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## THE OIL MARKET: ANALYSIS AND PROGNOSTICATION

### РИНОК НАФТОПРОДУКТІВ: АНАЛІЗ ТА ПРОГНОЗУВАННЯ

#### ANNOTATION

The article reveals to peculiarities of sustained development of the world oil industry is caused by the growing demand for petroleum products quite high income area. Given this fact, we can assume that investment in oil refining (construction of new refineries, reconstruction and modernization of existing ones) will remain advantageous during protracted to time. Development of the petroleum industry, the developed world try to maximize capacity of utilization, diversification sources of raw material and optimum deployment of new refineries, but mainly about the places of production of raw materials or areas where is the greatest demand of oil products.

**Keywords:** oil refinery industry, investment demand, global markets, production capacities, raw materials.

#### АНОТАЦІЯ

У статті розкрито особливості поступального розвитку світової нафтової промисловості, що зумовлені зростаючим попитом на нафтопродукти. Враховуючи цю обставину, можна вважати, що інвестиції у нафтопереробку (будівництво нових нафтопереробних заводів, реконструкція та модернізація існуючих) залишатимуться вигідними протягом довготривалого періоду. Розвинені країни світу намагаються забезпечити максимальне завантаження виробничих потужностей, диверсифікацію джерел постачання сировини та оптимальне розміщення нових нафтопереробних заводів здебільшого в місцях видобутку сировини та матеріалів або на територіях, які мають найбільший попит на нафтопродукти.

**Ключові слова:** нафтопереробна промисловість, інвестиції, попит, світові ринки, виробничі потужності, сировина.

#### АННОТАЦИЯ

В статье раскрыты особенности поступательного развития мировой нефтяной промышленности, обусловленные растущим спросом на нефтепродукты. Учитывая это обстоятельство, можно считать, что инвестиции в нефтепереработку (строительство новых нефтеперерабатывающих заводов, реконструкция и модернизация существующих) будут оставаться выгодными в течение длительного периода. Развитые страны мира пытаются обеспечить максимальную загрузку производственных мощностей, диверсификацию источников сырья и оптимальное размещение новых нефтеперерабатывающих заводов в основном в местах добычи сырья и материалов или на территориях, имеющих наибольший спрос на нефтепродукты.

**Ключевые слова:** нефтеперерабатывающая промышленность, инвестиции, спрос, мировые рынки, производственные мощности, сырье.

**Introduction.** The important factor of forming of assortment politics of oil-processing enterprise is estimation of the present state of affairs and development of prognoses of the market development. The program of such complex study depends on the features of commodity, character of activity of enterprise, scales of production and other factors. The correct estimation of market situation requires an analysis and prognosis of dynamics of demand and supply. Basic directions of complex market analysis: study of

demand, analysis of market segmentation, analysis of terms of competition and mechanism of sale. Complex market researches envisage realization of systematic analytical work, that allows to inform in relation to all new at the market, providing an adequate idea about that, what commodities can find a sale, what income can be got for a that or other commodity, what products are needed.

In different works different, sometimes opposite advices are given concerning that on what it is needed to be oriented to the enterprise. J. Armstrong and F. Collopy during undertaken a study educed that firms that is oriented on competitors had a subzero margin of profit. Next recommendations are offered: not to use market part as end in itself; a statistical base that is used must not carry out influence on basic strategy of firm; oriented not on a market stake, but on maximal profitability [1, p. 35].

With the aim of increase of competitiveness it is recommended to turn the special attention on the study of the market state of affairs, taking into account of basic tendencies of scientific and technical progress, perfection of the distribution of financial means and pattern of production system [4, p. 46]. As a result contacts become stronger between a producer and consumer, flexibility of production is provided, pre-conditions are created for producing of new types of products.

