

## MANAGEMENT OF ENERGY-SAVING TECHNOLOGIES AS AN INNOVATIVE DIRECTION OF ENTERPRISE

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**Abstract:** *Stakeholder concept (interested parties) comes under substantial consideration in systems engineering. From our perspective, methodological framework of this theory is possible to be used in the formation of the market promotion mechanism for energy saving technologies.*

**Keywords:** energy saving technologies; energy efficiency; energy management; strategy; alternative

The new millennium has seen Ukraine actively developing the implementation of energy supply projects based upon alternative energy sources. To advance with the formation of the European mentality in domestic consumers, intermediaries and other market participants it is of utmost importance to conduct corresponding marketing and communication support for creation and market promotion of innovative energy efficient technologies in Ukraine. The topicality of developing strategies, mechanisms of reducing threats to energy security of Ukraine is undeniable, particularly under the condition of energy consumption of the country being one of the highest in Europe.

An internal circle of stakeholders (primary stakeholders) comprises employees, business owners, clients, business partners when implementing the mechanism. An external circle (secondary stakeholders) implies indirect influence: government, business competitors, local communities (mass media, public and non-government organizations, etc.). Both circles determine an interdependent system, a web that supports the promotion and implementation or, by contrast, does not allow necessary arrangements for a mechanism to be duly realized. Creation of a platform for defining stakeholders is undertaken in systems engineering. The understanding of who is a stakeholder in respect of decisions made must be determined well in advance.

Among a wide circle of stakeholders the most influential individuals are selected – the alpha-stakeholders who immediately affect the organizational provisions of the mechanism implementation.

Organizational provisions of the project involve managing the capabilities of enterprises to supply and purchase products and services through project support, initialization and management. These provisions ensure availability of resources and infrastructure necessary to facilitate project realization and guarantee the achievement of organizational objectives and agreements in force.

Depending on the stage of the life cycle of market promotion mechanism of energy saving technologies, certain changes in the structure of beta-stakeholders come into effect, for instance: at the stage of 'Logistics and forwarding' – auxiliary services, instructors, participants in supply chains. It is possible to allocate four sectors of implementation of market promotion mechanisms for energy saving technologies where stakeholders act: technical, project portfolio management, quality management of market promotion and risk management.

In particular, when managing risks of mechanism implementation, a process is formalized: the description is given for risk categories, stakeholder prospects, technical (possible with the aid of references) and administrative tasks, admissions and restrictions. It is imperative to determine and maintain risk profile, each record of it containing risk significance. The significance is determined by risk criteria provided by stakeholders.

The essence of the corresponding risk profile must be regularly conveyed to the stakeholders depending on their requirement since the risk profile can change in case of updating a specific state of risk [1].

However, it is our belief that the enterprise personnel is a key factor of primarily leveling procedural risks with the implementation of market promotion mechanism for energy-efficient technologies (direct influence) as well as indirect influence – technical (performance of engineering specialists and works) and financial (expertise of financial analysts of the enterprise and upper executive management).

This represents the foremost internal circle of stakeholders of every business entity. It is for this purpose that building up personnel strategy for staff development is indispensable [1].

Hence, a necessity arises to take into consideration the development of enterprise personnel in the company policy and its strategic aspect. The modern methodology of strategic management employs three major models: M. Porter's strategic model, Boston Consulting Group matrix (growth–share matrix) and 'General Electric – McKinsey' matrix (matrix of market attractiveness). Two key factors of personnel development, which serves as the main force for ensuring implementation of market promotion mechanism for energy saving technologies, were selected: adaptation to the changes in conditions of enterprise activities (external factor) and innovation perceptivity of the personnel (internal factor). In this case, it is suggested to divide the factors on the scale: negative awareness, inertia, medium, strong, very strong negative awareness – non-acceptance and even active rejection.

Characteristics of the factors: inertia (from Latin – inactivity, underdevelopment, backwardness) – ability of the personnel to not to change its state in labor activity with regard to innovations as well as to sustain its stability in respect of external effects; medium, strong and very strong – stages, in ascending order, of changes in individuals as a basis for organizational adjustments [1].

