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# EFFICIENCY – MANAGEMENT STATE OF ENTERPRISE IN THE DISTRICT'S ELECTRICITY INDUSTRY

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**Abstract**

During the full-scale russian invasion of Ukraine, the problems that are present in the energy industry have become increasingly acute. Regardless of the systematic rehabilitation of power infrastructure, which suffers regularly due to russian military aggression, the ruinations remain extensive.

Therefore, the problem of effective functioning and management by energy industry enterprises has remained relevant. Any enterprise faces the problem in the activity process and, depending on the management decision to be made, affects the entity's future.

**Keywords:** *electric power industry, efficiency management, enterprise, electricity, consumers, region*

### Introduction

In the present turbulent processes conditions taking place in Ukraine, a number of new tasks emerge and their resolution is impossible by using old methods and approaches to efficient performance management of enterprises. Under market relations development conditions, the enterprise's economic activity, which is aimed at gaining competitive advantages and providing stability of positions with its assistance, significantly depends on timely-correct-efficiency management.

It should also be mentioned that efficiency management at the moment of military conflict when a lot of enterprises have faced the task of surviving, performs an important function since it establishes a form of relations with the external environment, forms the methodology of its system and basically realizes the process of management. Ensuring efficiency is one of the most important tasks for any enterprise.

**Methodology and the purpose of the study:**

In the process of developing theoretical generalizations and formulating conclusions as well as propositions, such methods of economic research in the work were used as follows: analysis and synthesis (research of theoretical and practical provisions of enterprise performance management), statistical-economic (for analysis of current state and level of efficiency of economic activity of JSC "Khmelnytskoblenerho"), and others. The methods of logical generalization were used to ensure scientific research's consistency.

Research objectives consists in determining of practical aspects regarding the efficiency management of the enterprise in the electricity industry of the Khmelnytskyi region.

**Literature review**

Scientists provide the first references to the definition of "efficiency" in the treatise "The Art of War" by Sun Tzu. In this well-known work, the author indicates in this famous work that in order to be effective, several conditions are required: to possess information about your own strong and weak sides as well as to maintain information about the opponent's strong and weak sides (Kalaman O. B., 2020).

The management of efficiency, in terms of commercial, and enterprising made scientists interested much later. The first scholar to raise a question of efficiency in management context from the practical point of view was F. W. Taylor (Taylor F., 1911).

Thus, researcher L. M. Dos Santos considers efficiency supervision as a part of general management clarifying such concepts as business management and management efficiency to be allocated (Zhulaj G. S., 2019).

Other researchers-economists, such as Savchenko S. M. and Nikitin V. G. (Savchenko S. M., Nikitin V. G., 2021), consider management of the efficiency in the enterprise from different sides. They refer to classics of economic theory, such as J. M. Keynes, D. Ricardo, P.Heyne. These scientists describe efficiency management as the process of achieving the maximum level of correlation between the result (effect) and costs (resources).

**Analysis of results**

Energy efficiency is regulated by the Law of Ukraine on Energy Efficiency. Statistical analysis determines – "the industry share at the energy consumption in Ukraine accounts above 30%" (Derzhavna sluzhba statystyky Ukrainy), but their total efficiency does not exceed 70%.

JSC "Khmelnytskoblenerho" is an integral part of the unified energy system of Ukraine which provides uninterrupted and reliable electricity supply at regulated rates for consumers.

The company operates 20 districts, 13 cities (six of them have regional high profile), 24 urban-type settlements, 1416 rural settlements in Khmelnytskyi oblast with a population of over 1.3 million people.

During 2020–2022, the efficient supply of electricity and commodity products of JSC "Khmelnytskoblenerho" has increased 2,7 times. Around 2,60 billion kW/h have been transferred by the enterprise's electricity grid annually. Volumes of distributed electricity for the determined two years are established as 4345.5 million hryvnias with predominant (59%) provision of universal services.

The company is a major employer in the region. The average number of personnel has increased by 8.1% during the period and accounted for 3194 people in 2022.

Sales revenue on one employee from 2020 to 2022 has expanded 1,54 times, firstly related to an increase in the size of sold production by 66.3% due to rising electricity rates. However, productivity growth inferiors to pay rise in the company: 157.5% versus 153.8% in 2022.

JSC "Khmelnytskoblenerho" always raises employees' salaries to encourage labor results, maintain the prestige of the position and keep professional staff in the company. Thus, salary in the company has been raised from 12594 hryvnas to 19829 hryvnas during 2020–2022.

