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SOME ASPECTS OF ENERGY SAFETY POLICY

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Today, as never before, the world faces a new challenge - the need to ensure energy security. The availability of own energy resources or the presence of reliable suppliers who comply with the terms of the signed contracts, the inadmissibility of turning energy resources into an element of manipulation and blackmail in political games - these are the factors that are laid in the basis of ensuring the energy safety policy of countries.

Energy sector is one of major factors of society development determining the development of civilization and causing environment pollution resulting in climate change. Whereas mankind used energy of sun, wind, and water before the industrial revolution, in the 20th century it used energy of fossil fuels (coal, oil, gas, uranium etc) for the most part. And so far they remain the base of world economy. As the energy consumption shows the significant increase trends in 21st century, the issues of energy saving, as well as wider concept of energy efficiency, become urgent and important recently.

Mankind should provide its existence with the energy produced, and this affects the development of economy and civilization directly, and simultaneously maintain the liveable environment for future generations. Ensuring reliable energy supply is one of the most important conditions of sustainable development and stable functioning of world economies. It being known that there exist the clear relationship between the economic growth rate and energy consumption rate; the increase of gross domestic product (GDP) in most developed countries was attended by equal relative increase of fuel and energy resources (FER) consumption.

Fifty recent years saw the significant increase of the rate of energy resources use. In 2015 it reached 13,647 mlrd tons of oil equivalent (o. e.). To compare: as far back as in 1973 (the benchmark of energy saving policy in the world scale) it was only 6,101 mlrd tons of o. e. [1, p.6]. According to a range of forecasts, explored reserves are sufficient for the following period of time: oil – 40 years; natural gas – 65 years; coal – 250 years. The coal resources are distributed almost equally between major regions and world economies, which provides the relative coal price stability, in contrast to oil price, although it changes in respond to political and social and economic interests. Only some countries have oil and gas re-

serves, and this fact rises the problem of access to their resources on a world scale and may lead to international conflicts, particularly military ones. Thus, after the Arab-Israeli War started in 1973 as resulted from embargo on oil put by Arab countries OPEC (Saudi Arabia, Kuwait, Iraq, Abu Dhabi, Qatar, Algeria), the price per barrel (160 liters) of crude oil increased 4-5 times and reached 11 dollars compared to 1,90 dollars. After the Iran-Iraq War started in 1979, the price of a barrel reached 30-40 dollars [2]. As the oil price is dependent on the cooperation between political and business elite, than, the more the energy system of a country is dispersed according to independent energy producers, the less are possibilities for manipulations with prices and profits on the energy market.

However, on the Post-soviet territories the practical implementation of approaches to energy saving face significant difficulties under the conditions of practical experience of real democracy. Whereas, the most successful methods of energy efficiency increase are developed by national economies of democratic states in Northern Europe. In the developed countries, where the authorities make the minimum intervention into enterprises activity, the economically sound system for management of energy efficiency increase is developed. Energy audit and energy management are the tools of its implementation. This enables permanent analysis of state of FER supply, critical assessment of energy efficiency of the main and additional techniques, determination of reserves of energy saving, and suggestion of complex energy saving measures of efficient use of FER.

According to the regulatory documents of EU, e. g. The Energy Chart Treaty [3], in the developed countries the fiscal and financial incentives are stipulated by the laws for implementation of energy efficient technology in the market, motivation of such an innovative approaches to funding energy efficiency increase as funding by the third party, maintaining and motivation of cogeneration, as well as measures of efficiency increase for central heating systems.

The realization by the governments of different countries the significance of energy sector for the development of economy and society resulted in the concept of "energy safety" elaboration. As for now, the energy saving has become the highest priority for the energy strategy of the developed countries. In most developed countries there exist national programs of energy saving as targeted on reasoned use of FER and include complex of measures for improvement of the structure of energy resources consumption, implementation of modern energy saving technology, deeper extraction of useful components, use of secondary resources, energy consumption control etc. The countries also launch the programs of development of nontraditional and renewable energy.

The energy safety of countries should be considered as the ability of the state to ensure the efficient use of its own fuel and energy base, to provide the optimum diversification of sources and ways of supply of the energy resources in order to provide the vital activity of inhabitants and functioning of national economy in ordinary state, emergency state, and military state; prevent fuel and energy resources from dramatic price fluctuations or create the conditions for the smooth adaptation of national economy to new prices of the resources.

The issue of energy safety is the main condition for existence of countries as an independent state. The measures of state regulation of energy safety ensuring may be divided into the preventive and liquidation ones. The implementation of preventive measures should favour the formation of less sensitive to energy troubles economy. This includes the energy saving, diversification of sources energy resources supply, motivation of production of the main types of fuel and electrical energy production, use of nontraditional and renewable types of energy. The liquidation measures should consist in creation of strategic oil and gas reserves controlled by the state authorities and the system of distribution of oil and gas in case of serious troubles of infrastructure of supply to consumers. The measures should also be taken to prospect and drill oil fields of strategic importance to be put into operation in case of war. The achieving the goal of energy safety is impossible without the determination of factors, which can cause negative effect on the development of fuel and energy complex.

Energy saving is the most prospective sector of providing countries with energy. Only by means of low-cost energy saving measures at least 10% of energy can be saved. As the first-priority measures of energy saving provision the following measures should be considered: development of State complex program of energy saving; technical retooling of production; creation of national non-budgetary fund for energy saving; strict stocktaking and control of energy consumption of all branches of production; motivation of energy saving technology implementation; structural reconstruction of economy by means of reduction of share of energy consuming industries; use of nontraditional and renewable sources of energy. [4].

Summing up, the issues of energy safety is one the main condition for existence of countries as an independent state. Improvement of control system for fuel and energy complex and energy saving process is among the important state purposes. Countries needs the changes of the structure of national production, implementation of energy saving technology; this would lower dependence from oil and gas import and lead to economy stabilization and provide the conditions for energy safety of the country. Energy saving is aimed at reasoned use of fuel and gas resources and includes a complex of measures for the structure of energy sources consumption, implementation of modern energy saving technology, deeper extraction of useful components, use of secondary resources, energy consumption control, and development of nontraditional and renewable energy system. Energy efficiency, as a problem of fuel and energy complex, as well as the ability of the latter to provide the efficient functioning of the whole economic system, is one the determining factors of national economy of countries.

References

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