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Russian Federation**

**«Export of Russian Oil into North-
East Asia as the Factor of Stability
and Collaboration in the Region»**

2006



Russia's subsoil assets comprise

- *30 % of world natural gas reserves,*
- *50 % of diamonds,*
- *25 % of nickel reserves,*
- *17 % of tin, and*
- *nearly 10 % of crude oil reserves.*

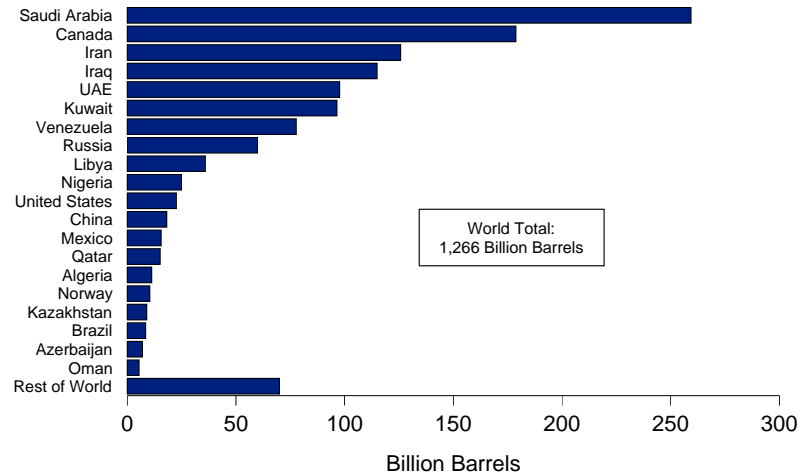
Deposits of practically all minerals known to mankind are discovered on the territory of the country.



- **Accordingly, Russia occupies leading positions in mining of main types of minerals being the largest producer and exporter of MRC production.**
- ***In 2004, the production volume in this sector of economy amounted to \$150 billion.***



World Oil Reserves by Country, as of January 1, 2004



Source: "Worldwide Look at Reserves and Production." *Oil & Gas Journal*, Vol. 100, No. 49 (December 22, 2003), pp. 46-47.



The resource base of the region

allows increasing annual gas production on the basis of its largest fields up to 105 billion cu m by 2020, including up to 70 billion cu m in Eastern Siberia and the Republic of Sakha (Yakutia) and up to 35 billion cum m in the Far East.

Thus, practically all crude oil and about 80 % of natural gas produced during the period until 2015 and may be even until 2020 should be exported.



In 2020, with total production in the East of Russia being 70-75 million t of crude oil and 105 billion cu m of natural gas, not less than 70 million t of crude oil and about 85 billion cu m of natural gas are proposed to be exported . The resources are enough to cover both the internal crude oil and natural gas requirements of the East of Russia and HC export to the Asia-Pacific countries.

Why to the Asia-Pacific Region?



Denial Yergin – Oil is blood of economic

Brad Glosserman, *Research Director Pacific Forum*

Energy lies at the heart of NEA integration. There will be -- and already is -- economic integration, but energy supplies and distribution will be a large part of that package.

- Global oil demand in 2005 continues its growth unabated, but slower than 2004. Growth rate is likely to fall from 2.7 million b/d in 2004 to somewhere around 1.5-1.7 million b/d in 2005.

Why to the Asia-Pacific Region?



- **The Asia-Pacific region is the most rapidly developing region in the world.**
- **It consumes about 30 % of world energy resources, with the HC share in the structure of the fuel and energy complex (FEC) steadily tending upward. The crude oil and natural gas market is very dynamic in conditions of large-scale demand for effective energy carriers and insufficiency of the HC resource base.**



- **Since 1965, crude oil consumption increased by a factor of six in the Asia-Pacific region and less than twofold in the world. Crude oil demand substantially surpasses its production. During the last 12 years, production rose by 17 % and demand by 50 %; in 2002 they came to 381 and 992 million t, respectively. A considerable growth of demand and import of crude oil, with relative stabilization of its production, is expected in the future.**
- **In 2003, import of crude oil in the Asia-Pacific countries amounted to 610 million t, including 243 million t (40%) in Japan, 105 million t (17%) in South Korea, and 77 million t (13%) in China.**



- *According to data of the Asia-Pacific Research Center, the capacity of crude oil market will grow to 1,000 million t by 2010, including up to 550-600 million t (55-60%) in China, Japan, and South Korea. These three countries are expected to import about 950 million t of crude oil in 2020.*
- **At present, large-scale production is carried out in China, Indonesia, and Malaysia only.**



A share of natural gas resources in the HC structure of Asia-Pacific countries is small (4%) as compared with that of the world (24%). With ecological and economic advantages of natural gas over other energy carriers taken into account, steady and substantial demand for it may be predicted both in the near and distant future



- It is particularly characteristic of China, Japan, and South Korea where gas demand is expected to increase by a factor of three by 2020, to 350-390 billion cu m from 134 billion cu m in 2002.
- Presently, major gas producers in ATR are Indonesia, Malaysia, and Thailand.
Total gas production is about 300 billion cu a year, 30 billion cu m are imported.



