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THE LEGAL REGULATION OF ENERGY EFFICIENCY OF ENTERPRISES IN UKRAINE

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НОРМАТИВНО-ПРАВОВЕ РЕГУЛЮВАННЯ ЕНЕРГОЕФЕКТИВНОСТІ ПІДПРИЄМСТВ В УКРАЇНІ

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НОРМАТИВНО-ПРАВОВОЕ РЕГУЛИРОВАНИЕ ЭНЕРГОЭФФЕКТИВНОСТИ ПРЕДПРИЯТИЙ В УКРАИНЕ

Due to imperfect existing regulatory and legal framework, the level of energy efficiency in Ukraine today is extremely low. In the article based on the conducted research the basis of normative and legal regulation of energy efficiency in Ukraine was been singled out and analyzed and priority directions of ensuring energy efficiency were determined. The main subjects of the regulatory and legal regulation of energy efficiency in Ukraine were been identified. Based on study of analytical materials of the International Energy Agency, singled out key measures to regulate energy efficiency and investigated their use in Ukraine. The most developed control measures are considered, and it is analyzed what measures are developed less. An analysis of incentive measures for energy efficiency in Ukraine was been made. The shortcomings of the existing legislation in this sphere are given and ways of their overcoming was been suggested.

Keywords: energy efficiency; regulatory; measures; incentives.

Tabl.: 1. Bibl.: 21.

Унаслідок недосконалої існуючої нормативно-правової бази рівень енергоефективності в Україні сьогодні є надзвичайно низьким. У статті на основі проведеного дослідження виокремлено та проаналізовано основу нормативно-правового регулювання енергоефективності в Україні та визначено пріоритетні напрями забезпечення енергоефективності. Визначено основні суб'єкти нормативно-правового регулювання енергоефективності в Україні. На основі вивчення аналітичних матеріалів Міжнародного Енергетичного Агентства виокремлено основні заходи регулювання енергоефективності та досліджено їх застосування в Україні. Розглянуто заходи регулювання, що найбільше розвинені, та проаналізовано, які заходи розвинені найменше. Виконано аналіз заходів стимулювання енергоефективності в Україні. Наведено недоліки чинного законодавства в цій сфері та запропоновано шляхи їх подолання.

Ключові слова: енергоефективність; регулювання; заходи; стимулювання.

Табл.: 1. Бібл.: 21.

Вследствие несовершенной существующей нормативно-правовой базы уровень энергоэффективности в Украине сегодня чрезвычайно низкий. В статье на основе проведенного исследования выделено и проанализировано основу нормативно-правового регулирования энергоэффективности в Украине и определены приоритетные направления обеспечения энергоэффективности. Определены основные субъекты нормативно-правового регулирования энергоэффективности в Украине. На основе изучения аналитических материалов Международной Энергетического Агентства выделены основные меры регулирования энергоэффективности и исследовано их применение в Украине. Рассмотрено наиболее развитые меры регулирования и проанализировано, какие меры развиты меньше. Выполнен анализ мер стимулирования энергоэффективности в Украине. Приведены недостатки существующего законодательства в данной сфере и предложены пути их преодоления.

Ключевые слова: энергоэффективность; регулирование; меры; стимулирование.

Табл.: 1. Библ.: 21. **JEL Classification:** G28

Problem definition and its relationship with important practical tasks. Implementation of energy efficiency projects in Ukraine at all levels remains low. The reasons for this are the lack of interest of enterprises in implementing energy saving projects including the use of renewable energy sources, low incentives such projects by the state. At the household level to listed factors, we can add the imperfect system of subsidization that does not create incentives for efficient use of resources and energy efficiency.

Analysis of the latest researches and publications. To study of the mechanism of state regulation of energy efficiency in Ukraine dedicated works of Trofymenko O. O., Voitko S. V. [20], Podolets R. [11], Novak E. V., Pleskach B. M. [8], Struk V. O. [18], Kistynyuk T. [5], Drozhzhin D. Y. [2] and others. A detailed research of legislation of Ukraine in energy efficiency was made by the Secretariat of the Energy Charter [21].

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Bold of unsolved aspects of the problem. Despite the numerous amount of publications on the subject, there is no research of international practices of regulation of energy efficiency and studies the possibility of using them in Ukrainian reality.

