formula.

Experts note that in the crisis conditions (with the resulting drop in consumption in Europe), Gazprom had a gas surplus, so it was interesting in putting a temporary halt to deliveries.¹⁷

On the whole, the *military-political and financial instability in the world* could have a negative impact on oil deliveries. The price of oil is rising in light of the growing instability in the Middle East and North Africa (as well as in several countries of East and West Africa) and the destabilization risks in Latin America; a periodic rise in its price to \$100 a barrel has already become par for the course. This may result in a slowdown in economic growth in Europe and in aggravation of the problems in the crisis zones, which, of course, will have a negative effect on the total demand for oil import.

¹⁴ See: "ES prognoziruuet uvelichenie importa gaza do 90% k 2030 godu," 16 November, 2010, available at [http://www.goodvin.info/news/biznes/17610-es_prognoziruuet_uvelichenie_importa_gaza_do_90_k_2030_godu.html].

¹⁵ See: "Potreblenie gaza v Evrope v 2010 godu vyroslo na 7.2%," 9 March, 2011, available at [<http://www.rbcdaily.ru/tek/partnernews/151904.shtml>].

¹⁶ See: "Uroven mirovoi dobychi gaza pokazal record padeniia. Gazoprovody Rossii mogut ne okupitsia," 24 May, 2010, available at [<http://www.newsru.com/finance/24may2010/gaz.html>].

¹⁷ See: "'Gazprom' okonchatelno pomirilsia s Turkmeniei," 22 December, 2009, available at [<http://lenta.ru/news/2009/12/22/january/>].

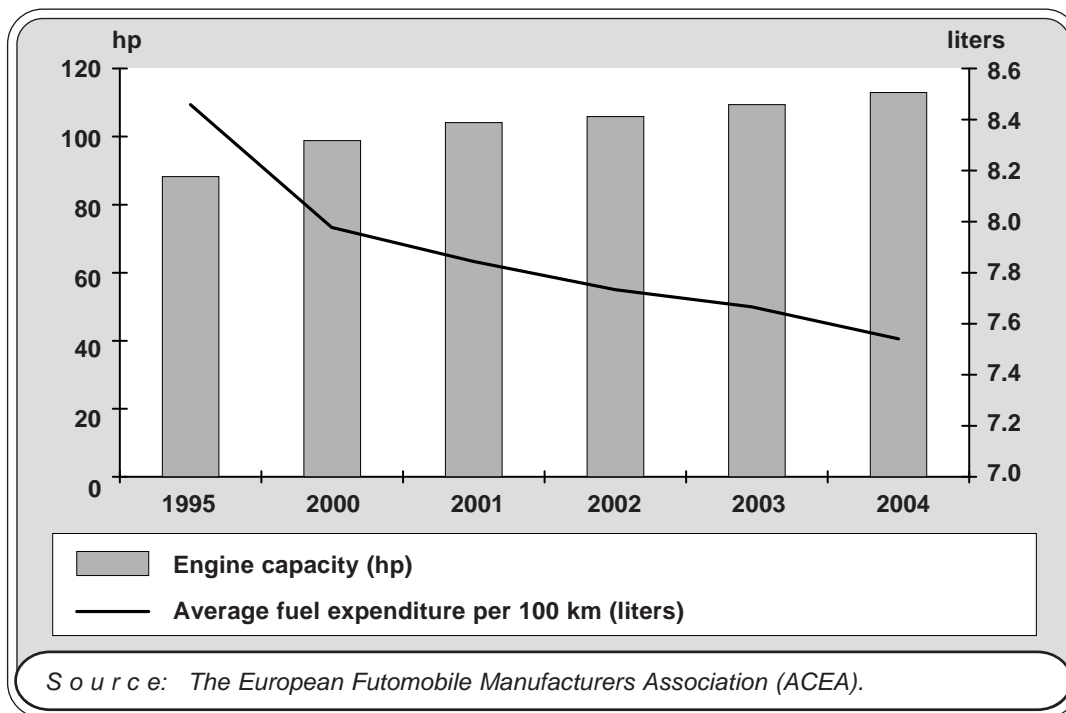
Uncertainty in the future of the American dollar as a payment and reserve currency is also playing a part in the price increase. Dollar holders are having to take different measures aimed at hedging their risks, which is resulting in bubbles emerging in the raw materials market, the oil market in particular. This rise in the price of raw materials is also dangerous for Europe in that it will negatively affect the restoration of industrial production.

