



POLITYKA ENERGETYCZNA – ENERGY POLICY JOURNAL

2022 ♦ Volume 25 ♦ Issue 1 ♦ 125–142

DOI: 10.33223/epj/146411

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Legal regulations of biofuel production in Ukraine

ABSTRACT: The global biofuel industry is characterized by a wide range of legislative and regulatory measures for the development of bioenergy. In order to stimulate the production of biofuels, a set of measures has been developed, including legislative regulation, indicative planning of production volumes, preferential taxation and budget support. Ukraine is among the top ten largest consuming countries of energy resources. Weak and inconsistent state policy in the sphere of biofuels as well as inconsistent legislative provisions regulating activities in the field of production, circulation and use of biofuels, impede the effective development of the biofuel market in Ukraine. The purpose of this article is to determine the components of the system of state regulation of bioenergy and to identify effective mechanisms with regard to improving the legal regulation of the biofuel market in Ukraine. The management processes discussed in this article are provided by several methods, which particularly relate to the functioning of power structures and the end results or goals of the public administration system. Currently, there are significant inconsistencies in the formation and

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further functioning of the regulatory framework with the legislation of the European Union on the rational use of fuel and energy resources, the limitations of which increase due to inconsistencies between centralized and regional distribution. Therefore, further processes of effective economic development of Ukraine will largely depend on solving the problem of the sustainable provision of available renewable energy resources. Future development of the biofuels market in Ukraine will strongly depend on the institutional and legal conditions in the field of production, circulation and use of biofuels.

KEYWORDS: legislation, biofuel, bioenergy, regulatory instruments

Introduction

Over the last decade, the international community has focused on achieving sustainable economic development, the most important elements of which include reducing the level of anthropogenic impact on the environment. As a result, new economic models are becoming more widespread – green, low-carbon, circular, and others – which aim to achieve a balance between economic growth, social development, and environmental sustainability.

The increasing demand for energy and the environmental consequences have led towards alternative renewable and sustainable energy technologies worldwide (Joshi et al. 2017). Biofuels are an important substitute for fossil fuels with advantages such as sustainability, environmental friendliness and good adaptability (Su et al. 2015). Biofuels have the potential to alter the transport and agricultural sectors of decarbonizing societies (Araújo et al. 2017). Over the last twenty years, the world's production and use of biofuels have continued to grow dynamically (OECD-FAO Agricultural Outlook 2020–2029). The key to this is an effective public policy, which has become a response of the governments of leading countries to the depletion of traditional energy resources, increasing their cost and deteriorating the environmental situation. To stimulate the production of biofuels in the leading countries in the field of production and consumption of biofuels, an effective set of measures has been developed: legislative regulation, indicative planning of production volumes, preferential taxation and budget support. The experiences of such countries as the United States, the EU, China and India has revealed the imperfection of legal regulation in this area in Ukraine.

One of the main components of Ukraine's economic system involvement in the economic space of the European Union (EU) is to achieve a certain level of harmonization of our country's legislation with the European legal norms. Ukraine is already contributing to joint efforts to create a climate neutral European continent under the Paris Agreement, the UN Sustainable Development Goals 2030, and the EU-Ukraine Association Agreement. Furthermore, Ukraine is taking all measures to become part of the European Green Deal (Ukraine's participation in the European Green Deal 2021).

The level of renewable energy development is a key component of the world economy sustainable development (Tokarchuk et al. 2021). The public policy in most countries is aimed at stimulating renewable energy, which minimizes the impact on the environment and can partially replace fossil energy resources (Pronko et al. 2020).

In Ukraine, on the other hand, despite the strong natural resource potential, biofuel production volumes remain quite low and are characterized by insignificant growth rates (Khvesyuk et al. 2018). Ukraine has a significant potential for renewable energy, but the country's energy potential is currently formed mainly through traditional fuels. A certain positive trend is inherent in the development of solid and gaseous fuels, but as for the market of liquid biofuels, in practice, its production over the past ten years has tended to decrease. According to Dergachova et al. 2020, the main problem of forming an effective energy strategy in Ukraine is the inconsistency of economic and energy policies and the lack of a systematic approach to their implementation.

With the current state of development of the biofuel market in Ukraine, it is necessary to optimize legislative regulation, taking into account the strategy of the development of the market of liquid, solid and gaseous biofuels in the short, medium and long term. Accordingly, one of the important factors in the development of bioenergy in Ukraine is the formation of a balanced state policy to regulate the production and consumption of biofuels, which will be aimed at the efficient functioning of the biofuels market and will strengthen energy security.

One of the main ways to ensure national security, increase the competitiveness of domestic products in both domestic and foreign markets, increase the budget and address social issues is to significantly increase the energy efficiency of the national economy of Ukraine (Tomchuk et al. 2018).

In January 2022, there was a sharp increase in fuel prices in Ukraine. From December 2021 to January 2022, the cost of gasoline and diesel fuel in Ukraine increased by 10% (Fig. 1). The cost of fuel in Ukraine has increased due to rising world oil prices as well as the depreciation of the national currency. Furthermore, fuel prices have risen in a number of European countries. In Germany in particular, fuel prices have risen to record levels. The rise in oil prices in the EU is largely due to rising world oil prices and geopolitical factors, specifically the crisis around Ukraine and the conflict in Yemen. The observed increase in fuel prices in Ukraine and all over the world will have a positive impact on the development of biofuels both in Ukraine and in other oil-importing countries.