**Setting objectives.** The aim of this article is to analyze and forecast the development of the oil market, which serves as an information base to form an effective product policy refineries. At the strategic planning conduct an estimation and ranging of markets of sale with the aim of exposure among them perspective. Most substantial factors that determine regional demand at the market of oil products – demographic, economic and transport. Demographic: a quantity and closeness of population, mastering of territory, that characterize level of economic and social development. Economic and transport factors: production volume in industry, building, agriculture and on a transport, that determines the volume of cargo and, as a result, volume of consumption of oil products. For an analysis there can be the used method of analysis of hierarchies, according to that the group of criteria from the point of view of that the estimation of attractiveness

of regional markets of sale is conducted is developed.

**Results.** Oil-processing industry in all regions of the world is in the state of overproduce and change of such state it is not envisaged in the future. Oil-processing companies must spend enormous facilities on the investment programs, development of more effective technologies, to adapt oneself to the constantly variable terms of demand and supply, on the increase of ecological safety of processes and foods must keep certain flexibility at processing of raw material of different quality. All stronger on oil plants a requirement to bring down the production of heavy oil products through the increase of demand on motor-car fuels carries out influence. The decision of this problem consists in the increase of part and improvement of catalytic processes. Production of goods in accordance with the current requirements of market and with a high income maybe only in the USA and Europe, where oil plants have more difficult technology, but not expose to oil simple distillation, thus almost all income appears due to the use of catalytic.

On the whole, the countries of ES have over 100 oil-processing plants orientated on processing of oil from a few permanent sources. For example, to the oil plants in the Mediterranean region oil comes from North Africa (Algeria, Libya), in Central Europe the base sort of oil is Russian petroleum mixture of Urals, in the South region Urals and oil predominate from Near east.

Productive and sale strategies of enterprise are determined by correlation of powers of oil production and oil processing, division of labor with the selection of leaders on separate positions of assortment and them economic and productive position.

In the countries of Central and East Europe in 90-th there was a rapid increase of market of motor-car fuels as a result of increase of motor-car park, and also price advance on them. The change of demand toward unleaded petrol, that 1990 to in many countries of region was not for sale, took place the last years. Hard ecological limitations became reason of it. In connection with an increase in the pattern of consumption of part of motor-car petrols development of oil-processing industry must be oriented not on volumes, but on the change of structure of products that is produced. Basic complication in the design of demand on petrol is related to that this index substantially depends on the sizes of investments in a motor transport and infrastructure. The sphere of consumption of petrols also in a large measure depends on current decisions in this area. Thus, current prices and size of profits influence on the value of service on motor-car petrols [2, p. 223].

Among basic factors that influence on development of oil-processing industry it is possible to distinguish the following: dynamics and pattern of demand on oil products, fluidized gases and petrochemical raw material; correlation of demand and

supply, limitation on supplying with oil, her quality, dynamics of oil prices and oil products; requirements are from the guard of environment; national politics of energy-savings; a necessity of grant to the flowsheets of enterprises and options is from processing of oil of flexibility, ability operatively to react on the change of the state of affairs at the power market; an achievement of safety, simplicity, management comfort is on oil plants, adjusting of connections of administration of petroleum companies with public; increase of profitability of production and sale oil products. Petroleum corporations adapt the investment strategy to the market changes. In a commodity structure there is side-shifting more easy foods, the consumption of fuel oil goes down. Demand grows on middle and easy distillates. Modification of commodity structure of oil-processing industry is caused by the changes of pattern of demand on oil products and ecological norms. As a result of the investment politics sent to deepening of processing of oil, the assortment of products of oil-processing plants is brought to conformity with the requirements of market, the production of heavy foods diminishes and increases production of middle and easy. Any market of oil products, including regional, presented by consumers, mediators and producers and carries dynamic associate character. The food aspect of forming of market closely constrained with territorial-economic. The feature of regional market of oil products is a structure, volume of consumption and production of oil products foremost in regions. In turn, a structure and character of consumption of oil products are determined by the branch structure of economy of region, amount and power of industrial enterprises, level of development of all types of transport, volumes of transport transportations etcetry. It is important to have description of basic groups of consumers of oil products in a region, to distinguish and give to them a quantitative and quality estimation: to define, who are they, volume and structure, frequency of consumption, or there is seasonality in consumption. In regions, where oil-processing plants operate, there is possibility to influence on the change of pattern of production of oil products and assortment of oil products that is produced. The important feature of regional market of oil products is a level of development of productive infrastructure, correlation of internal and interregional streams of oil products. A fact presently is a high degree of monopolization of regional markets of oil products by separate companies, that it is necessary to take into account at determination of regional demand.

