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**PROBLEMS AND CONTRADICTIONS OF THE FORMATION AND
IMPLEMENTATION OF THE STATE ENERGY POLICY
OF UKRAINE IN MODERN CONDITIONS**

The article describes the current state of national energy in the conditions of russian military aggression against Ukraine. The peculiarities of the formation and implementation of the state energy policy in the conditions of the martial law in Ukraine are considered. The problems and contradictions of the formation and implementation of the state energy policy of Ukraine in modern conditions are identified. The directions for improving the state energy policy with the aim of ensuring the country's energy needs in the conditions of russian military aggression in Ukraine are outlined.

Key words: *public management and administration, mechanisms of state administration, state energy policy, energy, problems and contradictions of the state energy policy, russian military aggression, martial law.*

Problem setting. Global energy costs in today's conditions are increasing significantly and will continue to grow in the long term. This trend shows that the energy issue is and will be one of the biggest problems of humanity, which requires an urgent solution. That is why the formation and implementation of a certain global energy policy, which will provide humanity with the necessary amount of energy resources and increase the efficiency of their use, is an extremely important task [5].

Taking into account the above-mentioned processes in global energy is extremely important for justifying the relevant directions for improving the state energy policy of Ukraine and preventing or minimizing possible challenges and threats in the energy sector in order to ensure the further sustainable development of the country in modern conditions.

Recent research and publications analysis. Scientists P. Beck, S. Maistro, J. Mitchell, A. Semanishina, A. Sheremet, A. Zamulko and others have devoted their scientific publications to consideration of problematic issues and contradictory trends in the formation and implementation of the state energy policy of Ukraine [3; 5; 7; 8].

However, many questions regarding the substantiation of directions for improving the state energy policy in order to ensure the energy security of the country in the conditions of martial law in Ukraine remain insufficiently researched.

Paper objective. The purpose of the article is to substantiate the directions for improving the state energy policy in order to ensure the energy security of the country in the conditions of martial law in Ukraine.

Paper main body. In the conditions of the Russian military aggression against Ukraine, which began on February 24, 2022, state authorities and local self-government bodies must implement and implement the measures and powers provided for by the Law of Ukraine "On the Legal Regime of Martial Law" necessary to ensure the defense of Ukraine, protect the safety of the population and interests of the state [1].

One of the most important directions of ensuring the defense of Ukraine, protecting the safety of the population and the interests of the state in modern conditions is the energy sphere, and, instead, the formation and implementation of the appropriate state energy policy of Ukraine in the conditions of martial law.

As a result of enemy bombings, the life support systems of all regions of the country are subject to catastrophic destruction, the war has caused colossal losses in the energy sector, which are constantly increasing. In the areas of active hostilities, the energy infrastructure is practically destroyed, thousands of critical infrastructure enterprises (including energy) lose their assets, and millions of Ukrainians suffer due to the lack of

electricity. First of all, the Russian troops are attacking the balancing thermal generation, which produces about a third of the electricity in Ukraine.

As a result, more than 5 million consumers in Ukraine temporarily lost access to power grids, for example, since the beginning of the war. The aggressor deprived almost a third of Ukrainians of the opportunity to use electricity for various periods. The amount of damage caused by Russian military aggression to the national energy infrastructure reaches hundreds of billions of US dollars. And this figure is constantly growing, as evidenced by the estimates of the government and independent research organizations [8].

Therefore, in order to counter Russian terrorist attacks and the destruction of Ukraine's energy infrastructure, the G7 countries (USA, Canada, Great Britain, France, Germany, Japan and Italy) created the G7 coordination mechanism in 2022 to help Ukraine repair and protect its energy infrastructure. The specified coordination mechanism was created based on the principle of the contact group on the defense of Ukraine, known as the "Ramstein" format [2].

And although the aforementioned energy "Ramstein" helped the Ukrainian energy system with equipment and energy lending, it will not be able to solve the main problem of the Ukrainian energy system - a large deficit of financial funds. The country's current energy market model is somewhat skewed and generates billions of dollars in debt every month, which is the biggest energy problem. That is, the Ukrainian energy system will not be able to properly prepare for the next heating season, unless a decision is made to increase electricity tariffs for the population, or adequate funds are not found from other sources to solve existing problems in the industry.

The Ukrainian energy system suffered significant damage as a result of massive Russian shelling, which led to restrictions in the supply of electricity to consumers and a shortage of fuel and lubricants in the first months of the war.