Expanding the use of energy-saving technologies would help to reduce energy imports and lower the political pressure on Ukraine from oil- and gas-exporting countries. In addition, the reduction of the energy component in the cost of production allows Ukraine to significantly increase its competitiveness in foreign markets. One of the ways to solve this problem is the further purposeful development of the sector of bioenergy.

The development of an effective energy policy is a complicated issue in a methodological sense. The methodological approaches used in the article concern public administration in general and biofuel production in particular. They consist of a set of research procedures and the processing and generalization of information on socio-economic, technological and environmental data, which are the basis for making important management decisions based on the regulatory

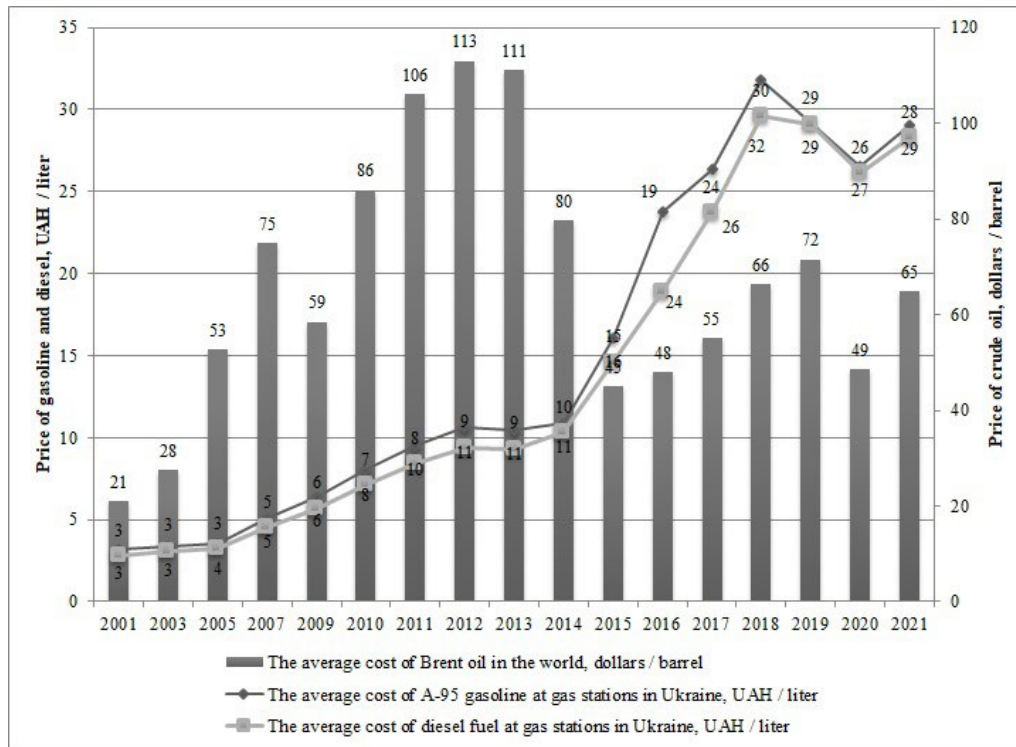


Fig. 1. Dynamics of oil prices in the world, the price of gasoline and diesel fuel in Ukraine

*note: gasoline and diesel prices have been indicated in UAH to demonstrate the growth of fuel prices that was caused not only as a result of the rise of oil prices but also the inflation of the national currency

Source: formed by the authors

Rys. 1. Dynamika cen ropy naftowej na świecie, ceny benzyny i oleju napędowego na Ukrainie

*uwaga: ceny benzyny i oleju napędowego zostały podane w UAH, aby pokazać wzrost cen paliw spowodowany nie tylko wzrostem cen ropy, ale także inflacją waluty krajowej

framework and organizational and economic tools to influence relations, relationships and social processes.

The management processes discussed in the article are provided by several methods, which particularly relate to the functioning of power structures and the end results or goals of the public administration system.

The main hypothesis of this study is laid in the process of forming the goal and its directions, the expected answer to a set of questions posed in the course of scientific knowledge by the authors is formed from possible links between the studied facts. The hypothesis of the investigation is mainly based on its main objective – research of the instruments and measures for improving the legal regulation of biofuel production in Ukraine.

1. Literature review

The problem of the normative legal regulation of production, turnover and the sale of biofuels is widely covered in the scientific works of international and Ukrainian scientists. However, the current level of production and consumption of biofuels in Ukraine testifies to the insufficient effectiveness of the existing regulatory instruments for the biofuel market in Ukraine, and the methods of state regulation of bioenergy development need improvement and adaptation to global requirements.

In recent years, many scientists have studied the impact of state support policies for renewable energy development. In particular, [Prokopenko et al. \(2011\)](#) proposed and described the principles of improving state support for the sustainable development of renewable energy.

The importance of the role of government is noted in other works, namely [Koval et al. \(2021\)](#), who emphasize that government regulation plays a key role in the further development of alternative energy. As noted by [Correa et al. \(2019\)](#), in the short term, several governmental mandates and incentives, along with the development of financial and market-based mechanisms and applied research partnerships, can accelerate the implementation of more sustainable biofuel production alternatives.

The country's energy policy is determined by the sequence of public management decisions that are made and implemented. In turn, managerial decision-making opportunities are limited by existing international obligations and the country's national interests ([Kytaiev et al. 2020](#)).

While Ukraine has a great competitive advantage in the production of biofuels based on the availability of the feedstock and fertile soils, it does not utilize this opportunity despite the policy goal of decreasing energy dependence on fossil fuels ([Janda and Stankus 2017](#)).