At adjusting of prices on power mediums priority is approaching of correlations of the domestic prices on the products of extractive and processing industries to the world proportions with the corresponding system of taxation, rationalization of pattern of prices in a petroleum sector due to maximally possible abandonment from taxes unconnected with the level of actual efficiency

of production and passing to taxation of income. For creation of normal operating of source of raw materials and realization of the program of reconstruction and modernisation of oil-processing industry conditions it is necessary to change approach to forming of oil prices and oil products, bringing down a tax constituent in them, decreasing grants that get to the consumers of fuel simultaneously, and also entering the special course of hryvnya to the dollar at the account of charges on the imported equipment and materials that is used in to oil refinery. For stimulation of investments it is necessary to pass to the estimation of profitability in relation to capital assets, but not to the charges.

Presently actual is a task of leading to of quality of home foods to the world competitive level. Simplest method of increase of competitiveness of commodity – price-cutting – for domestic enterprises useless, as in the conditions of the operating tax system prime price and such high. Another way an increase of competitiveness is drawing on internal reserves. For this purpose guidance must choose strategy of competition: decline of prime price, differentiation of products, market, introduction of innovations segmentation, rapid reacting on the necessities of market.

Guidance must estimate internal potential of competitiveness of enterprise, him strong and weak parties. Among factors that reduce the competitiveness of this industry in the world market will distinguish the following : satiation of demand up country in connection with the production of other substitutes of fuel; a rise in prices of products is from the requirements of guard of environment; building of new oil-processing plants in regions with the low level of requirements to the cost of investments; a change of consumer demand is toward more accessible power mediums.

For perfection of competition environment on the markets of oil products an important value has creation of permanent government strategic reserve of oil products, the presence of that gives an opportunity to influence on stability of markets of oil products in periods of indignations on it (sharp price, agiotage demand, disappearance of commodities advance from a market, to their deficit and others like that) and to soften the negative factors predefined by the state of affairs of world markets.

The purchase of oil products to government reserve it is expedient to carry out mainly in periods of reduction to demand and, accordingly, prices at the market. Except it, it is necessary to put right the effective mechanism of the permanent monitoring and prognostication of the state of markets of oil and oil products. Efficiency of development of oil-processing production in modern terms is largely conditioned by the degree of him technical equipped, by the level of scientific and technical progress, accordance of productive pattern of demand of consumers on foods

of oil-processing production, quality and labour productivity, by the personal interest of workers in the results of the activity, by the presence of investment resources.

Institutional transformations of enterprises from processing of oilstock brought in considerable changes in organization of production and influenced on the acceleration of introduction of hi-tech productive processes that are qualificatory in the increase of efficiency of oil-processing production and increase of its competitiveness. A growing competition on the world markets of production of oil-processing production distribution requires the search of new technological, productive-technological, financial, ecological and administrative decisions.

The market conditions of menage require from oil-processing enterprises cardinal reorganization of all directions of activity, optimization of marketing researches, diversification of production and development of new types of business.

Modern world tendencies are characterized by consolidation and integration of enterprises of oil production, oil processing and production distribution by acquisition of actions, confluence, absorption, cooperation and others like that.

Modernisation of oil-processing production must provide the specific cost cutting due to the increase of scales of production as a result of its combining and diversification, to assist the increase of return on assets of products due to the increase of employment of industrial capacity and objects of infrastructure, and also to the increase of exit of having a special purpose foods from unit of oilstock. Except it, modernisation of oil-processing production is able to provide an economy on transaction charges due to reduction of productive relations and translation of them in intraindustrial copulas, and also economy of all types resources. Economic efficiency of diversification of production is conditioned by the rational use of management, labour force and capital goods, including power powers, and also of communication and transport economy. Strategy of diversification of enterprise determines totality of rules and receptions of simultaneous development a few unconnected with each other types of production, expansion of assortment of products of the enterprise, sent to the increase the efficiency of its production and competitiveness.

