

**Theses of the Address of Mr. V.M.Nazarov,  
Member of the Management Board of ITERA  
Oil and Gas Company, at the Round Table on  
Long-term Security of Gas Supply in a Liberalized Market  
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on Gas of the UN Economic Commission for Europe)**

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**PROSPECTS OF ESTABLISHING THE WORLD (GLOBAL)  
GAS MARKET**

**1. Currently, within the framework of the world gas sector there are three main subregional natural gas markets:**

- Eurasia;
- North America;
- Liquefied natural gas market (LNG).

The Eurasian and North American markets are, mostly, the markets of so-called "pipeline gas" ("network gas") and are geographically within the corresponding continents (*Note: "pipeline" or "network" gas is natural gas transported from a field to the market through gas pipelines*).

LNG market is developing mainly in the countries of Asia Pacific (in Japan, for example, 100% of the national economy needs in "blue fuel" are met through LNG), and partly in the south of Europe. Today LNG deliveries make only several percent in the world natural gas consumption.

**2. All industrially advanced regions of the world have recently survived material changes in the production, transportation and marketing of natural gas.**

In the **European Union** and in the countries which are candidates to enter the EU the policy of liberalizing national gas markets is officially stated in order to establish a uniform, liberalized natural gas market in the framework of the so-called "Europe - 30".

Meanwhile, in **Russia** and in other **former USSR countries** there have been attempts to establish national home gas markets which together with the European gas market would form a uniform (technologically closed) Eurasian gas area.

However, both in Europe and in the CIS there are reverse trends along with the official policy of national governments.

For instance, monopolization and consolidation of gas (and energy, as a whole) business in a small number of major energy companies (such as German E.ON) go on in Europe; ENI (Italy), Gaz de France (France) have recently taken specific steps in this direction.

In the "post Soviet" territory major national gas companies (Turkmenistan, Uzbekistan, Kazakhstan, in Russia - OAO Gazprom, etc.) still occupy the leading (actually monopoly) positions in the gas markets.

Also, the scheme of natural gas export to the European countries which was used during the Soviet Union times has been almost completely resumed.

Russia (OAO Gazprom) still remains the only operator on transportation and sale of not only Russian but also Turkmenian, Kazakh and Uzbek gas. In fact, OAO Gazprom has turned into a gas trader that sells "somebody else's goods" as well.

However, there is another trend too. Gas producing countries persist in trying to enter direct contracts (without OAO Gazprom intermediary) with natural gas consumers in the European countries and other regions (for example, in Azerbaijan, Georgia, Armenia, Moldavia, Ukraine).

It is quite obvious that the "modest attempts" of the producing countries would become more and more persisting as the dependence on resources owned by other gas producing countries (Turkmenistan, Kazakhstan, Uzbekistan) for using in Russian contracts would grow.

It is lawful to suggest that "the advance" on the Russian positions in the Eurasian gas territory by those countries would grow after Russia enters into the World Trade Organization (WTO).

**Recently, discussions on the need to construct new gas pipelines including those "by-passing" traditional transportation routes (in particular, Russian routes) have been significantly intensified.**

They consider the construction of "**the South-European gas corridor**" (through Turkey and Greece) for connecting hydrocarbon resources of the Caspian region (Azerbaijan, Turkmenistan, Uzbekistan, Kazakhstan), of the Central Asia (Iran), and of the Middle East (Qatar) with the Southern and Western European consumers.

Large-scale projects on delivering gas from the Central Asia to **India and Pakistan** are reviewed.

Far East projects on providing natural gas to industrial and household consumers in **Japan, China, Korea** as well as in other countries **of Asia Pacific** are actively elaborated.

As to gas production projects, according to experts, active development of **Qatar** and **Iran** gas industry that has not only large potential hydrocarbon resources, but also prospective routes of their transportation (both by land, and by sea) to consumers of various continents would be focused in the coming years.

Some US companies have recently started to actively enter into business relations with leading world natural gas producers, including Russia, in order to essentially increase the "blue fuel" importation to the American continent.

**3. The main reason for the changes is, primarily, the ongoing increase of the world demand for natural gas as an ecological source of electric and thermal energy.**

In 20-25 years natural gas would become the main energy carrier while currently a share of natural gas in the world energy consumption is "only" about 27%. The conclusion was made by participants of the World Gas Congress that was held in the beginning of June 2003 in Tokyo.

According to estimates provided to this Forum by the World Gas Union, the world gas consumption would grow by 70-130% by 2030. North America and Asia would account for the biggest share of the increase. Gas consumption in Central Europe would grow at a more modest rate - by 2-3% per year.

According to the experts, the growth would take place exclusively through replacing other energy carriers, in particular, oil.

**4. In the US, the demand for gas as electric power generation fuel is growing rapidly.**

For the last three years the gas price in the USA has grown by 700%. This problem has become especially urgent after the US authorities officially announced gas as ecological fuel.

However, there are relatively few ways of meeting the growing demand for gas due to pure geographical reasons, as the American continent is rather far from the main world natural gas reserves (Russia and Middle Asia, including the Caspian region).

The Eurasian and American subregional markets of "the pipeline" gas are not technologically interconnected. And constructing a gas pipeline along the bottom of the Pacific or Atlantic oceans seems to be utopia.

