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**Svitlana Sivitska**, PhD student

Poltava National Technical Yuri Kondratyuk University, Poltava, Ukraine

## STATE PROMOTION OF INVESTMENT DEVELOPMENT OF ALTERNATIVE ENERGY

**С.П. Сівіцька**, аспірант

Полтавський національний технічний університет імені Юрія Кондратюка, м. Полтава, Україна

## ДЕРЖАВНЕ СТИМУЛЮВАННЯ РОЗВИТКУ ІНВЕСТИВАННЯ АЛЬТЕРНАТИВНОЇ ЕНЕРГЕТИКИ

**С.П. Сивицкая**, аспирант

Полтавский национальный технический университет имени Юрия Кондратюка, г. Полтава, Украина

## ГОСУДАРСТВЕННОЕ СТИМУЛИРОВАНИЕ РАЗВИТИЯ ИНВЕСТИРОВАНИЯ АЛЬТЕРНАТИВНОЙ ЭНЕРГЕТИКИ

*In the article factors that contribute to improving the investment attractiveness of alternative energy in Ukraine have been analyzed and identified. The state promotion of investment development has been investigated.*

**Key words:** investment process, energy dependence of the state, alternative energy, government regulation.

*Проаналізовано та виявлено чинники, що сприяють підвищенню інвестиційної привабливості альтернативної енергетики в Україні. Досліджено стан та перспективи державного стимулювання розвитку інвестування альтернативної енергетики.*

**Ключові слова:** інвестиційний процес, енергетична залежність держави, альтернативна енергетика, державне регулювання.

*Проанализированы и выявлены факторы, способствующие повышению инвестиционной привлекательности альтернативной энергетики в Украине. Исследовано состояние и перспективы государственного стимулирования развития инвестирования альтернативной энергетики.*

**Ключевые слова:** инвестиционный процесс, энергетическая зависимость государства, альтернативная энергетика, государственное регулирование.

**Introduction.** In modern conditions the task of improving energy security of Ukraine is considered with the market potential of alternative energy, a prerequisite for effective regulation of which is to determine the strategic priorities of its development, the development of an appropriate institutional environment and regulatory framework. The development of alternative energy requires activation of investment processes in this area at the present stage. Taking this into consideration, the problem of state promotion of investment development of alternative energy is highly relevant today.

**The purpose** of the article is identifying the main levers of influence factors and block of its implementation and investigation state promotion of investment development of alternative energy.

**Brief literature review.** The study of theoretical and methodological aspects of improving and increasing the efficiency of the investment process, including energy, considered in studies of I. Blank [1], P. Korenyuk [2], T. Mayorova [3], A. Peresada [4], V. Potapenko [5], A. Udalikh [6], Y. Zhalilo [7], O. Obolenskiy, A. Glen [8], C. Jones [9], B. Esty [10]. However, despite the significant achievements of these authors remain poorly understood issues related to the state promotion of investment development of alternative energy in terms of the energy dependence of the state at the modern stage.

**Results.** Regulative support of fuel and energy complex and alternative energy, in particular, also does not meet market requirements, inhibits the development of competition and the potential of the industry. All this affects the results of operations, level of welfare and the competitiveness of the national economy.

In such conditions special attention is required to the issue of improving the system of public administration and institutional support for the development of alternative energy and processes of investment in its development with the aim of creating favorable conditions for

self-organization of business entities in the industry as the main requirements ensure a high level of energy safety of Ukraine.

The main components of institutional support for investment in alternative energy in Ukraine are the state regulatory framework, the current organizational structure of the management system and tools used by it for the implementation of tasks.

The basic principles of the state policy in the field of alternative fuels are:

- increasing production and consumption of energy produced from alternative sources, with the aim of efficient use of conventional energy resources and reduction of Ukraine's dependency on importing them by restructuring the production and rational energy consumption by increasing the proportion of energy generated from alternative sources;

- compliance with environmental safety by reducing the negative impact on the environment during construction and operation of alternative energy facilities, as well as transmission, transportation, delivery, storage and consumption of energy produced from alternative sources;

- observation of safety for the health of people on the objects of alternative energy on all stages of production, and also at a transmission, transporting, supply, storage and consumption of energy received from alternative sources;

- scientific and technical support for alternative energy development, popularization and application of scientific and technological achievements in this field, training of relevant professionals in higher and secondary educational institutions;

- no breach of laws by all the subjects of relations connected with the production, storage, transportation, supply, transmission and consumption of energy produced from alternative sources;

- observance of terms of rational consumption and economy of the energy produced from alternative sources;

- attracting domestic and foreign investment and encouraging entrepreneurship in the field of alternative energy sources, including the development and implementation of national and local programs for alternative energy development.

