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PROSPECTS FOR ATTRACTING INVESTMENTS IN THE ENERGY SECTOR OF UKRAINE UNDER THE CONDITIONS OF MARTIAL STATE

The article examines the current problems and prospects of attracting investments in the energy sector of Ukraine in the conditions of martial law, which was introduced on February 24, 2022. In order to reveal this issue in detail, we studied the interpretation of the concept of "investment" by various domestic scientists and proposed our own interpretation of this concept. Ways of attracting investments were studied and it was determined that two factors have the most negative impact on this process: the unstable political and economic situation in Ukraine, which is largely caused by the start of a full-scale war. The state of attracting investments by the energy sector of Ukraine was analyzed and it was determined that in the period from 2015, the volume of investments increased, with the exception of 2020 and 2022, which indicates the positive dynamics of the development of the energy sector. The relationship between changes in the investment attractiveness index of Ukraine and the volume of investments was also noted, we note a direct dependence. In the conditions of martial law, Ukrenergo and Naftogaz attract the largest share of investments through cooperation with international organizations. We also investigated the state of renewable energy in Ukraine in the pre-war period and during a full-scale war. Until 2022, Ukraine actively and rapidly developed such generation, however, during the war, a large part of the capacities was destroyed. Taking this into account, we came to the conclusion that the most promising, as of 2023, is the attraction of investments in the restoration of critical infrastructure and in the development of renewable energy, because this is an integral element for successful integration into the European Union. Currently, Ukraine is actively working on this issue, developing energy strategies for the development of the renewable energy sector, for example, by 2030, it is planned to achieve a share of RES of 32% and improve energy efficiency by at least 32.5%. In the research process, such methods were used as: synthesis, analysis, analogy, abstraction, methods of statistical processing. The results were summarized using a systematic approach.

Keywords: *investments, attraction of investments, energy, renewable energy sources, energy sector of Ukraine.*

Problem statement. In the conditions of the legal regime of martial law, the enterprises of the energy sector of Ukraine faced a number of problems, one of which is the problem of ensuring continuous activity in unstable conditions. These turbulent conditions in Ukraine forced business entities to look for ways to improve their own situation. One of the options for improving the financial situation at enterprises in the energy sector of Ukraine is to attract investments. Taking into account the above, as of 2023, the problem of attracting investments by the energy sector of Ukraine will not lose its relevance.

Analysis of recent research and publications. The problems of defining the essence of the concept of "investment" and their involvement in the energy sector of Ukraine were investigated by many domestic scientists, including Dzyurakh Yu.M. [4], Shevchenko S.Yu. [5], Khaletska A.A. [6], Soroka L.M. [7], Georgiadi N.G., Fedorchak O.E. [8], Yarovenko T., Berezhna S. [9].

Identification of previously unresolved parts of the overall problem. In the conditions of martial law, the problem of ensuring continuous activity of the energy sector of Ukraine is an extremely important issue, therefore, the study of the ways, state and prospects of attracting investments by this sector requires special attention.

Formulation of the objectives of the article. The purpose of the article is to analyze the essence of the concept of "investment", the ways of their attraction by the energy sector of Ukraine, and the factors affecting it. In addition, the prospects of attracting investments in the renewable energy sector of Ukraine were investigated.

Research methodology. In the research process, such methods were used as: synthesis, analysis, analogy, abstraction, methods of statistical processing. The results were summarized using a systematic approach.

Presentation of the main material. In the conditions of martial law, which was introduced in response to the armed aggression of Russia, by the decree of the President of Ukraine "On the introduction of martial law in Ukraine" No. 64/2022, the functioning of enterprises in the energy sector of Ukraine underwent significant changes [1]. It should be noted that since the beginning of the full-scale war on the territory of Ukraine, the energy sector has suffered destruction as a result of the occupation of the territories and missile attacks in the amount exceeding 10 billion dollars according to the World Bank data [2]. Such a situation called into question the ability of energy sector enterprises to continue uninterrupted operations, therefore one of the ways to improve these turbulent conditions was to attract investments.