CA oil suppliers should keep in mind the trends characteristic of the EU market. Experts point out that whereas during the past 10 years oil consumption in the U.S. rose by 11.2%, in Europe it remained at essentially the same level, while in some countries it even dropped. This is because the developed EU countries are trying to transfer some of the production units capable of having a negative impact on the environment to the developing countries.

There has also been a *rise in efficient fuel use* due to the introduction of energy-saving technology in the EU. The influence of state-of-the-art energy-saving technology is readily seen with respect to the use of fuel in automobiles. Figure 1 shows that despite a gradual increase in engine capacity, the average fuel expenditure for one car decreases.¹⁸

Figure 1

**Dynamics of Fuel Efficiency in Personal Transport
in the European Union Countries**



The *increase in competition from other oil and natural gas suppliers* could become another problem for CA exporters. Whereas Europe as a whole will be able to deal with its problems and continue to increase oil import, the CA countries will gain a large number of competitors in the form of tra-

¹⁸ See: "Tendentsii razvitiia mirovogo neftianogo rynka: kakikh tsen nam ozhidat?" *Vestnik REO*, May 2009, available at [<http://www.finansy.ru/publ/mirec/003ress2.htm>].

ditional and new suppliers, including the OPEC countries (Middle East, North and West Africa), Russia, and Azerbaijan. The European market has always been a zone of tough competition among suppliers and, geographically, CA is in a rather disadvantageous position, since it does not have direct access to the EU countries and has to depend on Russia (or other countries if the Nabucco project is realized).

There will also be competition in natural gas deliveries. For example, Gazprom, which is the largest supplier of pipeline gas and partner of Central Asian exporters in gas transit, points out that in recent years the company has come up against an increase in LNG import by the European countries. This became possible thanks to the increase in world production of liquefied natural gas, primarily in Qatar, which led to a drop in its price. It became cheaper than the Russian gas delivered to the EU under long-term contracts.

The situation in the American market is also becoming complicated. The U.S. is experiencing an increase in shale gas production, which is intensifying competition and leading to a drop in price in the European markets. Experts think it possible that America's shale gas production experience could also be used in Europe, which will lower import volumes.¹⁹

3. Assessment of the Prospects for China's Oil and Gas Market

The Chinese market opened up fairly recently to oil and natural gas suppliers from CA, which has not only been a serious economic, but also a geopolitical achievement. This made it possible for Central Asian suppliers to diversify their delivery routes and made the economic and political strategy of the region's countries more flexible by lowering their extreme dependence on Russia (with respect to sales and transit).

Potential Pluses

It stands to reason that the PRC, with its energy consumption rates, is a very promising market for CA oil exporters. It should be noted that China, after moving ahead of Japan in 2003, has become the second largest oil consumer after the U.S.

According to the forecasts of specialists, *the consumption of energy resources in China and, correspondingly, their import will rise*, since this country has long turned into a world factory. Most experts agree that China's steady economic development will continue; this certainty is based on the impressive indices of the country's GDP growth over the past decade.

For example, the World Bank (WB) expects a GDP growth in China of 8.7% in 2011 and 8.4% in 2012 (for comparison, in 2011, an increase of 2.8% is expected in the U.S., of 1.4% in the Euro zone, and of 1.8% in Japan). According to the IMF's forecast, China's economic growth rates in 2011 and 2012 will reach 9.6% and 9.5%, respectively.

¹⁹ See: "'Gazprom' nazovet tri prichiny rezkogo spada eksporta gaza," 26 January, 2010, available at [<http://lenta.ru/news/2010/01/26/reasons/>].