Organizational activities in the field of alternative energy sources include:

- identification of sources and direction of financing activities in the field of alternative energy sources;

- connection of objects of all forms of property that produce energy from alternative sources to the united energy system of Ukraine by the enterprises of electric networks (energy supply companies);

- creation of a statistical database on the resources of alternative energy sources;

- confirmation of compliance of the energy generating objects with the objects of alternative energy.

The key subjects of state control of alternative energy is the Verkhovna Rada of Ukraine, the Cabinet of Ministers of Ukraine, the National Energy Regulatory Commission of Ukraine, sectoral ministries and departments, the Ministry of energy and coal industry of Ukraine, the Ministry of economic development and trade, the State Agency on energy efficiency and energy saving of Ukraine, the National Agency of Ukraine on ensuring of efficient use of energy resources, etc.

The powers of the Cabinet of Ministers of Ukraine as an institution of higher Executive authority include the approval of the energy policy and terms of management of state energy assets, the improvement of the management system.

The powers of the ministries should include direct government management of the branches in accordance with the principles approved by the Cabinet of Ministers of Ukraine.

State regulation of activities of subjects of natural monopolies and related markets in the electricity, gas and oil industries is carried out by the National Energy Regulatory Commission (NERC). The main task of the Commission is to regulate relations between participants in the energy markets on the principles of non-discrimination and the effectiveness of their work.

State regulation in the sphere of alternative energy sources is carried out by:

- development, approval and implementation of norms, rules and standards of production, transmission, transportation, delivery, storage and consumption of energy produced from alternative sources;
- supervision and control for safe execution of work on alternative energy facilities, regardless of their form of ownership, safe operation of energy generating equipment and transmission modes and energy consumption;
- supervision and control over compliance with requirements of technical operation on the alternative energy facilities, regardless of their form of ownership, maintenance of power equipment of objects connected to the unified energy system of Ukraine;
- establishment of amounts of charge for electric energy produced by alternative energy facilities, and thermal energy produced from alternative sources;
- comprehensive promotion and support of research, experimental design, and the activity of inventors and rationalizers, aimed at development of the production and use of alternative energy sources.

The basic tasks of the National Agency of the Ukraine on issues of the guarantee of effective use of energy resources are: conducting united state policy in the sphere of the use of energy resources and energy-economy; the guarantee of an increase in the share of unconventional and alternate fuel in the supply and demand balance of energy carriers; the creation of the political system of the state monitoring of production, consumption, export and import of energy carriers, the improvement of the system of calculation and control of the consumption of energy resources; the guarantee of functioning of the united system of rate setting of the specific expenditures of energy resources in public production [11].

The National Energy Regulatory Commission is the central enforcement authority with the special status and should provide carrying out of price and tariff policy, state regulation of natural monopolies, development of competition and protection of consumers' rights.

NERC also carries out the review of conditions of licensing of entrepreneurial activity with formation of qualifying requirements to the heads of the enterprises, creates systems of monitoring of the licensed activity and defines the mechanism of cancellation of licenses in accordance with the established procedure.

As to NERC, analysts state, that the given organization is not able to carry out its functions properly now, as regulations about of its activity are not backed with a special law and is under absolute influence of the Government. The present role of the Commission is defined first of all by the conflict of interests in its activity because of impossibility to balance interests of the state, manufacturers and consumers - as it is in the system of the central enforcement authorities which means actual submission to the Government.

This situation does not meet the standards of the European energy legislation, one of the main principles of which is the independence of national regulators from political influence, which involves making independent decisions relating to the regulation of market participants relations (Directive 2003/55/EU).