Thus, with the beginning of the war in Ukraine, interruptions with automobile fuel began, and the price of liquefied gas rose significantly. This is primarily due to the fact that until February 24, 2022, Ukraine imported most of the necessary oil products from from

belarusian and russian directions. Part of the fuel also came from Lithuania, but this direction was blocked by the belarusian authorities even before the war. That is, the traditional fuel supply channels instantly disappeared, and traders were forced to urgently look for new sources of its supply. The primary task for national traders is to establish new supply chains, which are characterized by more complicated and expensive logistics.

The national renewable energy sector was also significantly affected by the war. Before the full-scale russian aggression, renewable energy in Ukraine was actively developing: the production of "green" energy increased by more than 6 times during the period 2017-2021. According to the results of 2021, renewable power plants produced 8.1% of the total volume of electricity in Ukraine, and as of the end of 2021, the installed renewable energy capacity in Ukraine reached 9.7 GW, of which 78.6% were SPPs and 17.3% were WPPs [4].

Since the beginning of the russian military aggression in Ukraine, only about a third of the wind and solar power plants are working, because many SPPs and WPPs are located in the southern regions of the country, which have been the most attacked by russian troops. Wind turbines, solar batteries, power lines and electrical equipment of power plants are systematically destroyed. As a result, according to the estimates of the Ukrainian Wind Energy Association, only 27% of all wind turbines produce electricity, and the rest are decommissioned due to damaged transformer substations and overhead power lines. The situation in solar energy is difficult, because only about 35% of SPPs are functioning. According to the European-Ukrainian Energy Agency, as of March 10, 2022, 37% of ground-based, 35% of rooftop/facade solar power plants, 29% of biogas plants, 16% of small hydropower plants, and 48% of biomass plants were located in areas of active hostilities. In general, about 47% of Ukraine's renewable energy capacities are located in regions of active hostilities. Maintenance of renewable energy sources is a separate problem, since all foreign specialists left Ukraine due to military operations [4].

The last period has become quite effective in the issues of further reforming of the Ukrainian energy industry within the framework of European integration processes.

Thus, in general, the progress of Ukraine's implementation of the Association

Agreement in the energy sector by the results of 2022 amounted to 17%, and for the entire period of 2014-2022 - 75% [6].

However, a number of tasks remain in the context of the further transformation of state energy policy in the context of European integration and in accordance with the recommendations of the European Commission regarding Ukraine's application for EU membership in various sectors, areas and directions.

Thus, in 2023, Ukraine needs to make a transition to permanent parallel work with the energy system of continental Europe ENTSO-E, the speed of which will depend on the fulfillment of the requirements of the Catalog of Activities of the Agreement on the Conditions of the Future Unification of the UES of Ukraine with the European Energy System, as well as the implementation of measures to increase dynamic stability of the energy association.

Also, in order to further develop the oil and gas sector of Ukraine and to fulfill the requirements of Directive (EU) 2009/119 of 14.09.2009 on the obligation of member states to maintain minimum reserves of crude oil and/or petroleum products, it is necessary to adopt the Law of Ukraine "On Minimum Oil Reserves" and oil products".

In addition, in the field of nuclear energy, it is necessary to establish at the legislative level the status of the state regulatory body for nuclear and radiation safety, as a central body of executive power with a special status, which will serve to increase the efficiency of its activities and independence in making regulatory decisions, taking into account the provisions of European Union law documents, IAEA documents and the acquired experience of state regulation of nuclear and radiation safety [6].

A significant problem of the formation and implementation of the state energy policy of Ukraine is the irrational consumption of energy resources, as well as the inadequate provision of energy saving and energy efficiency.

Therefore, an important direction in the formation and implementation of the state energy policy of Ukraine in the direction of "energy efficiency and energy saving" is the development and implementation of appropriate "pilot projects" for each city and each settlement to ensure a full transition to the use of alternative (renewable) energy sources.

And the final goal of the state energy policy of Ukraine in the direction of "energy efficiency and energy saving" at the regional and local levels in the long term should be the introduction of "smart" energy-efficient and energy-saving technologies in all spheres by promoting the development of smart households, start-up enterprises and organizations, smart settlements, smart cities, smart regions, which will allow Ukraine to become an energy-efficient and energy-independent country. After all, the wide use of renewable energy sources and alternative types of fuel in all spheres of social life at the regional and local levels will contribute to ensuring the country's energy independence, development of local communities, environmental protection and solving existing environmental problems.

Also, in Ukraine, the processes of introducing energy management systems in budgetary institutions, state authorities and local self-government bodies need to be intensified.