As noted by [Lyndiuk et al. \(2020\)](#), Ukraine has a significant untapped potential for energy efficiency, which requires accelerating the pace of modernization and the development of renewable energy sources and highlights the problem of providing the industry with labor resources capable of promoting a green energy transition.

A study by [Zulauf et al. \(2018\)](#) notes that Ukraine is the only major agricultural producer with declining biofuel production since 2010. At the same time, Ukraine's agricultural sector is a potential resource for biofuel production. The relevance of biofuel production in Ukraine confirms the fact that the development of the bioenergy industry will have social, economic and environmental effects.

As noted by [Su et al. \(2015\)](#), governments in many countries have provided significant support to the entire biofuel production cycle, from the cultivation and processing of different type of feedstock to experiments and the industrialization of biotechnology. These actions have been taken in order to reduce investment risks. [Ebadian et al. \(2020\)](#) note that biofuel-blending mandates are the primary biofuel policies in use by most countries.

In general, the energy sector of Ukraine is in a transitional stage of formation ([Sinchenko et al. 2013](#)). There are a number of provisions in the current legislation of Ukraine that slow down the use of biomass and organic waste. [Pryshliak et al. \(2021\)](#) emphasize that a prerequisite for

the development of bioenergy in Ukraine is state support for research and innovation in improving new technologies for growing and processing bioresources and developing a science-based strategy for the development of the bioenergy sector, which would take into account all energy security factors.

According to [Kaletnik \(2008\)](#), considering the rapid construction of biofuel plants in the EU countries and their absence in Ukraine, it is likely that Ukrainian agricultural producers will become suppliers of feedstock for biofuel production abroad. Furthermore, the experience of the EU countries shows an exclusively unique and consistent state policy using legislative and economic levers that can ensure the real introduction of biofuels to the market ([Kaletnik et al. 2020](#)).

[Plakhtiy and Drachuk \(2013\)](#) note that legislative regulation at the state level using different approaches to encourage producers and consumers of a particular sector of the economy indicates an interest in positive results and the expansion of the competitive market in the future.

According to [Klymchuk et al. \(2020\)](#), support for the biofuel industry in Ukraine should be based on the following components: harmonization of Ukrainian biofuel legislation with EU legislation; approval of the biofuel market development strategy of Ukraine; tax benefits, subsidies to both producers and consumers; support of investment and innovation activities in the field of biofuel production.

In a broad sense, state regulatory policy is seen as a separate component and at the same time follows a relatively independent direction in the system of the state regulation of the economy, based on certain principles, it uses specific methods to improve the socio-economic system and involves cooperation between public authorities, the self-government of local authorities, economic actors, their associations, and the civil society in order to reconcile the interests and achieve the goals of economic development ([Bereziuk et al. 2020](#)). Thus, in the process of state regulation in the field of bioenergy, economic, legal and administrative methods of regulation are used ([Kolesnyk et al. 2018](#)).

Despite all attempts of the Ukrainian government to promote the production and use of biofuels, this sector is developing too slowly to satisfy international goals of energy security and climate safety. Issues of the legal regulation of biofuel production in Ukraine need a comprehensive analysis and generalization.

Another problem is the low level of awareness about state incentives for biofuel production in Ukraine. The survey made by [Pryshliak et al. \(2020\)](#) showed that only 50% of the managers of the surveyed agricultural enterprises know about stimulating legislative incentives regarding the use of renewable energy and alternative fuels.

The purpose of the article is to determine the components of the system of state regulation of bioenergy and to identify effective mechanisms in the direction of improving the legal regulation of the biofuel market in Ukraine.

2. Results and discussion

With regard to the general state regulation of bioenergy, this is a sphere of state activity which manifests itself in the targeted influence on the behavior of participants in the biofuel market in order to ensure the priorities of the state energy policy. The system of state regulation of bioenergy is an integral part of state regulation of alternative energy and is divided into the elements presented in Figure 2.

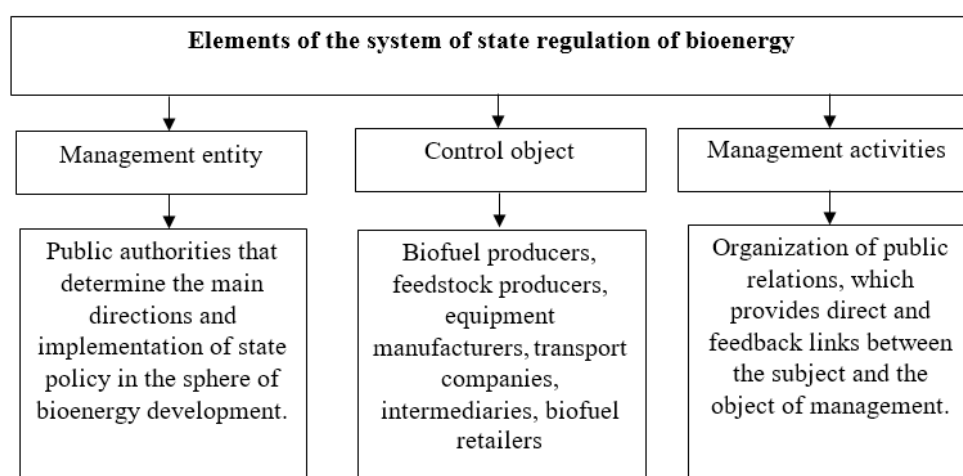


Fig. 2. Components of the system of state regulation of bioenergy

Source: formed by the authors

Rys. 2. Elementy systemu państwowej regulacji bioenergii

In our opinion, the main components of the state policy of bioenergy development are the set of organizational, legal and economic measures aimed at developing biofuel production as well as strengthening energy security, improving the environmental situation and ensuring the sustainable development of society. In order to achieve certain components, public authorities, which determine the main directions and implementation of policy in the context of bioenergy development, implement their measures through a system of legal, regulatory and other instruments that must be effective in the current market environment. The primary goal in the field of bioenergy development and biofuel production is the need to form the current legal and regulatory framework for the functioning of the biofuels market in the legal field.