Meanwhile, the forecasted rapid development of the US gas market may encourage the growth of the world gas production.

Once, in the mid 70-s of the last century, the growth of oil consumption in the US encouraged a rapid growth of the world oil production.

Now, the same situation may be with gas.

**5. The issue may be effectively resolved through increasing the use of liquefied natural gas (LNG) in the entire world gas trade, and in meeting the need of the American continent, in particular.**

Experts point out the following three basic reasons for increasing LNG role in gas trade:

- The growing global need in the "blue fuel";
- Geographical limits of regional markets of "the pipeline" gas;
- Essential reduction of LNG production and transportation costs in the last years.

According to experts, for the last thirty years (since 1970-s) the average cost of LNG production was reduced twice - from US\$500 down to US\$250 per ton.

Meanwhile, recent technical and engineer improvements have led to an almost 30% reduction of very high terminal and tanker costs for LNG sea transportation. And the reduction still continues.

Some experts speak of high (if compared to natural gas production) LNG production and marketing project costs.

What are actually the comparable costs?

According to Cambridge Energy Research Associates (CERA) experts, the world need in investments into LNG production and transportation in the coming 17 years would be US\$200 billion.

Which would be the costs related to the use of the natural gas "technology"?

Times of "cheap" natural gas produced from upper gas reservoirs have practically come to an end (Cenomanian gas). Many large gas deposits that are under operation are at the stage of depletion.

In order to enter new horizons (Valanzhinsky and Achimovsky gas), new expensive technologies which would increase total cost of gas production projects are required. (According to the most conservative estimates, new deposits development costs of Yamal peninsula in the North of Russia alone may be from US\$70 up to 90 billion).

Main gas pipelines construction costs (which are US\$2,0-2,5 million per 1 km, according to various estimates) plus compressor stations construction costs are to be added. In view of wear of the major part of operating pipelines (replacement of old pipes) and the need to construct new pipelines, the cost of "transportation" projects would make many dozens of billions of US dollars.

Therefore, if viewed thoroughly, the total cost of prospective LNG projects is not much different from the cost of prospective natural gas projects (according to some estimates, it is even lower).

Since LNG technology indicators obviously surpass those on natural gas projects (ecology, higher mobility of delivery to the markets, etc.), and their cost is gradually decreasing, they may appear more attractive to investors even in the near future.

## **6. In view of those factors, international experts forecast a material growth in the use of LNG in the world natural gas trade.**

Cambridge Energy Research Associates (CERA) experts forecast a rather rapid growth of LNG "popularity" even in the near future.

According to their estimates, by 2020 LNG share in the energy consumption, for example, in the US would grow up to 20% compared to 1-2% now (for comparison: 11% - in Europe and 100% - in Japan).

LNG consumption in the world is expected almost to double by 2010.

## **7. Material increase of the LNG share in the world gas trade may radically change the situation and lead to formation of the UNIFIED WORLD GAS MARKET.**

The very basis of the natural gas trade would be changed: namely, it would lose long-term and inevitable dependence of suppliers and consumers on gas pipelines and therefore, on main gas pipelines owners.

During LNG plants construction, an increase of coastal terminals number and sea transportation development, it would be possible to deliver gas to any corner of the world. Experts do not exclude that in several years cubic meters of LNG would be traded at the world (or regional) stock exchanges.

Therefore, the process of the world economy globalization would be composed of one more important element - the global world gas market.

**8. The new global system of gas trade would change the current relations between the market participants operating in gas production, transportation and distribution.**

For instance, new players which are sea carriers would take over a part of the transportation market and would compete in a certain way with modern "pipeline" gas transportation companies.

Meanwhile, new situation in the world gas market which is an increase of demand for natural gas and diversification of transportation opportunities of the goods delivery to consumer markets would obviously demonstrate **the predominating role of the production segment of the gas sector.**

This is gas producers as owners of top selling goods, rather than transportation or trading companies that would determine key rules of functioning at gas markets. To stabilize the processes, an international organization of gas exporting countries, such as Organization of Gas Exporting Countries or OGEC (similar to existing OPEC) may be established.

In order to meet the world demand for natural gas - both "pipeline gas", and LNG - to the fullest extent, large-scale investments into gas production projects would be needed.

Therefore, even today effective measures to raise investment attractiveness of gas production projects and to increase the number of gas producers should be taken.

However, liberalization of the gas market which is proclaimed today currently stimulates only new gas resellers.

Moreover, the paradox of the liberalization process is that today gas producers have to compete even more often in the European market with the states which can not produce the quantities of natural gas they need for export. *(For example, Ukraine and Turkey buy gas in quantities exceeding the needs of their domestic market. As a result, there is a deliberate "surplus of gas" in their territory which is further re-exported to other countries (with "known negative consequences" for the common gas market).*

In view of the forecasted growth of the needs in gas, we are entitled to state that all and any player of the world gas market should be involved directly (or indirectly) in gas production projects through a coordinated measures system (gas prices, transportation tariffs, customs, etc.).

Otherwise all of us would look like a nice family which sits down at the festive table and starts dividing the Christmas pie without thinking of the responsibilities it would have to take in order to get the tasty pie next year too.

"All of us are in the same boat". And the common burden of all players of the world gas market is that our common "gas ark" should keep afloat as long as possible.