Analyzing the scientific works devoted to the study of investments, we came to the conclusion that there are a large number of interpretations of this concept, because each scientist interprets this concept based on his own experience and the peculiarities of the functioning of the economy of a certain state. Some approaches to the interpretation of the concept are given in the table. 1.

Table 1

Systematization of theoretical approaches to the definition of the concept of "investment"

Author	Interpretation of the concept of "investment"
Law of Ukraine "On Investment Activity" [3]	Investments are all types of property and intellectual values invested in objects of business and other types of activity, as a result of which profit (income) is created and/or social and environmental effect is achieved.
Dzyurakh Y. M. [4]	Investment is the use of all forms of financial, property and non-property (in particular, human, intellectual) resources that are necessary for the implementation of economic activity, are implemented in business projects and programs and provide extended reproduction of the process of social production.
Shevchenko S.Y. [5]	Investments are considered as a dynamic process of changing the forms of capital, successive transformation of original resources and values into investment costs and transformation of invested funds into an increase in capital value in the form of an economic, social or environmental effect. Investments are investments in both monetary and real capital.
Khaletska A.A. [6]	Investments are a set of long-, medium-, and short-term investments of funds, property, and intangible assets aimed at the implementation of production, social, innovative, and environmental programs (projects) with the aim of real preservation of investment resources, increase of profit (income). , increasing the volume of production of goods (performance of works, provision of services), implementation of innovative developments, improvement of social and living conditions of people's living and ecological parameters of the environment.
Soroka L.M. [7]	Investments are all types of monetary, property and intellectual values that are invested in enterprises, business projects and programs that contribute to the development of production and non-production spheres, entrepreneurship, with the aim of obtaining profit and social effect."

Source: systematized by the authors based on [3-7].

As can be seen from the above information, there is no single definition of the concept of "investment" in domestic literature, therefore, based on the proposed definitions of scientists, we formed our own vision of the essence of the concept of "investment". Therefore, investments represent a set of property, financial and intellectual resources that are needed by business entities in order to achieve certain economic, social and environmental goals.

Given the importance and necessity of investment for the operation of the enterprise, it is important to consider the sources of investment and what influences it. It should be noted that attracting investments by enterprises can take place in different ways, including by using own funds or attracting external investments, among which state grants and loans, bank loans or foreign investments can be noted [8].

The process of attracting investments by enterprises of any sector of the economy is strongly influenced by the investment climate in the state in which the economic entity operates. The investment climate is directly related to the trends of attracting investments by enterprises of the energy sector of Ukraine, because it creates favorable conditions for attracting investments, or, on the contrary, creates obstacles. The number of investments involved depends on the national investment policy, the frequency of changes in

legislation, the adopted investment mechanisms and regulation of this activity, the conditions for attracting foreign investment and the tax burden [9].

For a detailed understanding of the investment attractiveness of Ukraine and how it affects the activity of the energy sector, let's analyze changes in the index of investment attractiveness of Ukraine, which was calculated by the European Business Association (Fig. 1).