The basis of institutional support for the production, circulation, sale and use of biofuels in Ukraine are decrees of the President of Ukraine, resolutions and orders of the Cabinet of Ministers of Ukraine, the laws of Ukraine, strategies, concepts and state standards of Ukraine, and technical conditions (Fig. 3).



Fig. 3. The structure of institutional support for the production, circulation, sales and use of biofuels in Ukraine
 Source: summarized by the authors

Rys. 3. Struktura wsparcia instytucjonalnego produkcji, obrotu, sprzedaży i wykorzystania biopaliw w Ukrainie

Analysis of numerous studies on public policy on the development of bioenergy allows the following three categories of these tools to be identified: support for final production (output related assistance), support for factors of production (support for factors of production) and distribution and consumption (distribution and use support) (Harmer 2009) (Fig. 4).

Thus, the most common tools to stimulate the production and consumption of biofuels in the world are:

- ◆ norms of the compulsory minimum content of biofuel in the fuel mixture with traditional energy sources and subsidies of biofuel producers (support of final production);
- ◆ instruments of tariff and non-tariff protection of the domestic market from imports;
- ◆ state support for fundamental research, applied development and pilot projects (support for factors of production);
- ◆ subsidizing suppliers of feedstock that is used for biofuel production;
- ◆ subsidizing the infrastructure of biofuel distribution;
- ◆ tax benefits that increase the consumer attractiveness of biofuels compared to traditional types of transport fuel (support for distribution and consumption).

The mandatory content of biofuels in the fuel mixture and instruments for the protection of the internal market belong to the category of support for final production; they are fundamental in nature, and their application, by EU countries in particular, has allowed:

- ◆ the formation of a market demand for energy, which differs in technological features of use from existing technologies of energy consumption of road transport and higher cost compared to gasoline and diesel fuel;

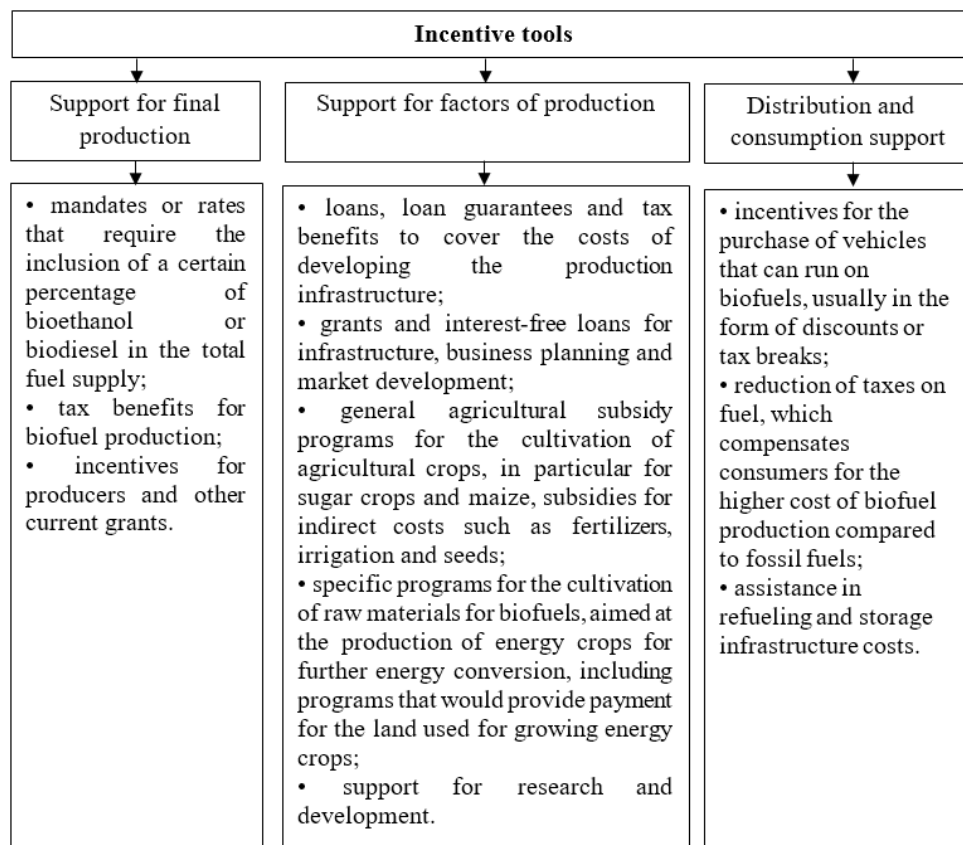


Fig. 4. Classification of categorical tools to stimulate the development of bioenergy in the world
 Source: composed by the authors

Rys. 4. Skategoryzowana klasyfikacja narzędzi stymulujących rozwój bioenergii na świecie

- ◆ the protection of the domestic producer from competition with foreign suppliers and increasing the investment attractiveness of the industry.

The use of other tools has allowed solving long-term problems that hinder the development of the industry, in the first place:

- ◆ accelerating the pace of the commissioning of production facilities;
- ◆ eliminating the impact of the high cost of biofuels on the final consumer;
- ◆ modernizing the distribution infrastructure of end-user biofuels.