Basis of diversification is a portfolio constituent, that is determined by that, how the diversified company determines the business principles in different industries, and also by actions and approaches, sent to the improvement of activity of groups of enterprises, a company was diversified in that. Thus, the diversified company is totality of different strategic areas of business, each of that has the own opportunity of increase, increase of profitability, or requires the special competition approach. In portfolio strategy it is determined to combination of different strategic areas of business, in that an enterprise will aim to

attain the aims. Competition strategy determines different approaches in that a company will operate in every strategic region.

Diversification of oil-processing production allows:

- to bring down a commercial risk due to the increase of assortment of products, cutback of the permanent spending and capital charges;
- to promote competition positions at the market;
- to inculcate progressive technologies;
- to save on charges, scales of production conditioned by an increase and by its modernisation;
- to promote efficiency of sale activity of enterprise.

In an oil-processing production diversification can come true on territorial and branch principle. Territorial principle envisages productive unity (all subdivisions of production take place on one territory). Branch principle is based on technics and to financial-economics unity of all elements and areas of the diversified production. Separate productions can be territorial disconnected in this case, and their unity, when foods of one production serve as raw material other, is provided mainly by centralization of management a capital and expenses.

Choice straight must come development of oil-processing production true on the basis of analysis and market of oil products, potential of production capacities and possibilities of its expansion, technological structure of the oil processing, requirement forecast in investment resources and others like that. In turn, a requirement in investments settles accounts on the basis of productive charges and receipt necessary for further development of income.

Productive charges are determined by quality of oilstock that is redone, operating flowsheet of its processing, structure and quality of ready oil products.

An oil-processing production is in hard economic and price limits that is determined by a price on an oilstock, by a productive prime price and costs of realization of oil products. Thus an enterprise can influence practically only on the level of productive charges.

Among basic factors that influence on the level of oil-processing production cost, it is possible to distinguish the following:

- an exit of having a special purpose foods is from unit of oilstock;
- level of employment of industrial capacity and capital productivity;
- quality of products that is produced, and level of measures, is in relation to its providing;
- labour productivity and present on an enterprise system of its stimulation;
- coefficient of complication of oil-processing production;
- level of skilled flowsheet of processing of oilstock that determines quality of products;
- technological structure of enterprise.

In development of world technologies the oil processing is traced clear tendencies to the use of

technologies as possible deeper processing of raw material, that maximally diminishes her unproductive losses and, accordingly, increases volumes, assortment and quality of eventual products. The countries of the Commonwealth of Independent States perceptibly fall behind from the countries of Europe after the technological level of oil-processing plants. It has a consequence, firstly, low level of processing of oil, and thus are substantial losses of raw material; secondly, more sub-zero quality of fuels, thus, is contamination of environment through the considerable volumes of extrass of harmful substances with the exhaust-gass of cars and other agile technique; thirdly, low level of export of eventual oil products and accordingly, high – to the export of oil and intermediate foods oil processing.

One of major directions of development of oil-processing production that increases his competitiveness, there is upgrading of products. The primary purpose of any enterprise is an improvement of him commercial effectiveness, increases of profitability, that are possible on condition of perfection of activity on the basis of optimal management of quality an economy.

**Conclusions.** Thus, forward development of world oil-processing industry is predetermined by both growing demand on oil products and high enough incomes of industry. Taking into account this circumstance, it is possible to consider that investing in the oil processing (building of new oil-processing plants, reconstruction and modernisation of existing) will remain advantageous during protracted to time.

Qualificatory progress of industry trends are introduction of modern technologies and maximal loading of production capacities. At the same time, the most world countries implement the programs of more hard ecological requirements both to the process of the oil processing and to its eventual foods (burned), and also to the mechanisms that consume (engines of internal combustion) these foods.

Developing oil-processing industry, the developed countries of the world try to provide the maximal loading of production capacities, diversification of sources of supplying with raw material and optimal location of new oil-processing plants, mainly near-by the places of booty of raw material or territories of most demand on oil products.

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