
Innovative development of the energy service enterprise as an object of management

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Abstract. The understanding of the peculiarities of innovations and innovative development of the energy service enterprise has been outlined in the article. The essence of the concept of "innovation" has been determined. To improve approaches to innovative development of the enterprise, it has been proposed to consider innovation as a result (product, process, service). This article is aimed at solving the problems of the energy service market, in particular the management of enterprises that provide production processes in the power industry to improve the technical equipment of labor, the rational organization of the workplace. The article presents the features of the formation of energy efficiency management strategy of enterprises using a comprehensive assessment of the internal and external environment based on sustainable development and practical approach combined with a comprehensive interpretation of the concept of energy efficiency management strategy of enterprises. The study takes into account the specificity through the emphasis on the system of areas (directions) to be managed in the framework of strategic management and provides references to the main characteristics associated with existing approaches to target effects and systemic, comprehensive approach to strategic management in this sphere.

A significant role is given to human resources in the mechanism of stimulating and motivating the energy efficiency of the enterprise, which is manifested in situations when the production process is energy-consuming or when the enterprise is a supplier of energy resources. It is in such areas of activity that every employee, regardless of management level, must understand the reasons for specific management actions, how their result will affect the results of work, and what will be the reward for it.

Keywords: innovative development, human resources, energy service enterprise, strategic management.

PROBLEM STATEMENT IN GENERAL

The foundations' adoption of the digital economy and sustainable development indicates the growing role of innovation in society. As a result, it is a prerequisite for the introduction of such an area activity as innovative development. In turn, this leads to an increase in the role of using the technological potential and intellectual work of the enterprise.

Because of this, the formation of the organizational and economic mechanism of innovative development of the energy service enterprise should be carried out in the context of modern aspects of socio-economic development. As a result, it is important to deepen the understanding of the conceptual essence of the concept "innovation", improve approaches to determining the role of innovative development of the enterprise by taking into account trends in digitalization of all spheres of human life, sustainable development, consumer behavior, creativity in business and others. In the context of business processes digitalization, the main feature of innovative

development as a type of management is the combination of organizational and resource opportunities, as well as strategic priorities of the business entity, taking into account macro- and mesoeconomic factors of social relations. It is worth noting that this feature manifested itself during the significant intensification of competition in the resource market in the late twentieth century. This process has been reflected not only the geopolitical problems of society but also forced active market participants to focus on the continuous search for a real way out of the situation. Undoubtedly, such innovations in technologies and processes have become the only one in terms of economic feasibility and necessity by overcoming the "dead end".

The aim of the study is to identify problems and develop the energy efficiency system of energy service companies and the role of human resources in this process.

The paper identifies the process of forming an energy efficiency management system for energy service enterprises by substantiating the features of the specified management system, which allows specifying its input and outputting parameters and formulating areas of integration of energy efficiency management as part of the overall management system.

THE METHODOLOGY OF THE RESEARCH

The methodological basis of the article is general and special research methods, including analysis, synthesis, and dialectical cognition to determine the conceptual approach to the energy management system of enterprises, systematization, and generalization to justify the place and role of energy management in the enterprise management system.

THE MAIN MATERIAL OF THE RESEARCH

According to E. Glenk, Director of the Thematic Programs Department of the Austrian Research Support Agency: "Modern economy is simply obsessed with innovation. This is driven by, on the one hand, competition, and on the other - the consumer himself, who is psycho-emotionally focused on the new, to be not only modern but even ahead of time" (Glenk E., 2013, P. 126-127). It has been considered that such position of E. Glenk while considering the content of innovations characterizes them quite one-sidedly. The researcher puts the very cause of innovative development in the economy itself, in which the consumer and competition between actors give rise to the novelty of all processes and phenomena. Instead, it has been agreed with the author only that there is no doubt that the consumer needs novelty, but this is only one of the reasons, and competition is a kind of catalyst for innovation processes.

The authors of the scientific-analytical report "Innovative Ukraine 2020" quite reasonably noted that the first product of human innovation was a tool produced by a human being, that is, for the first time was created something that did not exist in nature. Already here in the rudimentary state, some moments then turned into independent stages of movement of an innovative product from idea to practical realization. It is also a testament to the innovative nature of humans and his innovative nature [4]. Researchers confirm the thesis of E. Glenk, in the context of considering human as an innovator, with their ideas and the possibility of their implementation.