In Ukraine, the system of state regulation of the biofuel segment of the fuel and energy complex was formed in the process of dynamic transformations that have taken place over the past thirty years in the national economy. Despite the fact that the formation of the state energy policy in Ukraine took place under the influence of European integration processes, at this stage, the legal regulation of production and use of biofuels in Ukraine is characterized by certain obstacles (Fig. 5).

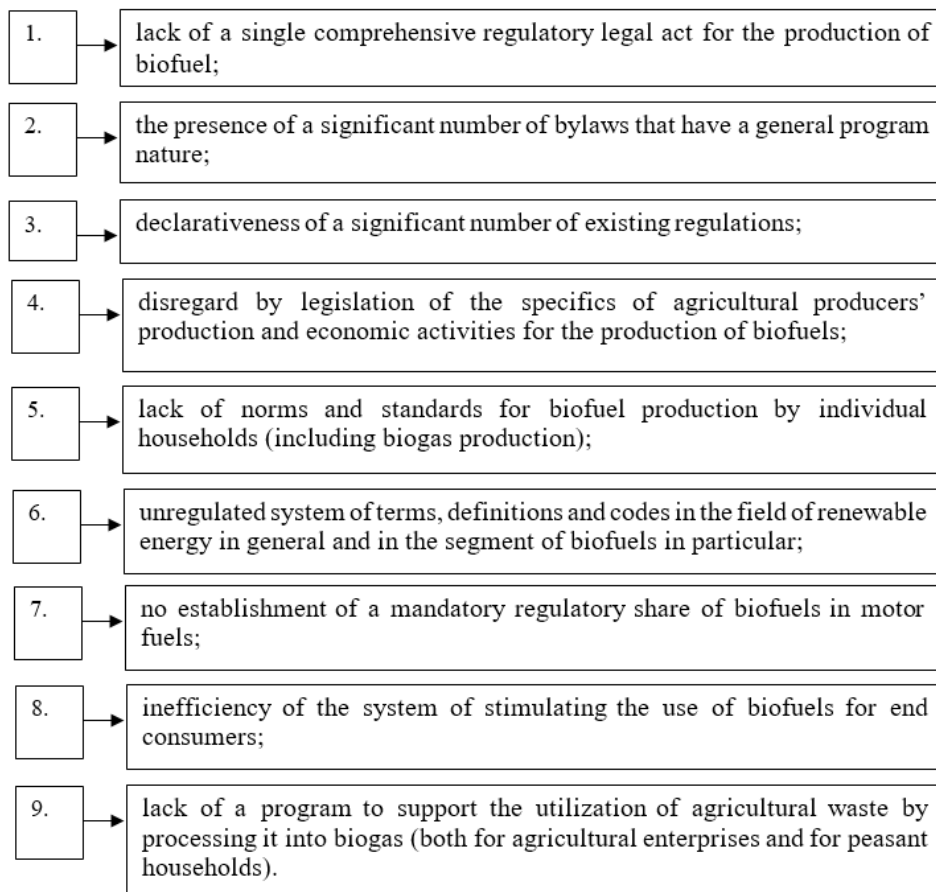


Fig. 5. Negative features of modern regulatory and legal support of the biofuel market in Ukraine

Source: composed by the authors

Rys. 5. Negatywne cechy nowoczesnego wsparcia regulacyjno-prawnego rynku biopaliw w Ukrainie

To this day, the specific financial mechanisms for the development of alternative energy in general and bioenergy in particular have not been formed in Ukraine. In addition, none of the approved programs for the development of alternative energy as one of the priority segments of the fuel and energy complex of Ukraine have been fully implemented. First of all, this is due to the insufficient substantiation of assessments of real possibilities and forecasts in the development programs, especially in the field of biofuel production, this concerns the capacities of the processing of biological feedstock. Waste-recycling programs have not been formed at all. Insufficient cooperation between public authorities and business structures in the process of developing programs, the lack of incentive mechanisms or responsibility for business structures in the formation of the biofuel market in Ukraine have caused the limitation of funding sources at the stages of implementation of individual projects and activities provided for in the programs.

The analysis of Ukrainian legislation showed amendments to the law of Ukraine “On Alternative Fuels” regarding the gradual increase of the standard share of production and use of biofuels and mixed motor fuels. In 2014–2015, this required the mandatory content of bioethanol in motor gasoline produced and/or sold on the territory of Ukraine to be not less than 5% (in volume), and since 2016, has required the mandatory content to be not less than 7% (in volume) and was made in accordance with the law of Ukraine “On Amendments to Certain laws of Ukraine on the production and use of motor fuels containing biocomponents” (No. 4970-VI of June 19 2012). This expired on the basis of the Law of Ukraine “On Amendments to Certain Legislative Acts of Ukraine on Simplification of Business Conditions (Deregulation)” (No. 191-VIII of 12 February 2015), which did not have an impact on the development of the market for the production of liquid biofuels and were unsystematic in nature, as no appropriate mechanisms were formed to control the norms on the content of liquid biofuels in motor fuel and no responsibility for avoiding the law was adopted.