Purpose of the article. The main purpose of this work is to analyze the existing legislative framework on energy efficiency, the study of global regulatory practices and developing proposals of address the deficiencies regulation of energy efficiency in Ukraine.

Presenting main material. Despite the lack of the concept of energy efficiency in Ukrainian legislation and on still missed the law «On Energy Efficiency», a that project was developed else in 2009, the legal basis for the definition and regulation of energy efficiency of business entities exist.

The basis of the legal framework of regulation relations in the sphere of energy efficiency are:

- 1. Law of Ukraine «On energy saving» from July 1, 1994 № 74/94-VR defined economic mechanism of energy efficiency (goals, objectives, events, incentives, etc.), and said principles of rationing and standardization in the energy saving sphere and bases for state examination and energy audit [15].
- 2. Law of Ukraine «On Electricity» from October 16, 1997 №5 75/97-VR defines the principles of state regulation of activities in the energy (including general principles for setting tariffs, including the «green» tariff) [14].
- 3. Law of Ukraine «On alternative fuel» from January 14, 2000 № 1391-XIV regulates the relations in manufacturing and use of alternative fuels, produced from biomass [12].
- 4. Law of Ukraine «On Alternative Energy Sources» from February 20, 2003 № 555-IV regulates relations in the field of alternative energy sources [13].
- 5. Law of Ukraine «On the introduction of new investment opportunities, guaranteeing the rights and legal interests of businesses for major energy modernization» from April 9, 2015 № 327-VIII regulates relations in energy service [16].
- 6. The Technical Regulation of construction products, buildings and constructions from December 20, 2006 establishes requirements for the energy efficiency of new buildings [19].
- 7. State targeted economic program for energy efficiency and the development of energy production from renewable energy sources and alternative fuels for 2010–2017 years from March 1, 2010 N_2 243 which identifies ways to reduce energy intensity of Ukraine's GDP by 20 % until 2020 [1].
- 8. Energy Strategy of Ukraine till 2030 from July 24 2013 № 1071-r that defines the development strategy of fuel and energy sector, the principles of state policy in the sphere of energy efficiency, evaluates potential of alternative and renewable energy sources and alternative fuels [3].
- 9. Strategy for Sustainable Development «Ukraine-2020» from January 12, 2015 in part of determination energy independence and energy efficient one of priority development directions. The strategy defines the goals of the state policy in this sphere the main ones are: reducing the energy intensity GDP by 20 % by 2020, implementation of projects with using renewable energy sources, switching to energy efficient technologies, reforming energy pricing, a departure from the system of subsidization and subsidies and others [17].
- 10. "National Action Plan for Energy Efficiency for the period until 2020" from November 25, 2015 defines energy efficiency measures in the household sector, industry, transport and services sectors and principles of an estimation these measures [7].

Especially important in the legal provision of energy efficient development of Ukrainian enterprises plays State Standard ISO 50001:2014 «Energy Management Systems. Requirements and guidelines on how to use», which is identical to international standard ISO 50001:2011 Energy management systems - Requirements with guidance for use [4]. This standard contains specific measures whose implementation will improve the energy efficiency of a particular company. They cover the following areas: energy planning, energy diagnosis, energy policy, the implementation

tation of energy efficiency measures, energy monitoring and analysis. At present, this standard is a single normative document in Ukraine, which tie to the practice management companies.

Having performed an analysis of the current legislation, we can conclude the main directions of energy efficiency in Ukraine is defined the following [1; 7]:

- Thermal modernization of existing residential buildings (warming of walls, windows, roofs, basements);
 - Energy certification of new buildings;
- Implementation of European standards for fuels used in the transport sector; stimulate purchases of energy-efficient types of transport (including city) and energy efficient equipment in the industrial sector;
 - Implementation of energy audit and energy management;
- introduce energy labeling of industrial equipment and household electrical appliances; popularization of energy-saving measures among the population.

In the legal regulation of energy efficiency in Ukraine, involving more than 15 institutions of different levels. The main ones are the Ministry of Economic Development and Trade (regarding provision of formation of public policy and legal regulation in the sphere of energy efficiency and energy saving), State Agency on Energy Efficiency and Energy Saving of Ukraine (regarding implementation of the state policy and control in areas of energy efficiency, energy saving, renewable energy), The National Commission for state regulation in the energy (conducting tariff and price policies on energy, regulation of monopolies).