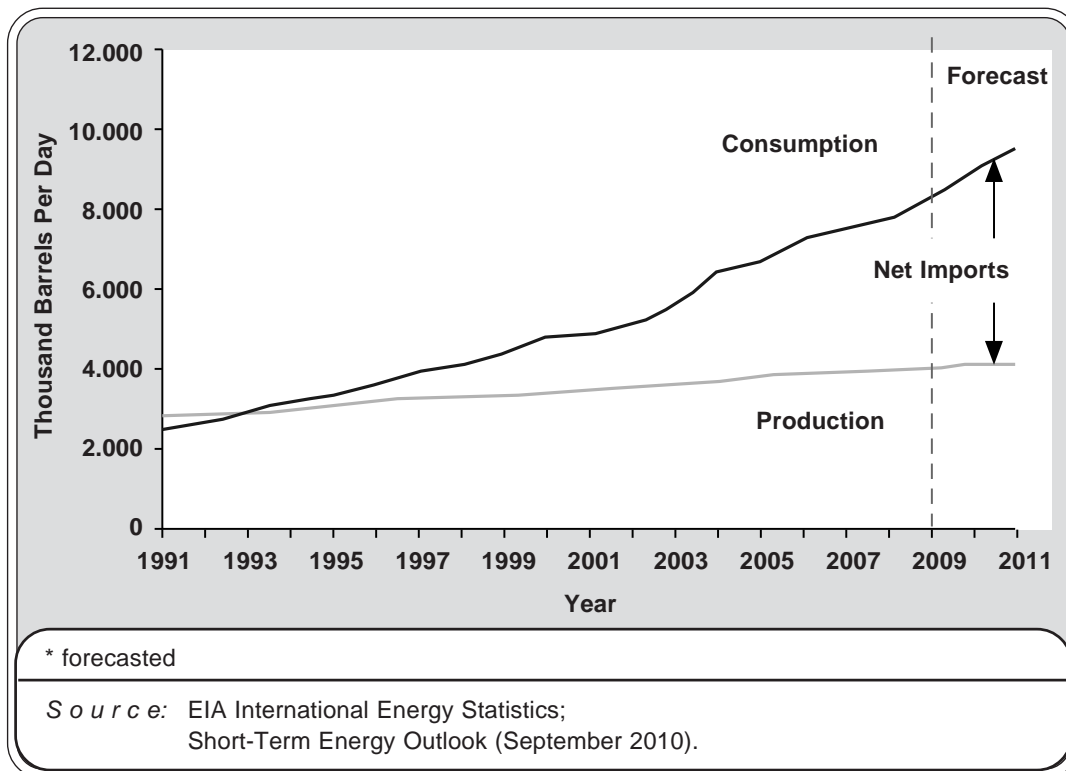
What is more, the IMF has made a rather bold forecast by saying that China might move ahead of the U.S. in terms of GDP by 2016 (earlier it was thought that this would not happen until 2030). According to the IMF, China's GDP will grow from \$11.2 trillion to \$19 trillion between 2011 and 2016 (for comparison, the U.S.'s GDP will amount to \$18.8 billion by this time compared to \$15.2 trillion in 2011). So the share of the U.S.'s GDP in the world economy will drop to 17.7% by 2016, while China's will increase to 18%.²⁰

Moreover, China still has an extremely *energy-intensive production structure*; the PRC consumes 31% of the world's coal, 30% of the iron, 27% of the steel, and 40% of the cement production. China uses 4.7-fold more energy than the U.S., 7.7-fold more than Germany, and 11.5-fold more than Japan to produce one dollar of GDP²¹ (on the whole, this is three times higher than the average world index).

As with Europe, the *drop in oil production* observed in China's traditional fields will be the main factor causing an increase in the country's raw energy import. Whereas in 2004, the PRC satisfied more than half of its needs using resources from its own fields (210 million tons), today, the production volume has fallen to 189 million tons.

Figure 2

China's oil Production and Consumption,
1991-2011*



²⁰ See: "Kitai obgonit SShA po ob'emu VVP," 26 April, 2011, available at [www.vesti.ru/doc.html]?id=448206&cid=6].