JSC "Khmelnytskoblenerho" is a monopolist and its activity is subjected to regulation by the NCREPU (National Commission of Regulating Energy and Public Utilities), and hence it's impossible to increase profits through distribution services (i.e. by increasing tariffs).

Therefore, the sold-production-by-66.3% increase positively affected at two-fold revenue growth during 2020–2022, although it was sealed for 67.3% by self-cost gaining. The main factors contributing to the increased profit of JSC "Khmelnytskoblenerho" are the so-called non-tariff revenues: income from the provision of non-monopoly services, joint network suspension, interest from placing temporarily free funds in deposit accounts, laboratory services, etc. Additionally, significant attention was paid to reducing non-productive and non-core expenses.

The production prime cost tended to gradual and steady increase over the research period. Thus, the total increase in the cost price of production for JSC "Khmelnytskoblenerho" amounted to nearly 2 billion hryvnias, which was driven by growth in four out of the five cost elements. The structure of operating expenses over the research period has been changed. Considering the most significant in the cost structure in 2020, "Other operating expenses" (38%) and labor costs (32.4%) were dominant in comparison with material costs (36.6%) and labor costs (31.9%) being crucial in 2022.

The expenses analysis by function characteristics indicated, that the gradual raising in operating expenses was repeated: an increase of 22.4% or 639.2 million hryvnias. The only exception refers to selling expenses, which have totally disappeared since 2020. However, these changes didn't impact the overall rate due to their insignificance in the total expenses.

In comparison with 2020, JSC's "Khmelnytskoblenerho" profit was dynamically increased by 23.7%, in 2021 as well as 40.1% in 2021–2022.

By decision of the Cabinet of Ministers of Ukraine, JSC "Khmelnytskoblenerho" transferred 50% of net profit to the state budget, proportionally to state share, and the remaining 50% was directed towards measures to improve the reliability of the power grid after the investment program being approved by NCREPU.

Overall, all profitability indicators increased during the research period due to the overall growth in the profitability of the company's business activities.

For example, the return on assets, which determines the profit share per unit of funds invested in the company's assets, increased by 1.12 percentage points in 2021 and 1.22 percentage points in 2022.

The return on equity ratio characterizes the meeting of expectations investing in the company. The behavior of this indicator is similar to the previous one. During the period, profit generated from 1 hryvnia of equity increased by 3.26 percentage points.

The liquidity indicators allow to determine enterprise's financial state by different accounting degree for liquid assets. Analyzing the solvency (liquidity) of the company, it can be seen that the level of absolute liquidity of JSC "Khmelnytskoblenerho" decreased by 0.26 points during the research period and fell below the normative level in 2022. This indicates that the company will lack sufficient funds to cover its current liabilities. However, regarding the solvency ratio, it should be noted that it also didn't meet normative limits each year, further confirming the insufficiency of current assets for the company to fulfill its current obligations to creditors.

Regarding the efficiency of using current assets, the intensity of their utilization in JSC "Khmelnytskoblenerho" should be considered as increased during 2020–2022, as their turnover accelerated from 4.7 to 5.7 turnovers per year. However, the profitability indicator increased by 6.46 percentage points.

Based on the financial and economic activity results during the research period, the financial result has shown a positive dynamic, increasing from 115.5 million hryvnas in 2020 to 200.1 million hryvnas. A comprehensive evaluation of the enterprise's efficiency has allowed us to examine the situation thoroughly basing on five components as follows: efficiency of fixed asset utilization, labor resource utilization efficiency, material resource utilization efficiency, financial activity efficiency, and financial condition indicators. Thus, the enterprise's performance was more efficient in 2022 compared to 2020 in terms of financial activity and labor resource utilization. However, the efficiency of financial resource utilization experienced the least growth during this period. Summing up, the company's management needs to develop measures to address the negative values of indicators in these components.

## Conclusions

In conclusion of the conducted research of enterprise's efficiency management activities, the following key aspects are necessary to be mentioned as follows: the assessment of the company's performance allowed for a thorough examination of the situation across all its components within the chosen indicators; the proposed system of indicators is clear and well-grounded as it reflects the efficiency of the company's activities from various angles and enables identification of priority areas in the economic activities.

For the successful realization of organizational development goals, it is necessary to implement economic activities that correspond to the characteristics of effectiveness, efficiency, and competitiveness.

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