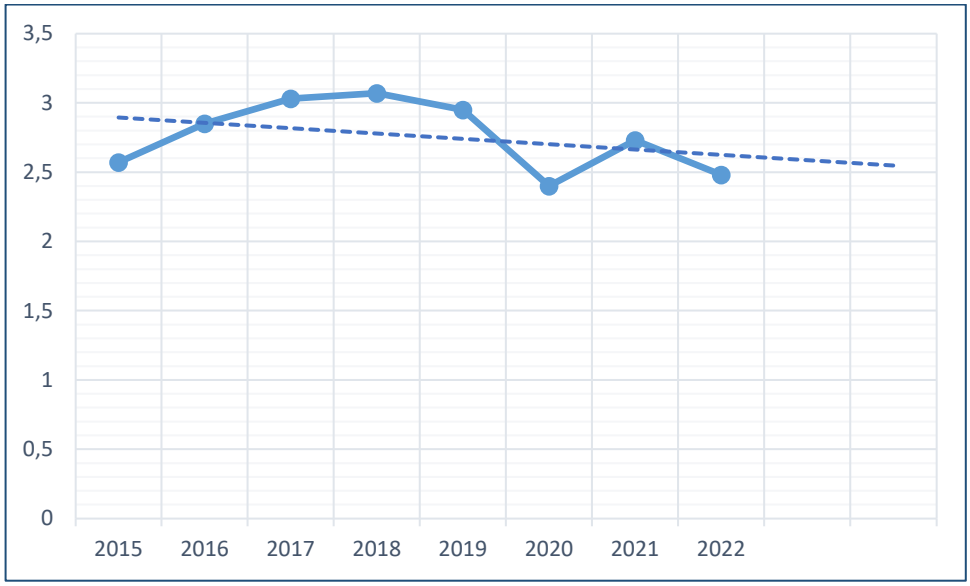


Figure 1. Dynamics of changes in the investment attractiveness index of Ukraine during 2015-2022
Source: compiled by the authors based on [10]

Analyzing the given dynamics of Ukraine's investment attractiveness index during 2015 to 2022, we note the following: the minimum value of the index (2.4) was observed in 2020 in connection with the spread of the COVID-19 pandemic and the establishment of quarantine restrictions; while the maximum value (3.07) was recorded in 2018. Taking into account the difficult political and military situation in Ukraine in 2022, which was provoked by Russia's attack on Ukraine, in the first half of 2022 the analyzed index decreased by 0.56 points, compared to 2021, on the other hand, in the second half of 2022, the investment attractiveness of Ukraine began to improve , which confirms the index, which was established at the level of 2.48. such positive trends are primarily related to the help of our foreign partners.

As can be seen from the analyzed dynamics, the biggest negative factors affecting the investment attractiveness of all sectors of Ukraine's economy, including the energy sector, are the impact of the COVID-19 pandemic and the beginning of a full-scale war, because these events caused significant political and economic turbulence in Ukraine .

Taking into account the current situation in Ukraine, we believe that the most appropriate source of attracting investment is direct foreign investment, because the attraction of state funding in this sphere is currently limited due to the growing costs of the military sphere. Attracting exactly this type of investment will contribute to the faster recovery of the energy sector of Ukraine and, accordingly, its development. For a detailed understanding of the situation regarding the attraction of capital investments by enterprises

of the energy sector, we analyzed the dynamics of their changes during 2015 to 2022 (Fig. 2).

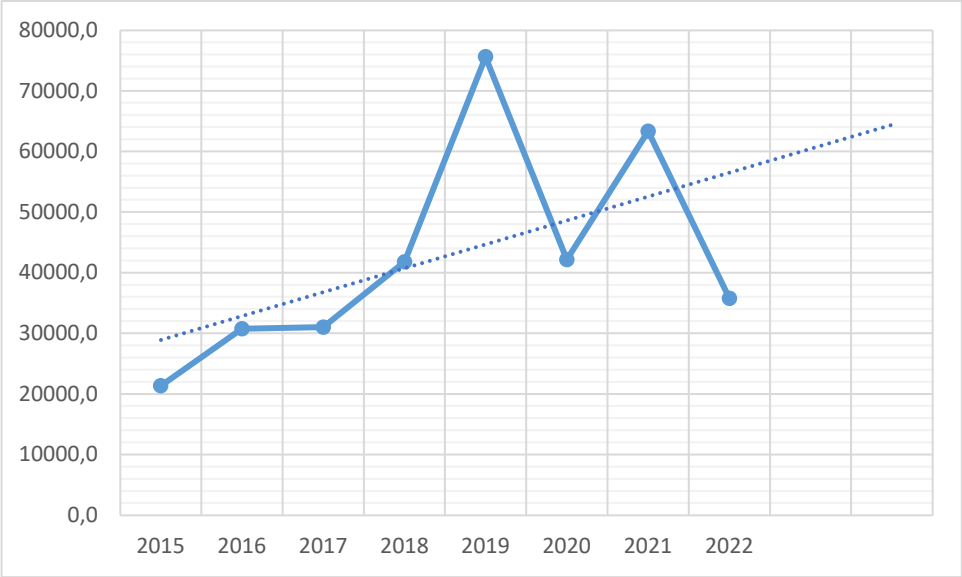


Figure 2. Dynamics of changes in the volume of capital investments of enterprises for the supply of electricity and gas. Steam and conditioned air for the period from 2015-2022, million UAH
Source: compiled by the author based on [11]

The given dynamics indicate positive trends in the attraction of capital investments, because in the period from 2015 to 2019 and in 2021 there is a trend of stable growth in investment volumes, but in 2020 and 2022, a decline occurred due to the introduction of quarantine restrictions and Russia's military aggression, respectively. This trend is also confirmed by the investment attractiveness index of Ukraine.