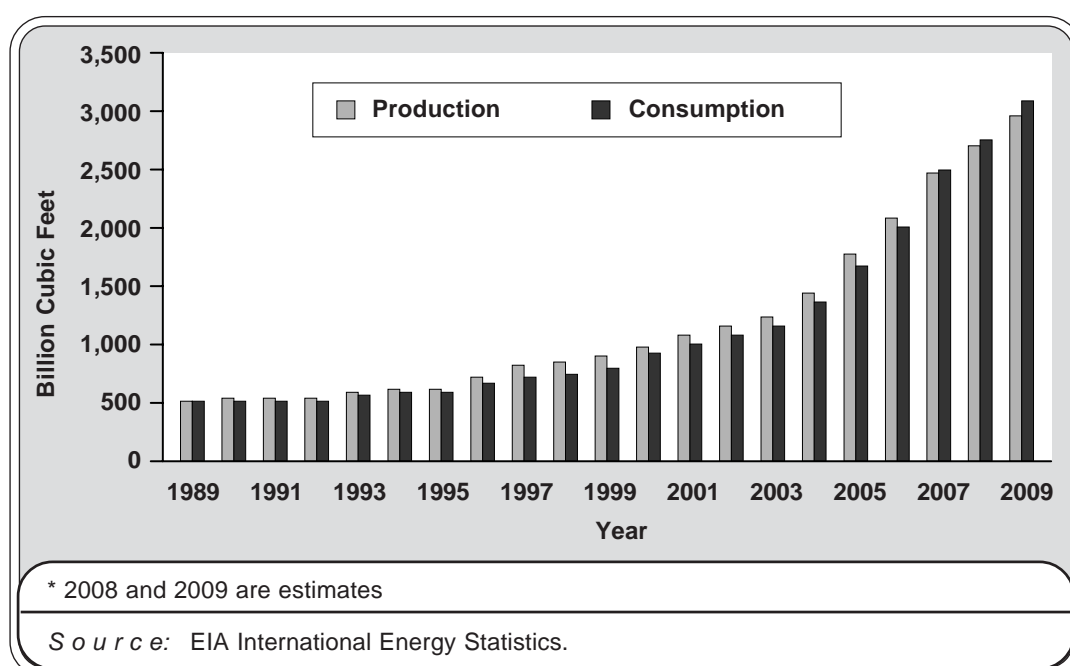
²¹ See: A.T. Jioev, A.V. Dmitriev, "Geopoliticheskoe protivostoianie za obladanie uglevodorodnymi resursami mezhd- du SShA, KNR i Indiei," available at [http://iseswe.org/geo_pol.htm].

The fact that China, borrowing the American experience, has decided to create *internal oil reserves* also indicates an increase in oil import in the PRC. By 2020, the country's oil reserve volume should reach the level of three months of import (36 million tons).

The *increase in share of natural gas consumption* is an important element in China's energy strategy. The fifth plenary session of the 17th congress of the CPC approved the Energy Saving and Emission Reduction Program within the framework of the 12th Five-Year Plan (2011-2015). It should be noted that it is one of the country's most important branch programs. By 2020, China plans to raise the share of renewable sources of energy to 15% and lower carbon dioxide emissions to 40-45% in its overall energy balance.

Figure 3

China's Natural Gas Production and Consumption,
1989-2009*



In this respect, the share of different types of energy in the energy consumption structure will change: the share of coal will gradually drop, that of natural gas will double, while the share of renewable energy will noticeably increase.

In the next five years, there will be an increase in the import of natural gas; by 2015, its share in the energy consumption structure will increase from 3.9% to 8.3%, that is, it will more than double.

However, it should be noted that the above forecast is the most optimistic; according to other assessments, by 2015, natural gas consumption in the country will amount to 6-7% (of the total volume of conventional energy resource consumption).²²

²² See: "12 energeticheskaja piatiletka Kitaia—grandioznyy plan energeticheskoi modernizatsii, eto vam ne GOERLO-2," 14 January, 2011, available at [energyfuture.ru].