On August 18, 2018, by Resolution No. 605-r, the Cabinet of Ministers of Ukraine approved the “Energy Strategy of Ukraine until 2035: Security, Energy Efficiency, Competitiveness”. The main provisions of Ukraine’s Energy Strategy until 2035 are based on the best practices of European countries and lay the foundations of an energy-efficient society and take into account the provisions of the Paris Agreement and Ukraine’s commitment to reduce greenhouse gas emissions by 2030. Ukraine’s energy strategy until 2035 contains three main stages (Fig. 6), which

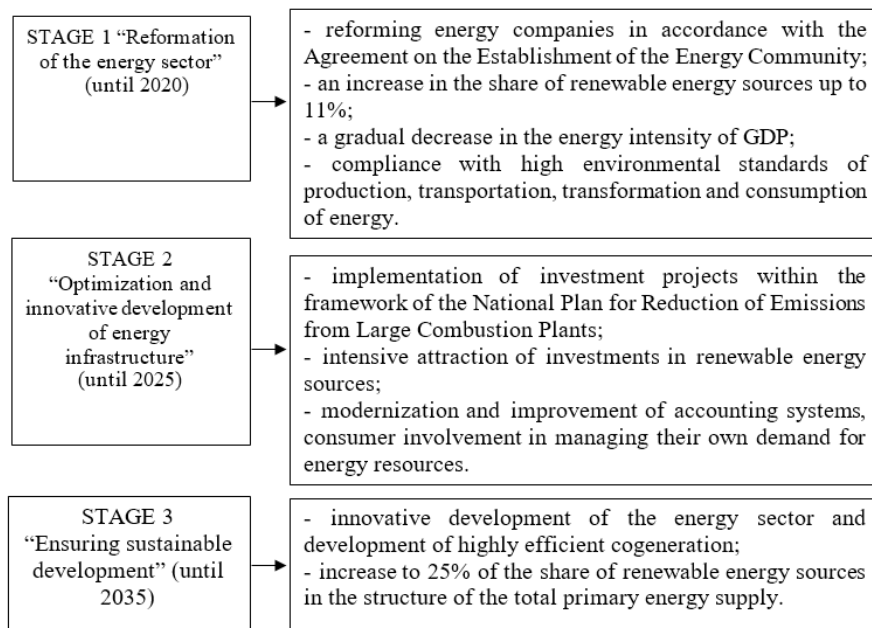


Fig. 6. Stages of the “New Energy Strategy of Ukraine until 2035” in the field of energy saving and renewable energy
 Source: formed according to Energy Strategy of Ukraine for the period up to 2035 “Security, energy efficiency, competitiveness”

Rys. 6. Etapy „Nowej Strategii Energetycznej Ukrainy do 2035 roku” w zakresie oszczędzania energii i OZE

should result in a reduction in the energy intensity of GDP by 2035 by more than half compared to the current value.

Among the shortcomings of the Energy Strategy of Ukraine until 2035, actions aimed at achieving the goals of the Strategy are represented by general abstract formulations. The specific steps, deadlines, stages and who should take these measures are not specified; tools and implementation mechanisms; the expected effect of the proposed measures.

The production of biofuels by agricultural producers and rural households is becoming more widespread throughout the world. In particular, agricultural enterprises in the EU actively use part of oilseeds to produce biodiesel for their own needs. The use of agricultural waste for the production of solid (pellets, briquettes, pellets) and gaseous (biogas) fuels has also become widespread.

This type of economic activity is relatively new but is promising. However, in Ukraine, the production of biofuels by agricultural enterprises and rural households has not yet been sufficiently developed for reasons including the imperfection of their legal regulation.

In order to develop the market for liquid, solid and gaseous biofuels in the short, medium and long term, it is necessary to create a favorable regulatory framework for the development of production, circulation and use of biofuels. To achieve this goal, we propose to implement the following measures:

- ◆ unification in the system of terms, definitions, customs codes and bringing them into line with those used in the EU;
- ◆ determination by years for business entities that produce and/or import motor fuel and alternative motor fuel for sale in the customs territory of Ukraine, the mandatory share of liquid biofuels (biocomponents) in the total sales as well as the establishment of liability for non-compliance of requirements for the mandatory content of biofuels in traditional fuels sold at filling stations in Ukraine;
- ◆ stimulating producers of liquid, solid and gaseous fuels by establishing tax holidays, tax benefits, and a mechanism to stimulate the production of blended fuels with contents of 10 and 15% of biofuels;
- ◆ introduction of accounting and control of the content of liquid biofuels (biocomponents) in motor fuel and motor alternative fuel in the market of petroleum products, which are entrusted to the central executive body, which implements state policy in the areas of the efficient use of fuel and energy resources, energy saving, renewable energy sources and alternatives types of fuel;
- ◆ attribution to offences of non-compliance by business entities that produce and/or import motor fuel and motor fuel alternatives for sale in the territory of Ukraine with requirements for the content of the mandatory share of liquid biofuels (biocomponents) in the total annual fuel sales and non-submission or late submission by business entities of information on the content of the mandatory share of liquid biofuels (biocomponents) in the total sales of fuel in Ukraine;
- ◆ introduction at the state level of requirements for the mandatory provision of statistical data for the control and generalization of data on production, consumption, import and export of biofuels;

- ◆ formation of a single information portal for the collection and display of statistical data on production volumes, prices and proposals for the sale of biofuels, as well as a portal of companies that manufacture and install equipment for the production and use of biofuels;
- ◆ adoption at the state level of the strategy for the production of biofuels from agrobiomass;
- ◆ development of recommendations on crop rotations, which will include the cultivation of such promising energy crops as miscanthus and switchgrass;
- ◆ standardization of biofuels, especially in the production of biofuels by agricultural enterprises and farms for their own needs to improve the quality and safety of fuel, as well as the adoption in Ukraine of international standards for biofuels, which will increase the competitiveness of domestic fuels in foreign markets;
- ◆ creation of a coordination office and a state governing body in the field of biofuels;
- ◆ establishing cooperation between biofuel market participants by supporting the development of agrobioclusters, which will unite raw material producers, biofuel producers, universities and research institutes, investment and financial institutes, insurance companies, and biofuel sales entities, etc.;
- ◆ the establishment of an environmental tax on petroleum fuel as well as on stored and non-recyclable waste (including livestock and poultry waste);
- ◆ incentives for the use of environmentally friendly cars running on biofuels or blended fuels where the share of biofuels is more than 10% (support for production and benefits when importing such cars to Ukraine);
- ◆ the stimulation and support of foreign investments for Ukraine in the field of bioenergy conversion;
- ◆ the financing of scientific and applied research, development and demonstration of the testing of biofuels and equipment operating on biological fuels and their mixtures.