The impact of the war on the energy sector of Ukraine was devastating: during 2022, this sector suffered the destruction of about 50% of the infrastructure [2]. Constant rocket attacks led to the fact that the enterprises of this sector were forced to look for ways to solve this difficult situation, because the functioning of the state depended on the speed of restoration of the energy infrastructure. That is why the 2 largest companies in the energy sector of Ukraine began to closely cooperate with the EBRD with the aim of attracting additional capital investments to restore the full-fledged operation of the energy sector of Ukraine. It should be noted that Ukrenergo received 2 unsecured guarantees for financing emergency working capital, among which the first guarantee was provided by the EU through the European Fund for Sustainable Development in the amount of EUR 35.625 million; the second received from the United Kingdom of Great Britain and Northern Ireland in the amount of 48.6 million euros. In addition, the EBRD provides support to Naftogaz, as 3 unsecured guarantees were signed with it. Also, to support the energy sector, Ukraine received 150 million euros from the USA, the main purpose of these investments is to ensure the restoration of the energy infrastructure [12].

As of 2023, Ukraine is trying to attract investments not only for the restoration of damaged infrastructure, but also for the development of renewable sources of electrical energy. First of all, let's analyze how the share of electricity generation by renewable energy sources changed (Fig. 3).

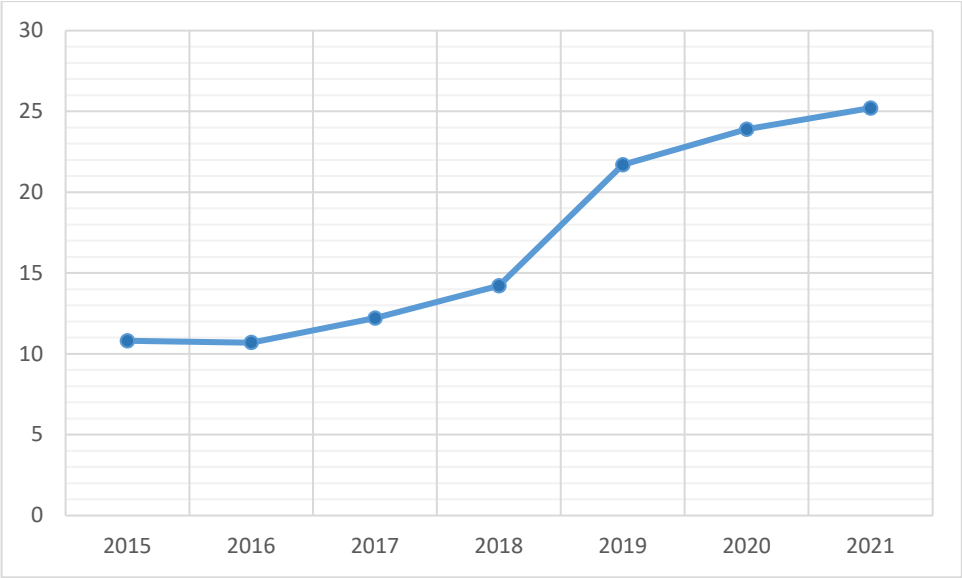


Figure 3. The share of renewable energy in the total electricity generation of Ukraine for the period from 2015 to 2021, %

Source: compiled by the authors based on [13]