Potential Risks

China's serious dependence on foreign markets is the greatest risk for CA exporters in the Chinese vector. The matter primarily concerns the U.S., Europe, and Japan. If the global financial and economic crisis should give an encore, these markets will collapse, which will cause an abrupt drop in demand for Chinese goods and, consequently, a decrease in the amount of energy used by the Chinese economy.

The data on the country's foreign trade turnover give a reliable picture of China's economic dependence on foreign markets. According to the year-end report for 2010, China's foreign trade turnover amounted to \$2.972 trillion, which was 34.7% more than in 2009. In so doing, export accounted for more than \$1.577 trillion (an increase of 31.3%), which import amounted to more than \$1.394 trillion (an increase of 38.7%).

In 2010, China's main trade partners were the EU (trade volume of \$479.7 billion, increase over the year of 31.8%), the U.S. (trade volume of \$385.34 billion, increase of 29.2%), and Japan (trade volume of \$299.77 billion, increase of 30.2%).²³

According to experts, China's economic growth may slow down in the event of a global crisis because of its high dependence on foreign markets and the low level of domestic consumption in the country.

In 2009, the level of China's internal consumption amounted to no more than 35% of GDP, while in most developed countries, this index is at the 60% level (in the U.S., it is approximately 80%).

4. Comparison of the EU's and PRC's Capabilities in the Competitive Struggle for CA's Energy Resources

As of today, the EU and China are the largest potential buyers of oil and natural gas from CA, and it is precisely between them that the main competitive struggle is unfolding for access to Central Asian energy resources.

It should be kept in mind that Central Asian energy resources are mainly delivered by pipelines and so issues of geographic proximity, geopolitics, and dependence on the position of transit countries is of immense importance.

There can be no doubt that China is at an advantage since it borders directly on CA and primarily on stable Kazakhstan, through which it has access to Uzbekistan and Turkmenistan.

In turn, Europe is forced to import oil and natural gas via a complicated route that includes many transit countries. Moreover, in some vectors, transportation involves repeated transshipment operations. For example, deliveries by means of the CPC are first transported via an oil pipeline through Russia and then by tankers across the Black and Mediterranean seas. Kazakh oil deliveries are even more complicated: they are carried out through the Caspian to Azerbaijan and on to the Georgian ports on the Black Sea.

²³ See: "Vneshnetorgovyy oborot Kitaia priblizilsia k 3 trln dollarov," available at [<http://www.vz.ru/news/2011/11/460101.html>].

China also has an advantage from the geopolitical viewpoint; it is skillfully maneuvering between the interests of external players (the U.S., Russia, and the EU) and, avoiding sharp contradictions, is carrying out intelligent political and financial-economic diplomacy with respect to the CA countries.

In contrast to China, the EU frequently acts against its economic and investment interests, making unjustified political and legal demands which, it seems, are called upon to compensate for possible dependence on the supplier, as well as act as a lever of pressure and way to acquire preferences.

Moreover, the western delivery route in the EU vector presents a snarl of various geopolitical contradictions and problems. The EU is clearly trying to play against Russia, striving to reduce its dependence on it with respect to oil and natural gas import.

In particular, Belgium (together with the U.S.) is trying to increase deliveries of Central Asian hydrocarbon resources by means of the Trans-Caspian gas pipeline, via which Turkmen gas reaches Azerbaijan along the bottom of the Caspian Sea and will be further transported to the EU by means of the Nabucco project. The EU is also trying to block Gazprom's attempts to gain access to the end European consumer and distribution networks by implementing the Third Energy Package. This document is a set of instructions, according to which large energy-selling holding companies do not have the right to own transport networks as well. In some cases, the networks and trader structures can be owned by one proprietor, but under the observation of an independent regulator.

Russia, of course, is actively opposing Brussels' maneuvers, since it wants to keep the EU bound to its oil and natural gas by offering the Europeans access to the CA's energy resources via the pipelines passing through its territory.