Where Will All the Gas Come From?

**Asced Dr. Fesharaki and Hosoe T. at the EWC-
presentation “Global Oil and Gas Business:
Where are We Heading”. 10.3, 2005.**

**Dr. Fesharaki examines the very difficult dilemma
of the present: “High Prices and High Demand?”
Can the consumer pay \$8/MMBtu or higher ex-
ship price?**



What is opinion of Dr. Fesharaki?

He has skeptical opinion:

Today, everyone says no, but we believe the consumers in Japan, Korea, Taiwan, and the U.S. have no choice. They are paying the high price for oil and they can afford the high price for gas, but do so reluctantly and with much resistance, particularly in the power sector.



- *Can the Chinese and Indian consumers pay such prices? Can fertilizer producers pay such prices? The answer is highly uncertain. China and India are still not addicted to gas. They will find coal as the best buy. Some sectors can pay the high prices, but most cannot, particularly in the power sector.*

It is very difficult Dilemma: Coal or Oil and Gas?



Opinions of the Russian analytics:

*Historically, natural gas has been an almost insignificant variable in China's energy equation. Until the mid-1990s, it primarily was used for fertilizer production. Currently, only 10% of gas consumed in the country goes to the utilities sector that is household consumption and small power-generating units. In 2004 China used 4,3 bcm of natural gas per year, of which 26% is consumed by the oil and gas industry for technological purposes. But the country is on the threshold of a spectacular leap in consumption to that by 2020 is expected to push consumption past 200 bcm per annum, **according to Chinese experts**. The key areas of growth are to be power generation and household consumption, with coal to be phased out gradually.*



What is prognosis?

- *China's Institute for Energy Studies forecasts annual natural gas demand at 236 bcm by 2020.*
- *The US Department of Energy estimate is 120-220 bcm, similar to the 120-190 bcm prediction of Japanese experts.*
- *The International Energy Agency (IEA) is the last optimistic of all projecting China's natural gas consumption in 2020 to be 110 bcm.*

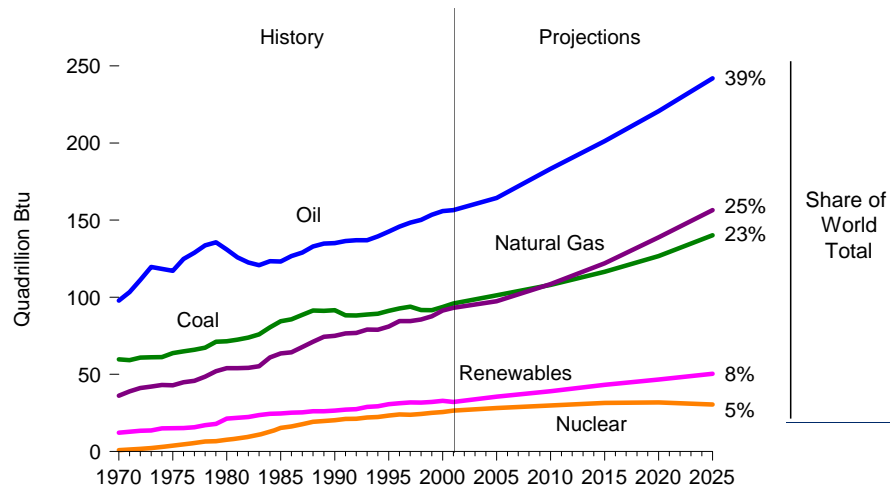


Russians specialists made conclusions:

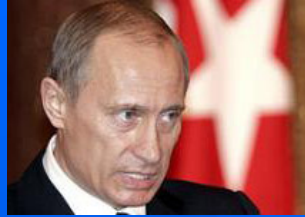
- *“Potentially, Russia could annually supply China with some 20 bcm of natural gas by 2020... Particularly uncertainty over Chinese gas consumption levels in the near future, and the high cost of the Kovykta project, the Chinese Market will remain a risky destination for Russian gas exports. Indeed, at this point the Russian side is working with estimates of potential export volumes to China ranging from 3 to 20 bcm per year. Natural gas demand in China is not a driving market force. Rather, government strategy is stimulating its development. In short, market demand for gas will grow according to the will of the state.*



