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## **EMPLOYING SWOT ANALYSIS IN MAKING STRATEGIC MANAGEMENT DECISIONS TO ENSURE THE ENERGY SECURITY OF THE COUNTRY**

In today's challenges, energy security of the country is a global problem. The implementation of new engineering and design solutions in energy supply systems, which provide the integrated use of renewable energy sources, will help to solve an important economic, scientific and technical problem of reducing the consumption of traditional fuel and energy resources for Ukraine.

Energy security is closely related to energy independence – it is the level of independence of the country's leadership in the formation and implementation of policy, independent of external and internal interference and pressure [1].

There is an increased interest in the use of non-conventional renewable energy sources in various sectors of the economy all over the world. The driving force of this process is changes in the energy policy of countries with structural reorganization of the fuel and energy complex related to the environmental situation and the transition to energy and resource saving technologies in energy, industry, housing and communal services, etc.

The main directions of improving energy efficiency and realization of energy saving potential are not only the mentioned technological modernization of energy

supply systems. The use of renewable energy sources under the condition of technological modernization of energy supply suggests the elimination of energy inefficient products and the implementation of the latest technologies, equipment, metering devices and systems. This contributes to the growth of energy efficiency and energy saving.

A common point that unites different approaches to the construction of indicators is a set of certain threats to the energy supply of the enterprise. At the same time, it is necessary, in our opinion, to investigate the impact of the external and internal business environment in determining energy security using SWOT analysis.

The architecture of the created model covers the following levels: data loading and processing; data analysis; SWOT model building; forecasting.

The first level provides the possibility to load data by manual input, after that – to edit them in order to eliminate redundancy of data or add new ones. Next is the preparation of data for analysis. Various software products can be used at this stage. In our opinion, the most convenient and affordable is MS Excel.

The second level provides the possibility of mutual analysis of pairs of such indicators: Strengths – Opportunities (S-O); Strengths – Threats (S-T); Weaknesses – Opportunities (W-O); Weaknesses – Threats (W-T).

The third level provides tools for building a SWOT analysis model.

The fourth level implements predictions based on the created SWOT model.

This model satisfies the main characteristics of the model, which is designed to assist the decision maker in identifying critical technologies of the studied industry. The main goal of the created model is the efficiency of identification of justified critical technologies.

Formation of an expert group on the basis of a competence-based approach, taking into account the ranks of positions, makes it possible to form a group that, according to its official duties, has the opportunity to build a personnel evaluation system in accordance with the goals of the enterprise. Specific requirements to the members of the expert group leave their mark on the principles of their selection. The personnel of the expert group consists of the total number of applicants and is formed from the most competent specialists who can demonstrate the ability to predict and identify patterns.

As experts were selected 10 officials from different levels of management at 7 industrial Ukrainian enterprises. The consistency of experts' opinions was calculated by Kendall's rank correlation coefficient, which is 0.67.

Let us highlight five strong characteristics with the highest importance [1]: S5 «Facilitation of internal reforms in the context of grid integration with the EU»; S6 «Change of energy type (alternative) and supplier»; S12 «Convenient geographical location for the development of the electricity industry»; S13

«Large stock of natural resources for various industries»; S14 «Favorable trade geographical location».

The weakest characteristics. Thus, the weakest characteristics are the following [1]: W5 «Establishment of appropriate tariffs, coefficients for enterprises»; W9 «High level of corruption»; W10 «Political and social instability»; W12 «Migration of labor resources for permanent residence abroad»; W22 «Increase in the cost of energy resources».

The most likely opportunities for implementation. Thus, the most likely opportunities are the following [1]: O1 «Significant potential of unconventional natural gas reserves (coalbed methane, shale gas, biogas from solid waste landfills, etc.)»; O8 «Development of renewable energy sources»; O10 «Implementation of incentive taxes»; O17 «Innovative renovation in accordance with world standards».

The most dangerous threats. Thus, the most dangerous threats are as follows [1]: T1 «Outflow of investment capital from Ukraine»; T5 «Social threat (high accident rate of production, strikes and other possible protests, etc.)»; T8 «External aggression of energy supplier».

Priorities in the development and implementation of new technologies in Ukraine are within the traditional technological areas: metallurgy, energy, chemistry, agriculture and new high-tech industries: national programs and projects for space exploration, aviation, biotechnology, telecommunications.

Industrial development relies heavily on the introduction of high-priority energy-saving technologies, which are key to creating world-class and above products. The use of key technologies should help to meet the priority needs of the country in social, military, economic and other economic spheres. The economic analysis of the factors influencing the determination of priorities of technological development shows that the indicators of key technologies implementation in the Ukrainian industry can be as follows: the volume of budget financing of scientific and technical works on the development of advanced technologies and determination of priority directions of science and technology development; the volume of innovation costs; introduction of new technological processes; mastering the production of new types of products; specific volumes of innovation costs for the introduction of new technological processes.

Ukraine has the potential to accelerate economic growth and improve energy security. Energy security is an important element of national security. Therefore, the Ukrainian government is implementing strategic reforms in the field of energy supply and strengthening energy security through the implementation of energy strategies. Ukraine is expanding cooperation with the European Union, which will ensure the protection of our country and create a competitive energy market and sustainable socio-economic development.

A key element of the modern economy is a powerful energy sector, the development of which is closely linked to the progress of science and technology. Energy resources in combination with mechanical systems provide technological renewal in all spheres of production, communication and society, which leads to dominant economic growth and national security.

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## **KWESTIONARIUSZOWA METODA OCENY POZIOMU POTENCJAŁU INNOWACYJNEGO PRZEDSIĘBIORSTWA**

Aby określić poziom rozwoju innowacyjnego i otwartość przedsiębiorstwa na innowacje, konieczne jest dziś postawienie odpowiednich pytań. Opracowaliśmy listę pytań zamkniętych z alternatywnymi opcjami odpowiedzi, pytaniami otwartymi i półzamkniętymi, aby zaplanować efektywne badanie eksperckie przedstawicieli biznesu:

Jaki jest cel, misja, wizja i strategia korporacyjna / cyfrowa / innowacyjna w Twojej firmie?

Czy przedsiębiorstwo / strategiczna jednostka biznesowa / pion funkcjonalny mają obecnie wewnętrzne startupy, w tym te z ryzykownymi pomysłami? Jeśli odpowiedź jest twierdząca, proszę powiedzieć, ile pomysłów ma obecnie firma?

Wymień trzy główne czynniki hamujące na drodze do innowacyjnego rozwoju Twojej firmy, a także trzy czynniki, które głównie wpływają na podejmowanie decyzji zarządczych.

W jakich pokrewnych branżach Twoja firma mogłaby wykorzystać swoje mocne strony?

Określ korzyści dla każdego interesariusza z działalności Twojego przedsiębiorstwa. Oddzielnie wskaż wartość dla innowacyjnego ekosystemu Ukrainy.

Czy Twoja firma wdraża program rozwoju intraprzedsiebiorczości?

Jak często w swojej działalności korzystasz z publikacji naukowych i fachowych dotyczących innowacyjnego rozwoju przedsiębiorstwa?

Opisz trendy innowacyjnego rozwoju przedsiębiorczości na Ukrainie według scenariuszy optymistycznych, pesymistycznych i docelowych (benchmarking).