Instead, J. Schumpeter expresses the essence of progressive change through "new combinations" of production factors [5]. And here, it can be agreed with the researcher that "innovation" or "new combinations" is not just a natural phenomenon in various sectors of the economy, but the main driving force due to which the quantity of a product changes due to changes in the number of factors. Recognizing them as an exogenous factor in economic growth, J. Schumpeter stated that innovation gave resources new opportunities to create wealth.

However, J. Schumpeter identified innovation as a source of change in the quantity of product, apparently bearing in mind that factors of production that have changed due to "new combinations" will allow to produce of more product and thus increase the country's wealth. That is, in such a statement, the main result of innovation is quantitative growth, which in our opinion, incorrectly throws aside the qualitative results of innovation. Therefore, the product itself can be innovative, i.e. improved, changed, modernized, endowed with completely different new quality parameters.

Thus, the outlined approaches characterize innovations, first of all, not as something new as a historically conditioned phenomenon that exists together with the need for improvement and changes that occur against this background. It is noteworthy that the path to innovation is always development under the influence of new ideas, changes, transformations, modernization, but in our opinion, innovation is the result as it can be a specific product, process, and service with new consumer, technical, technological, social, economic and managerial characteristics (Fig. 1).

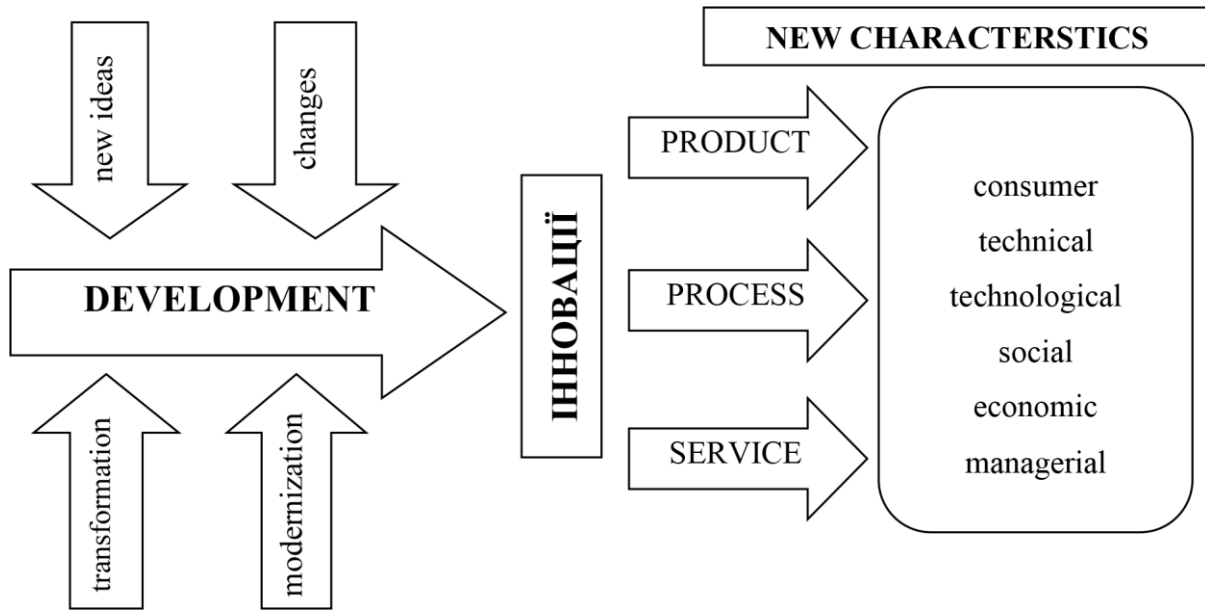


Fig.1: Innovation as a result of development

Considering the philological aspect in defining the essence of innovation, it has been noted that the word "innovation" comes from the Latin *innovatio* - noun and from the verb *innovare*, which means "change or modernize." Thus, the definition of innovation is based on updating. Such an update is possible only if people can change the way decisions are made, abandon standard methods, learn to make choices outside the plane of existing norms and rules.

However, the philological essence of innovation is somewhat contradicted by the thesis that "every innovation can be considered an innovation, but not every innovation will be an innovation. Those innovations that cannot be considered innovations are called "pseudo-innovations". An example of innovation for a particular enterprise can be a technological process that has long been used in this field, but the company introduced it [8].

