

THE ESSENTIAL FEATURES OF MANAGING ENERGY SECURITY IN THE CONDITIONS OF SOCIO-ECONOMIC TRANSFORMATIONS

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Annotation. *The article discusses the main problems of energy security management in the context of socio-economic transformations. The main approaches to the definition of the essence of energy security at the macro, meso and macro levels are characterized by author. A conceptual diagram of the formation of the mechanism for managing the energy security of an enterprise has been developed. The concepts of intensive, extensive and strategic use of energy security, depending on the identified needs and resource potential have been defined in the paper.*

Key words: *economic security, energy management, energy policy, energy saving, socio-economic transformations, energy security management*

Setting of a problem. The main trends that influence the development of the national economy are related, on the one hand, to globalization and internationalization of the world economy, and on the other hand, to the specifics of the national policy. If the basic principle of globalization is the openness of the national space for information, financial and other flows operating in the world economic system, then the basic principle of the national policy is the protection from external influence by using economic advantages.

However, the strengthening of the regionalization of the economy led to an increase in the differentiation of the regions in terms of their socio-economic development, and, consequently, in the level of economic and energy security [9]. The uneven distribution of reserves of fuel and energy resources in conjunction with the socio-economic, geographical and climatic nature creates difficulties for the timely and complete ensuring of the economy and society with the necessary energy resources. All this is accompanied by weak diversification of fuel and energy supply systems, as well as the dependence of regional consumers of fuel and energy resources on extended and expensive interregional transport communications, low reliability of interregional energy connections and other factors that have a negative impact on the process of ensuring energy security. Therefore, an extremely urgent task is the timely identification of security problems in order to formulate specific recommendations for solving them, or at least in order to significantly reduce their influence as a whole [1].

Analysis of recent researches and publications. The issue of ensuring economic security is the subject of study by a wide range of scientists and specialists, among which are: V. Geyts, A. Mazarakı, S. Bortalevych, A. Gafurov, Ya. Kipchars'ka, V. Loiko and many others. The problem of Ukraine's energy dependence and the related issues of ensuring the energy efficiency of the national economy and the country's energy security situation are investigated in the scientific works of A. Shydlovskiy, M. Kovalka, Ya. Kipchars'ka and V. Loiko. Based on the accumulated scientific-methodological and practical developments in the area under study, it should be noted that in a recession and unstable political situation, topical issues of ensuring economic security are of particular relevance and require the development of adequate mechanisms to ensure it.

Goal setting. The main goal of the paper is to determine the essential features of energy security management in the context of socio-economic transformations.

Presentation of basic material of the research. The energy sector is in a state of unstable equilibrium between the real demands of consumers of energy and the real possibilities of meeting these demands. Like other areas of national security, the energy sector is under the relentless action of threats, the integration of which leads to the emergence of a set of risks.

To understand the essence of the category "energy security" and the distinction between synonymous concepts, it is advisable, first of all, to reveal the essence of the definitions used in scientific literature.

The very concept of "energy security" has a rather short history. This concept became popular after the introduction of the oil embargo in 1973 and was interpreted as the country's energy self-sufficiency. However, over time it became obvious that it is necessary to distinguish between the concepts of "energy independence" and "energy security".

As a rule, energy security is interpreted as an integral part of economic security. Thus, for example, A. Shydlovskiy, M. Kovalka define energy security as one of the most important components of economic security, which manifests itself, first of all, as the state of providing an individual subject with fuel and energy resources, and guarantee its full activity and, secondly, as the state of security of the energy complex and the ability of the energy sector to ensure the normal functioning of the economy and the energy independence of the subject.

Thus, according to these authors, political and energy independence are interdependent with each other [7].

In the "Energy Strategy of Ukraine for the period until 2030", energy security is defined as an integral component of the national security, which involves achieving a state of technically reliable, stable, cost-effective and environmentally safe energy supply of the economy and social sphere of the state. This type of security can be defined as "the ability of the state to ensure the effective use of its own fuel and energy base, to achieve optimal diversification of sources and routes of energy supply to ensure the vital activity of the population and the functioning of the

national economy [8].

By definition of the International Energy Agency, energy security is a continuous access to energy resources at an affordable price [6].

From the point of view of A.V. Bait, energy security is a state of security of an individual, society, state, economy from threats of disruption of reasonable energy needs, energy resources under normal and emergency circumstances and threats of disruption of uninterrupted energy supply at economically reasonable, reasonable fuel prices and energy resources [1].

By summarizing the diversity of approaches to the definition of the “energy security” concept, V.V. Loiko defines it as follows: “Energy security is the state of protection of national interests in the energy sector, from threats of an energy nature, the state of supplying the economy with energy resources or providing the economy with fuel and energy resources. Given the uneven location of fuel and energy resources in the world, energy security for importing countries is ensuring their energy supply reliability, and for exporting countries it is consolidation in strategic markets at cost-effective prices” [5].