World Primary Energy Consumption by Fuel Type, 1970-2025



Source: EIA, *International Energy Outlook 2004*



As Russian president Vladimir Putin remarked at the 2003 APEC business summit:

“Russia is prepared to make its contribution to creating a new energy configuration in the APR. This will allow consumers of energy resources, which are widely represented in the APEC, ... to diverse deliveries of energy, and, which is especially important, to ensure their safety. For example, in 2007 it is planned to built a factory for liquefying natural gas on Sakhalin – one of the largest factories in the world.”



Why Asia-Pacific Region need Oil and Gas resources?



- *Grows of population in APR- countries and grows of demand oil and gas inside of countries for needs of the population;*
- *Development of the economics and grows of GDP;*
- *Development and using of new technologies. For new energy- technologies need oil and gas.*
- *Development of the military sector;*
- *Protection of Environmental*



**But hydrocarbon resources
will be sufficient in Russia for the effective
export to North East Asian Regions?**

**Thus, the expected HC market capacity
of Russia's major probable partners in
the Asia-Pacific region will come to 500-
600 million t of crude oil and 130-150
billion cu m of natural gas in 2010 and
may reach 950 million t and 275 billion
cu m, respectively, in 2020.**



One of the main problems

of the transportation of oil is the problem of communication. Through the path of transportation of oil, *two fundamental moments must be taken into account: the loss of the realization of the project and the guarantee of security.*

- The main characteristics of routes are the **capacity, cost of building** and modernizing the pipelines, and the **foremost, the security of the transportation.**



What are the routes of transportation of Russian oil and gas?



Proposed route of the East Siberia – Pacific pipeline

№8





During two years continued collisions around east rout of exporting oil pipeline:

- **First variant was a rout from Angarsk to Daqing with total capacity of oil pipeline up to 30 million tons of oil per year. Cost of building is \$ 2 bln.**

Project - Angarsk - Daqing had to go around Baikal from the south and in this case considerably further from the lake.

- **Second variant was a rout from Angarsk to Nakhodka with total capacity of oil pipeline up to 50 million tons of oil per year. Cost of building is \$ 5bln, but this project did not pass the ecological examination**



- *Third variant* was rout from *Angarsk to Nakhodka with branch to Daqing*.
- *Next (may be last?) variant* was rout oil pipeline "*Eastern Siberia – Pacific coast*".

Total capacity of oil pipeline up to 80 million tons of oil per year.



The results of the expert interrogation



1-st question was about Security situation in APR:

“Is it possible today a military conflict in the region or the situation is relatively stable? “

Answers: *1 group* – No – 44%

2 group – Yes – 56%, including

- China-Taiwan - 37%,
- NK -31 %,
- Japan-China (East China Sea and Senkaku) - 31%,
- Japan-Russia – (Kuryles) – 6%



What are risks and threats in APR?



Answers:

- **Nuclear Weapons of NK -56 %,**
- **China-Taiwan - 37%,**
- **Migration of the population from China to Russia – 31% (Chinese population as strategic weapons)**
- **Japan-China (East China Sea and Senkaku) - 25%,**
- **Militarization of China – 19%,**
- **Militarization of Japan – 13%**



Opinions of experts about transportations-routs:



**Igor Solyarsty, Vice-President Transneft-
Company**

Angansk-Datsin and Ttayshet - Nakhodka they are not alternative, the building of the second version will make it possible to supply oil both for the closed Chinese market and for the open market APR. In this situation, from the point of view of economic, the output on the coast of Pacific Ocean is the best version. Therefore the building of conduit on coast is more preferable, although it and more by road.

Brad Glosserman, *Research Director Pacific Forum*



Energy lies at the heart of NEA integration. Nahodka pipeline makes the most sense: it gives Russia access to the most markets -- Japan, ROK, the entire Pacific. I would give it preference for that reason. But there are, as you know, other domestic political considerations, and international ones, namely Chinese perceptions of a deal. There will be anger, and a sense that Russia is not a trusted partner. On the other side is the concern that it fuels the development of a rival. However, to the degree that China needs that oil, it cannot become too competitive with Russia for fear of losing vital supplies. In this case, interdependence would help smooth over tensions and give two potential rivals reasons to work together.



Рис. 7. Вероятные направления восточного экспорта УВ из России
Fig. 7. Feasible eastern lines of HC export from Russia





Thank you!