International Energy Agency has made a detailed analysis of international practices of energy efficient, resulting in a number of analytical materials prepared in which examples and specific actions to provide for development energy efficiency [9]. Study of these materials has enabled us to prepare a list of regulatory measures that are most advisable in energy efficiency (Table).

Table

The main measures of state regulation in energy efficiency

Measures	Essence	Presence in Ukraine
Tariff policy	The use of differentiated tariffs depending on the amount of energy consumed	Partially existing
Control measures	The requirement of mandatory energy audit and energy management and decision of energy standards	Partially existing
Incentive measures	Subsidies, grants, tax exemptions for investment in energy efficient projects, the introduction of "green" tariff	Existing
Measures to market development	Conducting information campaigns, labeling of household appliances and certification of buildings, formation of energy efficient thinking, including by the inclusion of issues of energy efficiency in the school curriculum	Partially existing
Measures for tech- nological develop- ment	Design and demonstration (in the form of exhibitions, presentations, flyers, etc.) achievements in energy efficiency technologies (materials)	Existing
Measures for ca- pacity building	Creating favorable conditions for transition of energy service companies to the national market or forming own companies, training experts in the field, creating opportunities for exchange of experience (including via the Internet), the formation of educational and scientific programs	Practically absent
Financial measures	Creating the funds for financing energy efficient measures, granting credits to low or zero interest rates	Under Construc- tion

As you can see from the Table, from the specified list of state regulation measures in Ukraine partially existing are measures for market development, control measures and tariff policy. Measures to market development in Ukraine limited legal framework for labeling of household appliances and a number of DSTU and GOST. Tariff policy that meets the re-

quirements of the International Energy Agency, applies only in relation to electricity. In the sphere of thermal power, similar tariff policy today in Ukraine cannot be used due to lack the counters of heat and their expensive for households. Controlling measures in Ukraine fixed DSTU ISO 50001:2014 and series of energy DSTU; at the same time, being developed the draft law "On energy efficiency of buildings". At the stage of development and implementation financial measures are (a bill "On creation the energy efficiency Fund"). Practically absent in Ukraine are measures aimed at capacity building energy efficiency in Ukraine (of all list are existing only training centers for energy managers). Therefore, we believe that regulatory agencies is these measures should be give the most attention.

The most widespread in Ukraine measures of state regulation of energy efficiency are incentive measures. Principles of incentives energy efficiency in Ukraine are now fully concentrated in the Law of Ukraine "On Electricity" (by imposing green electricity tariff that was produced completely or partially from renewable energy sources) [14] and the Tax and Customs Code of Ukraine. For companies that use energy technology (equipment, materials) or using energy from renewable energy incentives established on payment of profits tax, customs duties and value added tax.

- 1) Benefits on payment of customs duty benefits obtains if the goods imported used the taxpayer for its own manufacture and identical products with the same quality characteristics are not produce in Ukraine. Operations of import energy efficient equipment into Ukraine are exempt from tax (Article 282 of Custom Code of Ukraine) [6];
- 2) Benefits on payment of tax on profit of enterprises the Tax Code of Ukraine provides two benefits variants (Art. 158) [10]:
- a) tax exemption of 50 % of profit derived from the implementation of energy efficiency measures and energy efficiency projects of enterprises included in the State Register of enterprises, institutions and organizations engaged in the development, implementation and use of energy efficiency measures and energy efficiency projects;
- b) tax exemption 80 % of profit derived from the sale of goods of own production in Ukraine which promote the development of energy efficient technologies.
- 3) Benefits on payment of value added tax provides tax exemption to VAT transactions on importation into Ukraine on condition that these goods are used by the taxpayer for its own manufacture and are not produced in Ukraine identical products with the same quality characteristics (Paragraph 16 of Article 197 of the Tax Code) [10]:
- a) equipment that is working on renewable energy, energy saving equipment and materials, measuring tools, control and management of fuel and energy resources, equipment and materials for the production of energy from renewable energy sources;
 - b) Materials, equipment and components that are used for production.

Despite the presence of preferential legislation in practice to obtain the above benefits is extremely complicates by the severity of proof by the taxpayer of the fact that Ukraine has not produced products with the same characteristics. In addition, the fact of limiting choice of place of production of energy efficient equipment (or materials) is not too stimulating to purchase.