In general, considering the above definitions of the essence of the concept of “energy security”, we can conclude that each of them characterizes a particular aspect of this essential category and can become an integral part of a single concept of energy security, and their combination can create a more holistic generalized view on the essence of energy security from economic position only.

Thus, energy security is a fairly broad concept that can be applied to various management objects – the state, regions, business entities, and the like.

Since energy security is one of the most important components of economic security, by analogy with the grouping of interpretations of the essence of the concept “economic security” concept, which was conducted by Ya. M. Kipchars’ka [4, p. 64], it is advisable to consider the given category “at the macro, meso and micro levels, respectively (See Figure 1).

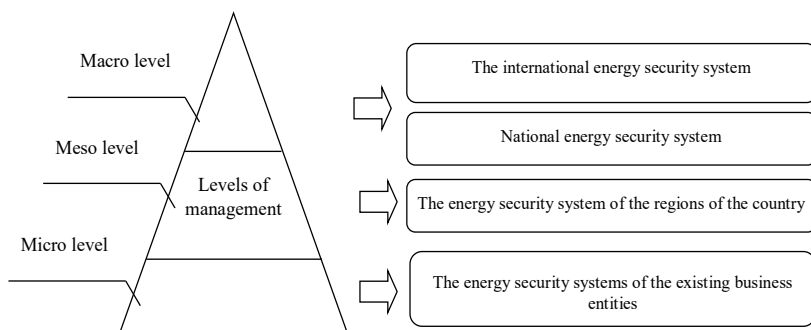


Fig. 1. Energy Security Management Levels
[developed by author on the basis of the source: 4]

In modern conditions, the energy security of an enterprise is a significant element of its economic potential. It should be noted that the level of national energy security cannot be determined by a simple sum of indicators of regional energy security levels, which in turn should not be determined by a simple sum of enterprises' energy security levels, since at different levels of the national economy rather unequal factors affect the level of energy security. However, it is the micro level, that is, the level of business entities that is the base level for ensuring the energy security of the region and the country. However, the micro level, that is, the level of business entities, is the basic level for ensuring the energy security of the region and the country as a whole.

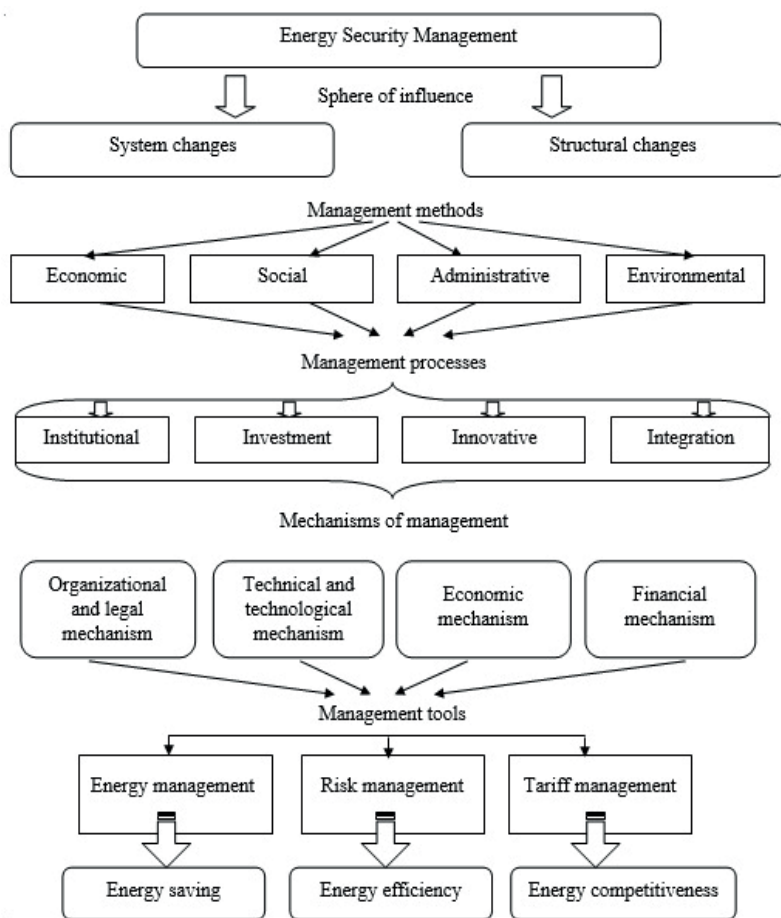


Fig. 2. The conceptual scheme of formation of the energy security management mechanism of the enterprise [developed by author on the basis of the source: 2, 3, 9]

To ensure the energy security of the enterprise, a well-developed and effectively functioning energy security management system is required [2, 3, 7, 8]. The formation of a modern security management system at any level of management is a complex process, encompassing the formation of a development strategy from the management level, the determination of resource capabilities, the selection of the necessary forms of integration of system participants, creation of an organizational structure, adequate to the existing level of management, and, finally, the formation of the methods, processes and management tools. The conceptual model of the formation of the mechanism for managing the energy security of an enterprise, which covers the above mentioned aspects, is shown in Figure 2.