A considerable part in the innovation-driven development is played by individual's life paradigms, behavioral models, which either facilitate the advancement of innovations in economics and social life or impede such expansion. Perception or imperception of innovations by civil society in Ukraine at the present stage is defined primarily by social factors (among them low level and quality of life of the majority of population that do not facilitate innovations).

Largely depending on how the individuals perceive one or another innovation (be it a new idea, new production equipment or new labor organization) is the rate (at times even the very possibility) at which any innovation is spreading. One of the essential characteristics driving the success of innovations is innovation receptivity. In our viewpoint, it is possible to single out the following qualitative properties of the enterprise personnel that define this very characteristic: openness to new experiences, critical thinking and ability to overcome stereotypes in professional activity.

With the enhancement of the role of strategic management in the conditions of global changes in technology and management systems, there arises a necessity for developing its constituent that ensures information and control function of management – the strategic management accounting (methodological, technical and organizational aspects).

Development of human capital allows prolonging the professional lifecycle of the individual and develop certain properties under the influence of innovative technologies. Employing the concept of personnel lifecycle as a specific asset allows taking into consideration the contemporary trends in forming the new type of knowledge-based economy. Continuous lifelong development, acquisition of new knowledge, skills, support of health and decent living standards is an essential prerequisite for information-oriented society.

With this, it is of extreme importance to consider the phenomenon of decoupling. Decoupling exists in two types: resource decoupling and impact decoupling. In the process of researching the indicators of energy security of the enterprise it is crucial to consider the 'impact decoupling', which is considered as an increase in ecological efficiency and predetermines the growth in production output simultaneously with diminishing the negative impact upon the environment. Such impact may occur as an aftermath of both resource exploration and direct production process or use of goods and services, particularly at the 'after consumption' stage. This wide range of possible realizations of impact decoupling complicates the process of its definition (measuring).

It is connected with both a wide range of possible negative consequences to be taken into account and presence or absence of data with regard to a specific kind of negative manifestations. In particular, significant difference may be noticed with regard to tendencies of statistical series according to standalone constituents (atmospheric air pollution, water resource pollution, waste generation, etc.). The phenomenon of 'impact decoupling' is topical with the utilization of resources that may pose a threat to human health and the state of the ecosystem or in case of technological decisions having significant potential for decreasing the level of threats to people and environment. This phenomenon does not always manifest itself due to the decrease in the utilization of resources or costs in the process of production. Achieving the effect of 'decoupling' frequently requires changes to be introduced into the technological process which further demands substantial utilization of alternative energy sources at the enterprise.

Taking prudent approach to the integrated and multipurpose use of energy resources will allow acquiring stability and availability of uninterrupted power supply for major energy users (industrial enterprises, utilities enterprises). In this context the issue of reliable energy supply, including the

implementation of energy from renewable sources, must be considered from the standpoint of the issue of energy security of the enterprise in the process of formulating strategies for energy security of the enterprise. Namely energy efficiency measures, as constituents of energy strategy, serve as the highest-priority condition for survival of the industrial enterprise in the conditions of alternative energy sources implementation.

The enterprise development strategy at the modern stage of social development stipulates the reduction of external energy dependence of business entities with the purpose of competitive survival in global markets. Firm baseline behind solving this top-priority issue is the wide utilization of alternative energy sources. Efficient energy supply, energy generation and distribution in modern power grids facilitate the increase in competitive capacity of business entities and whole regions alike.

Achieving high reliability of energy supply, improving consumer satisfaction on the basis of high-quality energy supplied to clients is attainable through implementation of innovative, information-driven solutions in the energy sphere. Energy security and economic security of business entities and large-scale industrial groups functioning is ensured on the basis of employing the achievements of advanced innovative technologies in the sphere of electrical energy industry. Social and economic efficiency of implementing innovative energy and information technologies is realized through social labor saving and cost-effective use of important resources. Fundamental research findings play pivotal role in the functioning of innovation-driven companies in energy markets. With this, it is of utmost importance to achieve high degree of commercialization of innovation.

#### REFERENCE

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