Evolving, the humankind starts using new resource categories (atomic and geothermal power, solar power, tidal energy, wind power and other nontraditional sources). However, the fuel resources play key role in the supply of the energy of all the branches of economy nowadays.

The petroleum industry is closely related to the whole production sector of our country. For its development more than 20% of the financial resources, 20% of the capital funds and 25% of the industrial product of Russia are spent. And 10% of the product of the machine-building complex, 12% of the product of the metal industry are used for it; 2/3 of the pipes are consumed by it; it provides more than half of the export of the Russian Federation and the significant quantity of the chemical feedstock. Its portion in the shipping operations is 1/3 of the railroad freights, half of the water haul and all the piping.

This branch provides not less than 30% of the currency earnings to Russia, allows to have the positive balance of foreign trade, support the ruble. The high income in the budget of our country from the mineral oil excise tax.

The role of oil is quite high in politics as well. The regulation of the oil delivery to the countries of the near abroad is, in fact, a substantial argument in the dialogue with these new states.

Thus oil is the wealth of Russia. The petroleum industry of the Russian Federation is closely related to all the branches of the national economy, it is of great significance for the Russian economy. Oil demand always outruns its supply, that is why practically all the developed countries of the world are interested in the successful development of our oil-producing industry. The Russian oil extraction makes up 10% of that in the world, so it is safe to say that our country takes up a strong position on the international oil market. For example, OPEC experts made the statement that the states included in this organization are not capable of compensating for the shortcoming of oil if the Russian Federation abandons the world market.

The petroleum industry of Astrakhan Oblast.

The history of the hydrocarbon production in Astrakhan Oblast started in 1979 when the gigantic Astrakhan oil, gas and condensate field was discovered, positive reserves of which make up 3,5 trillion cubic meters of oil-dissolved gas and 560 million tons of condensate at present. The recovery on the field started in 1986, it was complicated by hard specific conditions: the deep depth (over 4 km), anomalously high reservoir pressure; and, in the first instance, the composition of the produced gas, which consist of carbon dioxide and hydrogen disulfide by one third. For the purification of gas, there was built the Astrakhan Gas Plant

(AGP), which is the largest producer of sulfuric acid in Russia nowadays, providing around 15% of the world’s output. With the current extent of production, the Astrakhan Oil-Gas Condensate Field would last for 200-250 years, for high-sulfide cardinally reins in output: Gasprom, developing reserves, is forced to recover a maximum of 12 billion cubic meters per year instead of possible 50-60 billion cubic meters in order to keep the polluting emissions at an acceptable level. This notwithstanding, in the period of low prices for sulphur, at plant there are considerable reserves of this active material accumulating, which could form poisons and spontaneously ignite.

Gasprom and regional authorities try to solve this problem of the storage and realization of sulfuric acid in two ways - to release commercial sulphur in non-hazardous form and increase its sales in the domestic market. In 2009 at AGP the new sulphur pelletization unit with a capacity for 2 million tons per year was put into operation, which allowed to increase the share of the granulated sulphur production up to 73% of the volume of the production (it was 32% before this project). It is less hazardous to ship and store granulated sulphur than block sulphur (frozen watery sulphur), and Gasprom is planning to give up on producing block sulphur completely. Gasprom is engaged in utilization of sulphur for constructional materials in parallel, which would allow to cardinally solve the problem of its storage. Upon the adoption of the common usage of sulphur concrete, which is more solid than common concrete, the Russian domestic market of sulphur could grow a few million tons per year.