The basic principles of building an effective system for managing energy security of an enterprise should include as follows:

- the diversified structure of the energy balance of the enterprise, that is, the absence of dependence on a single energy source;
- taking into account the environmental component, which means that the energy system of the enterprise should not have a negative impact on the environment;
- efficient use of energy resources, that is, the ensuring of a minimum amount of losses and waste;
- implementation of innovative technologies aimed at the rational use of energy resources;
- staff development in the field of energy management and efficient use of energy resources [4, 5, 7, 8].

A clear understanding of “energy security” as a dynamic category made it possible to formulate the basic principles of organizing an energy security management system that would be more responsive to a dynamic environment, and would allow an adequate level of energy security to be formed in the long term period.

Of course, the concept of “energy security” cannot claim to disclose the content of crises occurring in the energy system. However, being a general term, this category brings us closer to a correct understanding of the processes occurring both outside and inside the system, and helps to more accurately determine their meaning. That is why, depending on the identified needs and resource potential, it is advisable to define the following concepts of energy security:

1. The concept of intensive use (maximum performance from the use of energy resources), the essence of which is to use the reserve energy potential, that is, to ensure the transformation of the reserve potential into the investment one and later into exploitable potential. In modern economic conditions, this concept is considered to be the fundamental one in the system of economic regulation.

2. The concept of extensive use (or maximum growth) consists in building up the “investment” energy resources and transferring reserve and exploited resources. Innovative development and formation of a portfolio of investment proposals within this approach is typical for those entities that are able to implement large-scale energy sector development projects or for economically developed entities engaged

in the external buildup of energy resources. Innovative development and formation of a portfolio of investment proposals within this approach is typical for entities that implement large-scale energy sector development projects or for economically developed entities engaged in external buildup of energy resources.

3. The concept of strategic use (maximum exploitation) consists in forming the maximum reserves of energy resources and, if possible, transferring exploited and investment resources into its structure. This concept is typical for those entities that concentrate the energy potential for a strategically delayed period, most likely for future generations to use it appropriately.

Conclusions. The energy security of an enterprise is the degree of protection of its energy supply from external and internal threats in the conditions of normal operation, taking into account the development prospects, as well as the degree of energy supply of the minimum required energy needs in an emergency. The energy security of an enterprise depends on the strategic orientations of the long-term energy policy, energy security (national security in the field of energy), energy efficiency, budget efficiency and environmental safety of the energy industry. For the achievement of these benchmarks and a corresponding increase in the manageability of the energy development process, the formation and implementation of the main components of the state energy policy with its focus, responsibility, principles and mechanisms for implementation, as well as performance indicators, play an extremely important role. Such components include, above all, subsoil use, the development of domestic fuel and energy markets, the formation of a rational fuel and energy balance, regional and external energy policy, social, scientific, technical and innovative policies in the energy sector.

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ЗМІНИ У ФОРМУВАННІ РЕГІОНАЛЬНОЇ ЕКОНОМІЧНОЇ ПОЛІТИКИ В ПЕРІОД ГЛОБАЛІЗАЦІЇ

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***Annotation.** The article deals with the changes taking place in the field of the main economic institutions and regimes of economic regulation in the countries-leaders. The types of new organizational forms of production are distinguished. The connection between the change in the model of the state system and the transition from the agrarian to the industrial development of individual countries is considered.*

***Key words:** Economic regulation, organizational forms of production, industrial development, technological process, world economy.*

Участь держави в економіці в різних країнах характеризується своїми специфічними формами. Відзначено, що у воєнний час, як правило, і в ряді випадків мирного часу, в економіці функціонують державні підприємства. В їх завдання входить не стільки отримання прибутку, скільки вирішення соціальних проблем і заповнення ніш ринку, які не беруть на себе приватні фірми. Особливо активно втручання держави в економіку окремих країн спостерігалось в періоди економічних криз. В даний час високорозвинені країни переживають період структурної перебудови економіки, що викликається процесом переходу від технологій четвертого укладу до п'ятого. У розвинених країнах стали проявлятися випадки тривалого уповільнення темпів економічного зростання. Глобалізація світових ринків загострила міжнародну конкуренцію, і уряди високорозвинених країн, які раніше слідували шляхом «лібералізації економіки», починають проводити активну