Generalized interpretations of innovations are presented in the table. 1 and reflects the evolution of attitudes to change in various areas of the economy. From these interpretations, a characteristic feature has been traced: some researchers consider innovation as a certain process, and others - the result.

In the context of efficiency, researchers consider innovation as a materialized result obtained from investing in new equipment or technology, in new forms of organization of labor production, service, and management, including new forms of control, accounting, planning methods, analysis, and more. But, this understanding of innovation essence somewhat denies the position on the full value of the content of innovation, because here the investment of capital "new" is not understood as an investment in the "unique".

Table 1: Consideration of "innovation" concept as a result and as a process

Author	Concept description	result/process
J. Schumpater	Commercial or industrial use of something new: product, process, method of production; new market or sources of supply; a new form of doing business.	RESULT
M. Porter	For the concept of innovation M. Porter includes technological improvements, best practices, and ways of doing business. This can be manifested in product changes, processes, new marketing approaches, new forms of distribution.	PROCESS
P. Druker	Mr. Drucker described the innovation as "a special tool for entrepreneurs, through which changes can open a new business or provide new services. Innovation is a specific business tool - an activity that gives resources new opportunities to create wealth.	RESULT
F. Cotler	F. Kotler called innovation as a good, a service and an idea that someone perceives as new. The idea may have existed for a long time, but it is an innovation for a person who perceives it as new.	RESULT

R. Griffin	Innovation is the organization's focused effort to develop new products and services or new applications of existing products and services.	PROCESS
New York State Business Council	Innovation is a combination of ingenuity, insight and entrepreneurship that creates new industries, creates new values.	PROCESS

But, on the other hand, investing in something new, for example for an enterprise, but not unique to production, can lead to the formation of a unique result. That is why this interpretation of innovation complements the comprehensive understanding of the economic nature of innovation.

If a focus on innovation as an object of management, it should be stated that innovation is a process and a result, which combines elements of the management system with its uniqueness (Fig. 2).

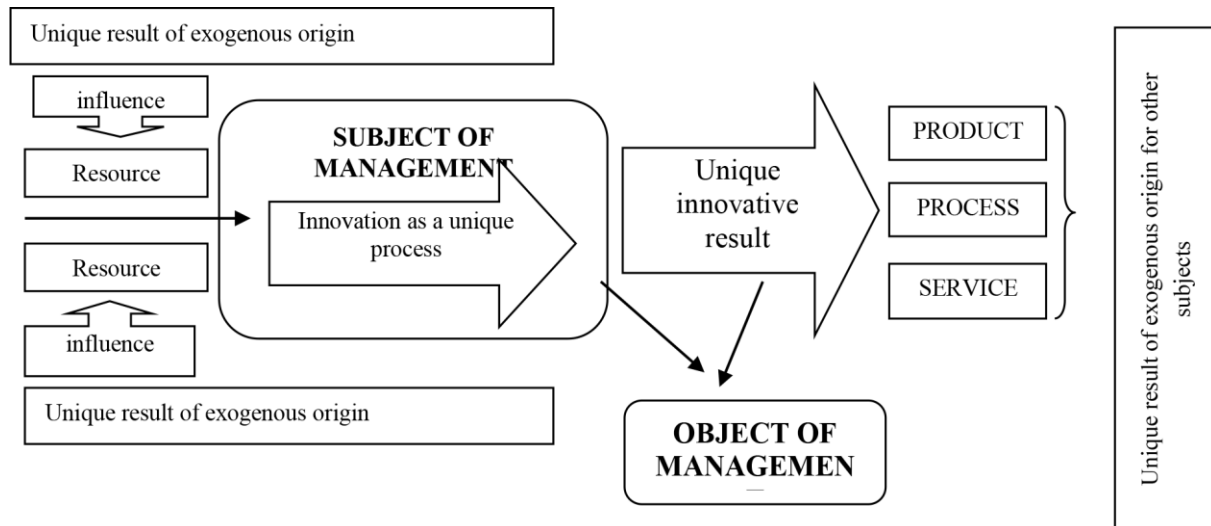


Fig.2: Innovation as an object of management

In fig. 2 innovation is defined not only as an object of management but also provides for its uniqueness, i.e. a unique result in various socio-economic spheres, which directly affects the resources required for the activities of the business entity. At the same time, thanks to the unique innovative processes at the enterprise, a unique result of its activity has been formed. This result later becomes an opportunity for "new combinations" (according to J. Schumpeter) of production resources of economic entities.