The adoption of a number of measures to improve the regulatory framework of the biofuel market will provide such positive results as presented in Figure 7.

Inefficient state policy in the field of bioenergy and the ineffectiveness of incentives for producers and consumers of biofuels have led to a slowdown in investment in industry and the curtailment of the development of the biofuels market in Ukraine in recent years. In order to create a favorable investment climate for the development of bioenergy in Ukraine and the development of the biofuels market, state policy should be aimed at implementing an effective mechanism to support the production and use of biofuels. The effectiveness of this mechanism is based on the optimal ratios between administrative and market instruments for regulating the bioenergy segment of the fuel and energy complex. The decisive role in shaping the state policy of bioenergy development in Ukraine belongs to the process of the development and adoption of legislation aimed at introducing tax, credit and price instruments which will be more focused on regulating the demand for biofuels. The main regulators of the state policy of support for biofuel producers should be licensing rules and organizational support for the development of market infrastructure.

Thus, the growth of energy efficiency of the national economy requires the implementation of a set of priority measures in the shortest possible time for regulating the legal framework for the

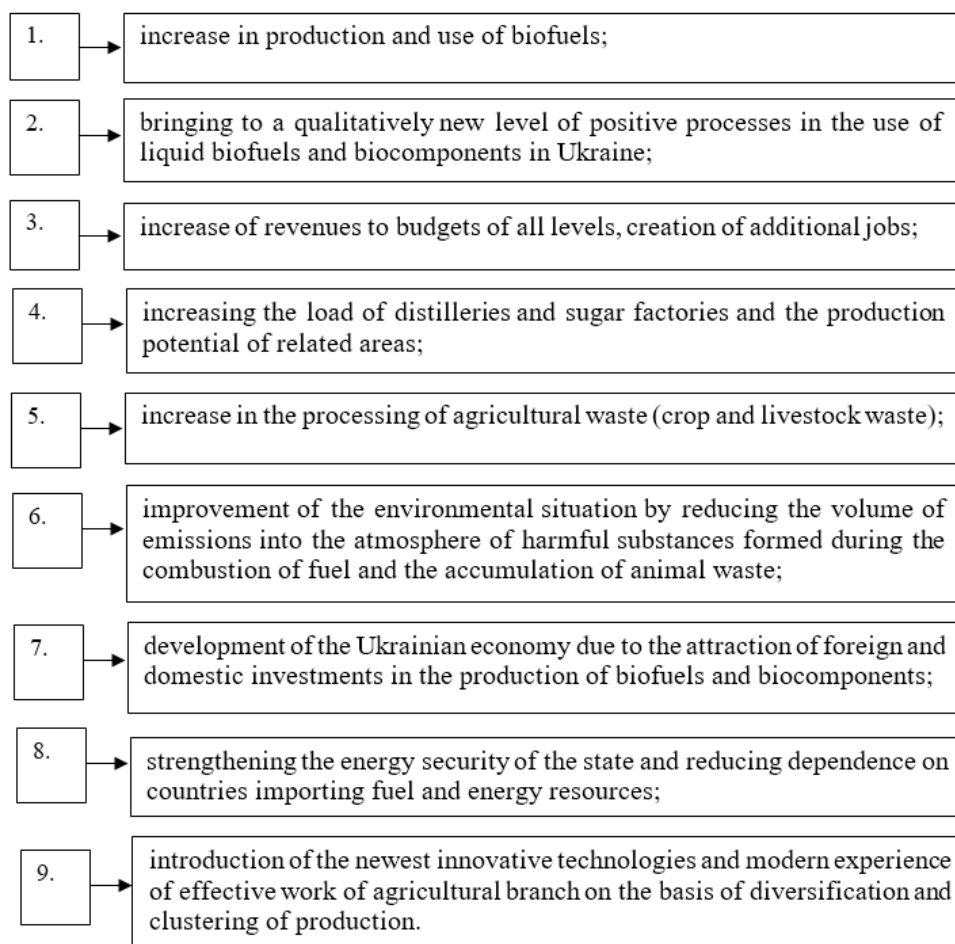


Fig. 7. Positive aspects of improving the regulatory framework of the biofuel market in Ukraine
 Source: composed by the authors

Rys. 7. Pozytywne aspekty poprawy ram regulacyjnych rynku biopaliw na Ukrainie

production, circulation and sale of biofuels which would increase energy efficiency in all sectors of the economy (Fig. 8).

In general, the potential for the full-scale production of biofuels is characterized by a significant unevenness in its implementation in different countries and the effectiveness of their consumption primarily depends on the effectiveness of the institutional and legal environment and government incentives for this process. European Union countries, the USA, Canada, Brazil, China, Thailand, India, etc. have already chosen the bioenergy vector as a priority area of development, thus they have significant experience in establishing the legal framework and implementing programs to promote and support the production and consumption of biofuels.