Gasprom also recovers around 4 million tons of condensate per year, which is also processed at the Gas Plant, besides gas, covering the requirements of Astrakhan Oblast in petroleum products completely. At the moment the Gas Plant is capable of producing gasoline and diesel fuel of the “Euro-4” class, and in 2015 a condensate isomerization plant is planned to be finished. The installation of this unit would not only allow the plant to start letting out fuel of the “Euro-5” class, but start letting out the “RON-98” top bracket gasoline. Although the stocks of the gas deposited from the fields situated in the mainland of Astrakhan Oblast are very heavy and match the stocks of the major fields of the West Siberia and the Yamal Peninsula; the complex composition of the gas wouldn’t let start the recovery in the region, corresponding to the reserves. At that, the reserves of the oil on the region’s shore used to be valued quite lowly, the more especially as it is mainly about high-viscosity oil, the recovery of which involves extra expenses and technologies. But this spring, the head of MinPrirody Sergey Donskoy said about the revaluation of the Velikoe Field’s stocks from 42 million tons to 300 million tons of oil. If the evaluation is true, then Velikoe will become the most significant discovery since the Vankor Field in the Eastern Siberia, which could dramatically change the attitude of oil producers to the stocks of the mainland of Astrakhan Oblast, all the more so, because, according to preliminary data, the oil of the field is light. However, carbohydrates lie very deep - around 5 km, so the supplementary exploration alone would need at least 100 million dollars of investment.

At the moment the expectation of the regional authorities is connected with the development of the Caspian Sea Shelf. In the Russian sector of the Caspian Sea, there are 8 major oil, gas and condensate fields open and more than 20 good structures with projected reserves of oil and condensate for around 1,1 billion tons, gas for 800 billion cub. m. at the moment.

At that, the possibilities to discover new major fields in the Northern Caspian are not nearly exhausted. It makes the Russian sector of the Caspian Sea as well as the Eastern Siberia one of the main sources to increase the Russian oil production in the medium term.

Lukoil is the pioneer to develop the Caspian Sea Shelf. In April of 2010, the company placed the first offshore field in the Caspian Sea - and at the moment the first one in Russia in general - named after Korchagin on production. At the end of 2010, there was 55 thousand tons of oil recovered, the reaching of the planned production level - 1,3 million tons of oil per year - is expected in 2015. Next year Lukoil is also planning to place the second major offshore field - named after Filanovskiy, and then fields called Sarmatskoe, Rakushechnoe, Hvalinskoe sequentially by 2020 in order to recover 30 million tons of oil and 18 billion cub. m of gas in the Caspian Sea by the beginning of the next decade. The partner of Lukoil for the Centralnaya Field is Gasprom, for the West-Rakushechnoye Field, Rosneft.

In this context, the priority of Astrakhan authorities is to create concomitant plants that would provide offshore projects with necessary materials and equipment, thereby extending the effect of shelf development to other branches of the economy of the region. Thus, according to the Ministry of Industry, Transport and Natural Resources of the region, in 2013, the development of offshore fields caused the dramatic growth of the production of hardware - the branch which had no impact on the summary economic results over the previous eight years. This effect was caused by the start of the work of the “SVAP-YUG” manufacturing logistics park for applying concrete protective weight coating and pipe-line wrapping built in 2012. The product of this enterprise is used when constructing underwater pipelines for the deposits in the Caspian Sea. The capacity of the plant allows to make monthly shipment of not less than 25 km of pipelines for Russian and foreign enterprises (to Kazakhstan, Turkmen, Iran), in addition there have been created 450 highly qualified jobs.

The effect in shipbuilding is more observable yet: Astrakhan shipbuilding yards doubled their output last year - mainly due to the supply vessels of offshore projects, drilling rig for Eurasia, and also due to the work on the central processing platform for the field named after Filanovskiy. This year one of the largest oilfield services companies in the world - Shlumberg - is to open its equipment yards for drilling and geological exploration equipment in Astrakhan.

This enterprise will become the largest base of the company in Russia. Besides, Astrakhan authorities are working on the creation of the special economic area where the world’s leaders in oil and gas equipment for shelf development building are expected to transfer some part of their production works. SEZ offer its resident zero duties and the import VAT, reduction in profit tax and temporary zeroing of net worth tax, and it also offers finished production and transport infrastructure. In 1010, there was established the Institute of Petroleum and Gas on the base of Astrakhan State Technical University for the staff training for this branch, and in 1011, was there was opened the corporate training centre of Lukoil, which has became the first specialized centre for the staff training to work at off-shore oil and gas facilities in Russia.