Another significant disadvantage of state regulation of energy is that the focus in the development is made on the sources of energy and raw materials that are not renewable. However, alternative fuels and renewable energy sources receive very little attention. It is worth noting that the developed world has already started research and development of

unconventional areas of energy supply and fuel. The world community sees this as a radically new approach to establishing the basis of energy safety and independence.

Let us define the factors contributing to the increase of investment attractiveness of alternative energy in Ukraine: the market of alternative energy in Ukraine is still not fully explored through different causes and there are many free or relatively free niches; unmet domestic demand, a large potential domestic consumption; unstable oil prices and gas prices which tend to increase, and the high costs of transportation of energy resources, which also makes the cost higher; environmental pollution; the need to develop renewable energy sources, as a condition for the access of Ukraine to the EU [12].

These factors can be classified as external to the energy sector. The following factors which positively influence the development of investment in this area belong to internal: significant technically achievable potential of alternative energy; own production facilities for the construction of renewable energy plants; development of research in the field of alternative energy.

However, there are negative factors that diminish the investment attractiveness of alternative energy of Ukraine: the row of political crises, political instability; imperfection of legislative base, unsettled legal state; involvedness of the land items (however, the mechanism of lease of land fully allows to many foreign enterprises to work in Ukraine); financial and currency instability; excessive regulations concerning business (necessity to receive plenty of licenses, certificates and permissions). These factors can be classified as external, that influence the development of alternative energy regardless of a region in which they are located.

The next factors can be classified as internal, that influence on alternative energy on a micro-level: specific viewpoint onto the key problems in alternative energy; high level of corruption; not high solvency of consumers at the internal market; a low level of demand on alternative energy sources; a low level of informing population in relation to advantages of this type of energy; the specific of encouragement to make a purchase, namely acquisition of alternative energy sources, for at an enterprise such decisions are mostly made by either a leader of organization, taking into account the deputies' opinions, or proprietors of the company [13]. With regard to the cost of projects from passing to the alternative sources of energy, and also state and dynamics of factors of business-environment positive decisions in this direction are made with extraordinary difficulties, and process of taking them over takes a long time.

Successful implementation of these factors depends on the degree of participation of state authorities, as in developed countries high performance of alternative energy is achieved with the help of the state. Based on the experience of successful operation of renewable energy in developed countries, we can identify areas that need to be developed in Ukraine to encourage the development of this sector, to increase investment activity and intensify the process of formation of investment resources in the energy sector

Analyzing the views of leading industry experts and scientists, it can be said that state administration in the energy sector is not sufficiently effective. The most controversial issue is the need to improve the existing institutional infrastructure to ensure the effective control and regulation of energy. However, certain issues of supervision and control over the activity of enterprises in the energy sector are the responsibility of many government bodies, so it would be reasonable to reorganize them into an independent institutional structure to ensure the effectiveness and completeness of the monitoring of project works and field development and supervision in the sphere of subsoil use.

The main directions of state regulation of development of alternative energy in Ukraine, which will improve the efficiency of its operation and the country's energy safety, according to leading scientists, can be the following:

- providing the differentiation of the sources of energy supplies to Ukraine, but the solution of this issue is complicated due to numerous problems of a political, technological and

economic nature. However, the government policies should be aimed at the harmonization of conflict issues and ensuring the diversity of selection of suppliers of resources;

- technological update of the material base of the fuel and energy complex, which will provide cheaper energy and fuel;
- territorial rationalization of location of energy companies to ensure the reduction of transport costs;
- support of development of unconventional energy sources, including taking into consideration their geographic allocation. Predicted data of world dynamics of the use of unconventional sources of fuel and energy resources indicate the growth of their part in general balance (predicted growth is in 0,5 %);
- implementation of rational use of equipment of fuel and energy complex with the possibility to use individual items of fixed assets to meet the needs of new research directions;
- the promotion of scientific and applied research in the field of energy supply.

**Conclusion.** The regulation of investment processes in alternative energy in modern terms requires the use of active state investment policy, as often the main source of investment can only be state funds, in addition, many areas of investment: policy need regulation: formation of depreciation policy, tax policy, credit financing of alternative energy innovation policy, human resources policy, price policy.

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