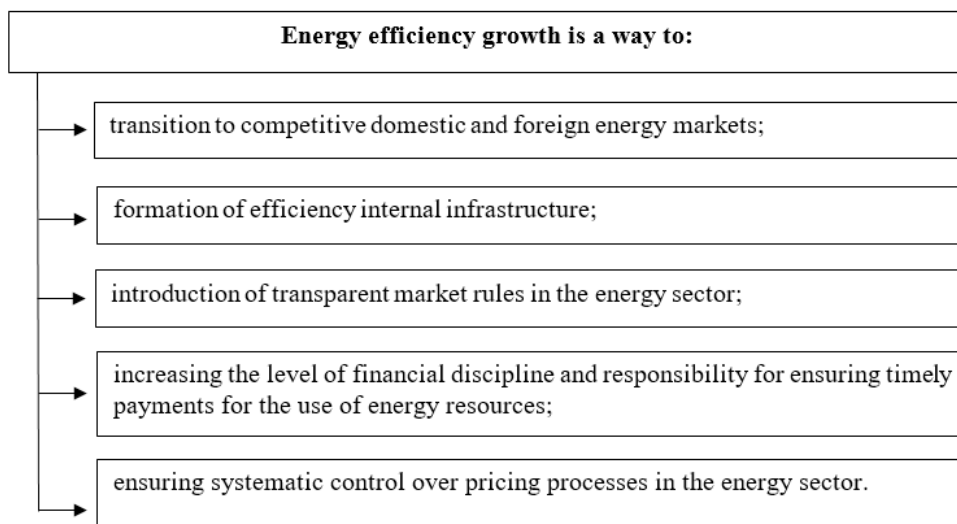


Fig. 8. Positive aspects of energy efficiency growth of the national economy
 Source: composed by the authors

Rys. 8. Pozytywne aspekty wzrostu efektywności energetycznej gospodarki narodowej

Thus, public policy continues to play a fundamental role in the development and formation of the domestic production of biofuels for its main producers. In the near future, most countries will continue to support domestic bioenergy industries to ensure their viability and competitiveness, especially in light of the current global environmental, climatic and financial shocks.

Conclusions

It is established that the most effective measures in the context of stimulating the production and consumption of biofuels in the world are: instruments of tariff and non-tariff protection of the domestic market from imports; norms of the obligatory minimum content of biofuel in fuel mixture with traditional energy sources and subsidies of biofuel producers (support of final production); state support for basic research, applied development and pilot projects (support for factors of production); subsidizing suppliers of feedstock that is used in biofuel production; subsidizing the biofuel distribution infrastructure; tax benefits that increase the consumer attractiveness of biofuels in comparison to traditional types of transport fuel (support for distribution and consumption).

For the formation, development and efficient production and use of biofuels in Ukraine, it is important to improve the mechanisms of regulatory policy. Effective legislative regulation of the bio-

fuel market that has norms corresponding with the regulatory requirements of the European Union would contribute to the formation of demand and supply for biological fuels and would help to utilize unused capacities for its production. For the development of the market for liquid, solid and gaseous biofuels in the short, medium and long term, it is necessary to create a favorable institutional and legal environment for the development of the production, circulation and use of biofuels.

The development of bioenergy would contribute to Ukraine's compliance with the requirements for reducing greenhouse gas emissions provided by international agreements, would create a guaranteed market for agricultural feedstock and biofuels and would promote the development of rural areas. In this view, the adaptation of Ukrainian legislation to EU requirements and ensuring the functioning of regulations at the appropriate level would be another step towards strengthening the country's energy security.

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Regulacje prawne produkcji biopaliw w Ukrainie

Streszczenie

Światowy przemysł biopaliw charakteryzuje się szeroką gamą środków legislacyjnych i regulacyjnych dotyczących rozwoju bioenergii. W celu pobudzenia produkcji biopaliw opracowano zestaw środków, w tym regulacje prawne, orientacyjne planowanie wielkości produkcji, preferencyjne opodatkowanie i wsparcie budżetowe. Ukraina znajduje się w pierwszej dziesiątce krajów o największym zużyciu surowców energetycznych. Słaba i niekonsekwentna polityka państwa w sferze biopaliw oraz niespójne przepisy prawne regulujące działania w zakresie produkcji, obrotu i wykorzystania biopaliw utrudniają efektywny rozwój rynku biopaliw w Ukrainie. Celem artykułu jest określenie elementów systemu państwowej regulacji bioenergii oraz wskazanie skutecznych mechanizmów w zakresie poprawy prawnej regulacji rynku biopaliw w Ukrainie. Omawiane w niniejszym artykule procesy zarządzania są przedstawione kilkoma metodami, które w szczególności odnoszą się do funkcjonowania struktur władzy oraz końcowych rezultatów lub celów systemu administracji publicznej. Obecnie występują znaczne niespójności w kształtowaniu i dalszym funkcjonowaniu ram regulacyjnych z prawodawstwem Unii Europejskiej w zakresie racjonalnego wykorzystania zasobów paliw i energii, których ograniczenia narastają ze względu na niespójność pomiędzy dystrybucją scentralizowaną a regionalną. Dlatego dalsze procesy efektywnego rozwoju gospodarczego Ukrainy będą w dużej mierze zależeć od rozwiązania problemu zrównoważonego zaopatrzenia w dostępne zasoby energii odnawialnej. Przyszły rozwój rynku biopaliw w Ukrainie będzie silnie zależał od uwarunkowań instytucjonalnych i prawnych w zakresie produkcji, obrotu i wykorzystania biopaliw.

SŁOWA KLUCZOWE: ustawodawstwo, biopaliwa, bioenergia, instrumenty regulacyjne