Certainly, the concept of "innovation" refers to the type of general categories.

It is endowed with exceptional breadth and structural complexity i.e. has many approaches to the disclosure of its content. However, innovation in any area of economic research should be considered as an element inseparable from the level gradation and, accordingly, the further management of innovation is exclusively a component inseparable from the macro, meso, and micro levels.

In this context, the authors of the given study proposed clarification of innovation concept as a basic and only possible component of the economy, macro-, meso- and micro-level development, which is the result of the accumulation of resource potential of economic subsystems and periodic generation of structural models of modernization of the economic system.

CONCLUSIONS AND PROSPECTS FOR FURTHER STUDYING

In general, effective management of the innovative potential of the energy service company automatically generates resources and accumulates reserves for its economic development. Accordingly, the content of innovative development of the enterprise is to consider the functions of innovation and improve the approach to the formation of a plan for innovation in the enterprise.

Thus, in terms of innovative development, the energy service company should focus on the potential of all levels of economic relations, the accumulation of which will be most effectively ensured by the management system of innovation processes. The functioning of such a system should allow the use of intellectual and scientific and technical potential of the country in the shortest possible time and with high efficiency in the production, taking into account territorial, sectoral and structural features.

Besides, the considered conceptual approaches to defining the "innovation" concept indicate that innovative development is an important component at all levels of the economy. Moreover, at the macro level, there is a selection of national priorities for innovative development and the creation of a state organizational and

economic system for managing innovation processes according to the structure of their use. At the meso level, the formation of a system of innovative interaction of business, state, society has been envisaged, taking into account the peculiarities of the development of innovative activity in the regions. In turn, at the micro-level, it is necessary to create an effective management system for innovative development with the involvement of businesses in the active search for unique resources to achieve a unique result. As a result, the prospects for further research on the innovative development of the enterprise are to consider the factors of innovation and to improve the approach to the formation of a plan for innovation in the enterprise.

REFERENCES

1. Rogoza M.E., Vergal K. Yu. 2011. Strategic innovative development of enterprises: models and mechanisms: monograph. Poltava: RVV PUET. 136 p.
2. Kovtun O.I. 2013. Innovative strategies of enterprises: theoretical and methodological principles. Ukraine economy.. № 4. P. 44–56. URL: http://nbuv.gov.ua/UJRN/EkUk_2013_4_5.
3. Innovation as a driver of socio-cultural development. 2013. Under the scientific editorship of VI Supruna. Novosibirsk: FSPI "Trendy". P. 126-127.
4. Innovative Ukraine 2020: national report. 2015. / General. ed. V.M. Heitz and others. ; NAS of Ukraine. Kyiv. 336 p.
5. Schumpeter J.A. 1982. Theory of economic development. Moscow: Progress. 137 p.
6. Polehenka M.A. 2016. Etymology of the term "innovation" as an economic category. Agrosvit. № 2. P.57-61.
7. Nironovich N.I. Theoretical aspects of innovation. URL: <http://ena.lp.edu.ua/bitstream/ntb/8633/1/74.pdf>.
8. Schumpeter J. A. Teoria rozwoju gospodarczego, Warszawa: PWN. 1960.
9. Porter M. E. On competition and strategy. *A Harvard Business Review Paperback*. 1991.
10. Drucker P. Business and Innovation 2007. Moscow.: LLC "I. D. Williams".
11. Brych V., Fedirko M., Yanik I. 2016. Organizational and economic prerequisites for reengineering business processes in the municipal heat market of Ukraine. *Bulletin of Ternopil National Economic University*. №2. P.7-19.
12. Brych V. Ya., Nagara M. B. 2009. Methodological principles of coaching development in Ukraine. *Ukraine: aspects of work*. №6. P.18-23.
13. Brych V. Ya., Shushpanov P.G. 2009. Socio-economic structure of the population of Ternopil region as a factor of external labor migration. *Ukraine: aspects of work*. №1. P.33-37
14. Brych V. Ya., Snigur H.A. 2017. The role of innovations in increasing the competitiveness of the enterprise: epistemological positions. *Visnyk of Prykarpattia University*, Issue. 12 .P. 82-86
15. Brych V. Ya., Borysyak O.V. 2017. Innovative technologies of personnel formation of enterprises in terms of optimization development. *Scientific herald of the Uzhhorod University*. Series: Economics. Issue. 2 (50). P.172-178