The regulatory framework to stimulate renewable energy in Ukraine also has significant drawbacks. Tax Code of Ukraine provides a number of benefits that can be applies at implementation of renewable energy projects [10]:

- 1) Exemption from payment of VAT and customs duty imports of equipment that works for renewable energy exempt from paying VAT and duty exemptions for its import to Ukraine;
 - 2) Reduction of the land tax land tax is payable at 25 % of the land tax rate;
- 3) Reduced of rent total annual payments for land granted for placing construction, maintenance and operation of power stations for energy production from renewable sources,

including technology infrastructure of power stations (production facilities, bases, distribution points, power plants, electric networks) shall not exceed 3% of the normative evaluation;

- 4) Exemption from payment of profit tax profit from core operations of the company, which produces electricity only from renewable sources is exempt from profit tax for 10 years;
- 5) «Green tariff» a special tariff for electricity generated at the power stations that use alternative energy sources (except blast and coke gases and for hydropower produced small hydro power stations only). Under the Law "On alternative energy sources", such sources include: 1) renewable energy sources, which include solar, wind, geothermal energy, wave energy and tidal, hydropower, biomass, gas from organic waste, gas from sewage treatment stations, biogas; 2) secondary energy resources, which include blast and coke gas, degassing of methane gas from coal deposits and other [13].

However, legislation related to the benefits for stimulation renewable energy has a number of drawbacks. These drawbacks include:

- 1. Companies that generate electricity along with traditional and renewable sources, are not entitled to exemption from of Profit Tax and the establishment of "green" tariff this reduces the possibility of a gradual transition to renewable energy does not create enough motivation for realization projects using alternative energy. Fix this problem maybe by setting a proportional or differential tariff rates (income tax), depending on the share of renewable energy.
- 2. The difficulty of proof that the land really been received for placing construction, maintenance and operation of power stations for the production of energy from renewable sources the procedure of recognition of land such as that provided for the production of energy from renewable energy sources is not legally defined, its creates a possibility to delay the process of decision and to request additional documents. Possible ways to regulation this issue is to establish procedure for recognizing land for the production renewable energy and definitions exhaustive list of documents to obtain the benefit on payment of the land tax.
- 3. The requirement of local content projects that will allow to use energy from renewable sources, and which may use "green" tariff necessarily must to use part of the goods and works of national origin. The share of Ukrainian component for the objects that produce energy using solar, wind, biomass and biogas, set at 50%. Since the production of parts for power stations that use renewable energy, in Ukraine is not fully established (no market as such), this requirement only creates additional barriers to entry of Ukraine and scares potential investors. In the current environment, it would be appropriate to remove this requirement or defer effect.
- 4. Essential modernization of power stations that use renewable energy or building of additional facilities (for an amount of more than 50 % of their original value) after 2014, 2020 and 2024 will result in lower rates "green" tariff for all power stations by 10, 20 and 30 % respectively. Since the funds are exempt from enterprise profits tax profit could being used for modernization of power companies, the introduction of new technologies, increase production, negative consequences in the form of lower rates "green" tariff looks illogical [21].

Conclusions and proposals. Based on the above stated priority measures on improvement the current situation with energy efficiency in Ukraine we determine the following:

- adoption of Law of Ukraine «On energy efficiency», which aims to regulate relations associated with the use fuel and energy resources and to ensure their effective use and reduce the negative impact on the environment. This law determines public policy, mechanisms of ensuring and sources of funding for energy efficiency measures;
- adoption of Law of Ukraine "On energy efficiency of buildings", which defines the legal and organizational bases of activity in energy efficiency of buildings and aims to create conditions for reduction energy consumption in buildings;
- introduction activities to promote the energy efficiency and increasing public and enterprises awareness about advantages and action from energy efficiency;

- creating an effective financial mechanism that will allow to finance energy efficient projects involving credit facilities at reduced or zero interest rates;
- creating the possibility of publishing information of enterprises about the level of energy consumption, emissions into the environment, and realized projects in energy efficiency;
 - organization of interaction between regional authorities, universities and businesses;
- introduction measures to create energy efficient thinking and public environmental responsibility through thematic lessons in schools, colleges, institutions of higher education; launch social advertisement in the media and the Internet; broadcasting of documentaries, etc.;
 - the elimination of existing drawbacks of legislation.

The prospects for further research may be studies of development potential of public-private partnership in energy efficiency.

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