In addition to everything else, there are several problems between the supplier and the transit countries. For example, the territorial disputes between Turkmenistan and Azerbaijan (relating to the Caspian fields) are interfering with building the Trans-Caspian gas pipeline. Iran is also proposing its alternative for demarcating the borders in the Caspian.

Nor should we forget the fuel wars between Russia and Ukraine that threatened gas deliveries and gas transit to the EU.

The dynamism China is displaying in reaching its goals sets it advantageously apart from the other players. The Atasu-Alashankou and Kenkiyak-Kumkol oil pipelines, as well as the Turkmenistan-Uzbekistan-Kazakhstan-China gas pipeline, were built in a relatively short time.

China is particularly active in the gas sphere. While Europe has not even started to build Nabucco and is constantly postponing implementation of this project, China has already received more than 10 bcm of gas via its new gas pipeline.²⁴ Moreover, the PRC has reserved 40 bcm of Turkmen gas a year for itself. In the future, 20 bcm may be received from Uzbekistan and Kazakhstan (10 bcm from each), which will make a total of 60 bcm.

After the South Iolatan field went into operation, Turkmenistan, according to some data, could add another 10-20 bcm to these volumes. China's CNPC was granted the right to build surface facilities at the field along with four companies from South Korea and the UAE.

However, despite China's achievements, some experts still think that the EU's position is stronger, since the Europeans are offering a more attractive price for Central Asian gas. This opinion is quite true, but there is a very strong counter argument to it: in order to implement the projects in the energy sphere, China is willing to offer large loans under acceptable conditions at the earliest opportunity.

²⁴ See: "Turkmenia za 1,5 goda eksportirovala v Kitai bolee 10 mlrd kubometrov prirodnogo gaza," 30 May, 2011, available at [<http://www.upmonitor.ru/news/russia/910554a/>].

Building surface facilities at the Turkmen group of South Iolatan-Osman gas fields can serve as an example. In 2009, Turkmengaz and China Development Bank signed a loan contract for \$4 billion. In April 2011, Beijing offered another privileged loan of \$4.1 billion.²⁵ By offering loans, the PRC is essentially contracting future volumes of Turkmen gas.

This policy is part of Beijing's more extensive strategy to gain access to raw hydrocarbons. According to the calculations of *The Financial Times*, two Chinese state banks, China Development Bank and China Export-Import Bank, offered loans abroad for \$110 billion in 2009-2010 (for comparison, WB issued only \$100.3 billion between mid-2008 and mid-2010). As a British publication noted, energy transactions based on the principle "money for oil" accounted for most of the loans issued. China is ahead of WB in the competitive game largely due to its more advantageous lending conditions and enormous international reserves, which top \$2.5 trillion.²⁶

Conclusion

When assessing the dynamics of the discovery of new oil and gas reserves, as well as investments in production and the construction of export routes, we can confidently forecast a further increase in the significance of CA's hydrocarbons for the world energy industry. It stands to reason that no one knows how the global economy will develop, but there can be no doubt that oil and gas from CA will continue to be in demand and that China and the EU, as the key continental raw hydrocarbon importers, will be its main purchasers.

It should be noted that South Asia could become another key consumer of raw hydrocarbons, but the situation in Afghanistan and the sanctions against Iran are interfering with the creation of a full-fledged southern energy corridor.

The existence of such a strong market as China is very advantageous for CA suppliers; it gives them the opportunity to decrease their dependence on the northerly and westerly vectors, where Russia and the EU-U.S. occupy the dominating positions.

Maximum diversification makes it possible to create an atmosphere of competition and attract significant investments into implementing projects on more advantageous conditions, which will ultimately have a positive effect on their rates of implementation.

²⁵ See: "Kitai aktivno kontraktuet turkmenskiy gaz, kotoryy v Evrope zhdut cherez NABUCCO," 27 April, 2011, available at [www.regnum.ru/news/1399160.html].

²⁶ See: "Kitai oboshel Vsemirnyy bank po kreditam inostrannym gosudarstvam," 18 January, 2011, available at [<http://lenta.ru/news/2011/01/18/lending/>].