In order to ensure the necessary level of energy security of the country, the energy system of Ukraine must be made less vulnerable (both in the conditions of war and in the conditions of post-war reconstruction of the country) by creating a decentralized energy system. Such a system will be less vulnerable and should provide for the construction of mini-power plants and small generation facilities implemented in the existing energy system [11] and the further development of "green" energy (implementation of the so-called concept of "green" energy transition) in close coordination (at least in the medium term) with nuclear energy. In addition, renewable energy sources are especially effective in small cities, settlements, and are intended for autonomous energy consumers, distant from centralized energy supply systems and owned by residents of the respective territorial community, which prevents the decline of communities and promotes their sustainable development.

Another problem and rivalry that needs to be solved is the fact that there is a low level of competition in the fuel and energy markets of Ukraine, and often it is absent at all.

So, for example, in the segment of gas supply for the population, the so-called gas

outlets dominate. That is, sales companies, which were only formally separated from regional gas companies, historically are one hundred percent monopolies in gas supply.

Competition in the electricity and heat supply segment is also almost completely absent. In addition, consumers do not have the opportunity to freely choose the supplier of these energy resources - in fact, consumers are locked into regional monopolists.

The absence of large transparent international companies in the segment of gas and oil production is also a symptom of insufficient market development. Moreover, strategic international investors are absent in such segments as gas and oil transportation. In addition, almost 100% of oil processing in Ukraine is concentrated in one enterprise.

Coal production, in particular grades used for electricity generation, is also concentrated, as more than 60% of production is concentrated in the hands of one large private industrial group [10].

In the production of electricity, there is also a high share of SE "NAEK" Energoatom", especially in the "base schedule" mode, and another private industrial group occupies about 50% in the structure of thermal generation (which is critical for the entire power system) and 90% of generation in Burshtynsky Island [10].

That is why the energy markets of Ukraine have one of the lowest levels of competition among local markets in Europe, which contributes to the fact that monopolists set: high prices and economically unreasonable tariffs, receive excess profits, are not interested in improving the quality and reliability of their services, do not invest investments in the modernization of energy capacities are not sufficient, and their activities are opaque and inefficient, which, however, does not prevent these monopolistic companies, which are owned by oligarchs or in state ownership, from dominating the energy markets of the country. As a result, there is underinvestment in the sectors of the energy complex, the absence of strategic investors and foreign companies that would bring international expertise and willingness to work in competitive conditions to Ukraine.

As a result, the country's energy enterprises suffer from: critical wear and tear of fixed assets; low technical and economic level of electricity and heat supply systems,

which causes interruptions in energy supply; unstable financial situation; significant indebtedness of energy consumers and the crisis of non-payments; ineffective state regulation of energy prices; lack of investment, etc.

In order to resolve the existing problems and contradictions of the formation and implementation of the state energy Ukraine, on May 1, 2023, the Cabinet of Ministers, at the request of the Ministry of Energy, approved the Energy Strategy of Ukraine for the period until 2050.

It should be noted that the adopted Energy Strategy of Ukraine until 2050 takes into account:

- the consequences of a full-scale war, strengthening the role of energy security and strengthening the stability of the energy system;
- the results of joining the UES of Ukraine to the European network of electricity transmission system operators (ENTSO-E) and deepening the integration of the energy system of Ukraine into the European one;
- the availability of the latest technologies (production and use of hydrogen, small modular nuclear reactors, energy storage facilities), technical changes in the energy sector, global trends and innovative solutions, requirements for environmental safety in accordance with EU regulations and accepted obligations of Ukraine;
- Ukraine's international obligations regarding energy efficiency and the use of RES, reduction of greenhouse gas emissions, etc.;
- decentralization of electricity generation throughout the country [9].

However, it is extremely important not only to adopt an appropriate strategy for the development of the country's energy sector for the long term, but also to ensure the formation of an effective state energy policy with the help of effective mechanisms and tools for its implementation in order to solve existing problems and contradictions in the development of the specified sector of the economy [3; 7].

Conclusions of the research and perspective of further development in this direction. Therefore, in modern conditions, the formation and implementation of the state energy policy should take place in directions that will contribute to the solution and

resolution of such problems and contradictions: insufficient diversification of sources, directions and types of imported energy resources; lack of systemic modernization reforms in all branches and sectors of the energy sphere; low level of energy efficiency and energy saving in all sectors of the economy and spheres of social life; insufficient pace of integration of the national energy industry into the EU energy market; establishment of not always economically justified tariffs for energy resources; imperfection of the system of subsidizing frugal energy consumption by the population; the negative impact of the energy sector on the environment; insufficient attention to solving environmental problems caused by the functioning of Ukraine's energy industry. All this, of course, will contribute to ensuring the necessary level of energy security of our country in the conditions of martial law and will bring closer the victory of Ukraine in the war with the Russian aggressor, which will be the subject of our further scientific research.

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