In general, during the analyzed period, the share of renewable energy grew every year, which indicates unconditional positive dynamics. In the period from 2015 to 2022, the share of electricity generated by renewable sources of electricity grew every year, which indicates positive trends in the development of the energy market of Ukraine. In general, in 2019, Ukraine took a place in the TOP-10 countries in the world in terms of the pace of development of renewable energy, and in 2020, Ukraine entered the TOP-5 countries in Europe in terms of the speed of development of solar energy. However, in 2022, in connection with the beginning of the war, a large share of renewable sources of electricity was destroyed, due to their location in the south-east of Ukraine. Also, the beginning of military aggression caused a reduction in the amount of generation by renewable sources. As of August 2022, according to the estimates of various experts, about 30-40% of RES were affected, that is, there was a reduction in generation by approximately 1120-1500 MW. In addition, the construction of wind and solar plants was stopped due to insufficient funding and constant missile attacks [14]. So, the war had an extremely negative impact on the entire energy sector of Ukraine, including renewable energy.

However, such turbulence did not stop Ukraine on the way to the development of the energy sector, because we continue to actively cooperate with international organizations and partners to attract investments, both for recovery and for further development. It should be noted that Ukraine is also actively developing energy strategies for the development of the renewable energy sector, for example, by 2030 it is planned to achieve a share of RES of 32% and improve energy efficiency by at least 32.5% [14].

Conclusions from this study and further prospects in this direction. We believe that investments are one of the driving forces in the development of the energy sector of Ukraine, however, currently the main problem with attracting them is the unstable political and economic situation in Ukraine, which in a certain way worsens its investment climate. However, as of 2023, Ukraine is actively trying to attract foreign investments through

cooperation with various organizations, which definitely has only a positive effect. We believe that the most promising direction of attracting investments is the restoration of the damaged energy infrastructure and the development of renewable energy. Right now is a turning point in the development of Ukraine's energy sector, because we have a unique chance to rebuild the destroyed infrastructure and actively develop renewable energy with the help of attracted foreign investments, so the study of further ways of attracting investments does not lose its relevance.

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ПЕРСПЕКТИВИ ЗАЛУЧЕННЯ ІНВЕСТИЦІЙ В ЕНЕРГЕТИЧНИЙ СЕКТОР УКРАЇНИ В УМОВАХ ВОЄННОГО СТАНУ

У статті розглянуто актуальні проблеми та перспективи залучення інвестицій енергетичним сектором України в умовах воєнного стану, що був запроваджений 24 лютого 2022 року. Для детального розкриття цього питання нами було досліджено трактування поняття «інвестиції» різними вітчизняними вченими та запропоновано власне трактування

цього поняття. Досліджено шляхи залучення інвестицій та визначено, що найбільш негативний вплив на цей процес чинять два фактори: нестабільна політична та економічна ситуації в Україні, що більшою мірою спричинено початком повномасштабної війни. Проаналізовано стан залучення інвестицій енергетичним сектором України та визначено, що у період з 2015 року обсяги інвестицій збільшувалися, за винятком 2020 та 2022 років, що свідчить про позитивну динаміку розвитку енергетичного сектору. Також було відзначено взаємозв'язок між змінами індексу інвестиційної привабливості України та обсягами залучених інвестицій, відзначаємо пряму залежність. В умовах воєнного стану найбільшу частку інвестицій залучають Укренерго та Нафтогаз через співпрацю із міжнародними організаціями. Також ми дослідили стан відновлювальної енергетики України у довоєнний період та під час повномасштабної війни. До 2022 року Україна активно та стрімко розвивала таку генерацію, однак у воєнний час значна частина потужностей була зруйнована. Враховуючи це ми дійшли висновку, що найбільш перспективним, станом на 2023 рік, виглядає залучення інвестицій у відновлення критичної інфраструктури та у розвиток відновлювальної енергетики, адже це є невід'ємним елементом для успішної інтеграції до Європейського Союзу. Наразі Україна активно працює над цим питанням, розробляє енергетичні стратегії щодо розвитку сектору відновлювальної енергетики, наприклад планується до 2030 року досягнути частики ВДЕ у розмірі 32% та покращити енергоефективність як мінімум на 32,5%. У процесі дослідження було використано такі методи, як: синтез, аналіз, аналогія, абстрагування, методи статистичної обробки. Узагальнення результатів здійснено за допомогою системного підходу.

Ключові слова: *інвестиції, залучення інвестицій, енергетика, відновлювальні джерела енергії, енергетичний сектор України.*