

REGULATORY AND LEGAL CONCEPTUALIZATION OF ENERGY EFFICIENCY OF BUILDINGS

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Abstract. The article is devoted to a comprehensive study of the regulatory and legal conceptualization of energy efficiency of buildings in Ukraine in the context of the implementation of European standards and the formation of a national legal regulation system. The evolution of the conceptual apparatus from the term "energy saving" to "energy efficiency" is analyzed, which reflects the transition from quantitative restrictions on consumption to improving the quality of energy use in accordance with the requirements of Directive 2010/31/EU on the energy performance of buildings and Directive 2012/27/EU on energy efficiency. The basic legislative acts are studied, in particular the Law of Ukraine "On Energy Performance of Buildings", the Law of Ukraine "On Energy Efficiency" and the creation of the Energy Efficiency Fund as an institutional mechanism for supporting the thermal modernization of residential buildings with total funding of over 2 billion UAH. The main legal regulatory instruments are identified: a system of mandatory energy certification of buildings, energy audit, minimum requirements for energy efficiency of new buildings and the concept of buildings with a near-zero energy consumption level. An analysis of by-laws and technical standards that form a comprehensive regulatory system from design to operation of buildings, including methods for calculating energy characteristics and energy efficiency classification, was carried out. It was established that Ukrainian legislation successfully integrates European approaches, creating a legal basis for a systematic reduction in energy consumption in buildings and achieving climate goals by 2050. The practical implementation of the concept demonstrates positive results in the period 2018-2023. The average level of energy savings after thermal modernization is 31.3%, which confirms the effectiveness of legal mechanisms for stimulating energy efficiency and the need for further improvement of the regulatory framework.

Keywords: energy efficiency of buildings, legal regulation, energy certification, thermal modernization, European integration, energy audit, sustainable development.

Introduction. Energy efficiency of buildings is a priority area of modern state policy in the context of global challenges of energy security and climate change. According to the European Commission, about 40% of total final energy consumption in EU countries is accounted for by buildings [1]. In Ukraine, the situation is complicated by the historically high energy intensity of the economy and the dilapidated housing stock. In particular, energy costs for heating a typical apartment in Ukraine are 2–3 times higher than the average in EU countries [2]. As a result, increasing the energy efficiency of buildings is considered a strategic way to reduce energy consumption, reduce greenhouse gas emissions, and save the population's costs for housing and communal services.

It should be noted that Ukraine, moving in line with European integration processes, has undertaken to implement EU regulations in the field of energy efficiency, in particular Directive 2012/27/EU on energy efficiency and Directive 2010/31/EU on the energy performance of buildings [3, 4]. The implementation of European standards in Ukraine takes place at the intersection of two important trends: ensuring sustainable (balanced) development and reforming national legislation in accordance with European standards. Domestic researchers A. Kalensky and T. Gerlyand rightly

note that the issues of legal support for energy efficiency of buildings are among the leading ones in the context of sustainable development law of today [5]. That is why, in recent years, a comprehensive regulatory and legal framework has been formed in Ukraine, which laid the conceptual and organizational foundations for ensuring the energy efficiency of buildings.

Analysis of recent research and publications. The issue of legal support for the energy efficiency of buildings was studied by domestic scientists A. Kalensky and T. Gerlyand, who rightly note that these issues are among the leading ones in the context of the law of sustainable development of our time [5]. Policy and regulatory updates have created clearer institutional requirements for minimum performance, certification, and management practices in buildings. However, it should be noted that official guidelines explicitly highlight methodological and procedural challenges that, if not addressed, will make regulations ineffective [6, 7]. O.O. Kravchuk critically assessed certain provisions of the legislative changes, in particular the premature introduction of administrative liability for unforeseen consequences of thermal modernization [8]. In modern Ukrainian scientific doctrine, we can find a similar position in the works of scientists who note the need to verify the proportionality, legal certainty and predictability of the consequences of sanctions, taking into account the real practice of law enforcement (S.B. Smereka, S.M. Lifirenko) [9]. Technical aspects of energy certification were studied by V.I. Deshko, M.M. Shovkalyuk, and Y.S. Kuzmina, who analyzed the database of energy efficiency certificates for buildings in Ukraine [10]. A. Ryabikov draws attention to the sensitivity of class assignment to data quality and accepted assumptions of the methods, which requires validation of models on real consumption and greater transparency of calculations [11]. Also noteworthy is the empirical study by S. Kovtun, O. Dekusha, and A. Ryabikov, who consider the quality of the initial parameters and the reproducibility of the methods, in particular in connection with audits and the tightness of enclosing structures [12]. Comparisons with European benchmarks for the building sector demonstrate that achieving target trajectories without synchronizing norm-setting, data and monitoring, reporting and verification (MRV) procedures appear problematic. Consequently, the national policy focus should shift from declarations to proven efficiency instruments. At the same time, there is a lack of comprehensive research that reveals the theoretical and legal foundations of the formation of the concept of energy efficiency of buildings in national legislation. An unsolved part of the problem remains the analysis of the evolution of the conceptual apparatus, the systematization of legal mechanisms and the assessment of the effectiveness of their practical implementation in the context of the implementation of European standards.

The purpose of the study is to conduct a comprehensive analysis of the regulatory and legal conceptualization of energy efficiency in buildings in Ukraine and to identify the features of its formation in the context of European integration. Achieving the goal requires the following tasks:

- analyze the evolution of the conceptual apparatus of energy efficiency of buildings in national legislation;
- investigate the system of basic legislative acts and their innovations in the field of energy efficiency of buildings;
- characterize the legal mechanisms for ensuring energy efficiency (certification, energy audit, minimum requirements);
- analyze secondary legislation and technical standards as elements of a comprehensive system;
- assess the practical effectiveness of legal mechanisms for stimulating energy efficiency of buildings.

Materials and research methods. The research was carried out on the basis of an analysis of the national legislation of Ukraine in the field of energy efficiency of buildings, including laws, by-laws, technical regulations and standards. Official reports of the Energy Efficiency Fund, statistical data on the implementation of thermal modernization programs, as well as scientific publications of domestic and foreign researchers were used. The methodological basis is the methods of comparative legal analysis for comparing Ukrainian norms with European directives, the systemic method for studying the relationships between different levels of legal regulation, the historical and

legal method for analyzing the evolution of the conceptual apparatus, as well as empirical analysis for assessing the practical effectiveness of legal mechanisms based on actual energy saving indicators after the implementation of energy efficiency measures.

Research results. The regulatory and legal conceptualization of energy efficiency of buildings begins with the definition of basic terms in the legislation. Energy efficiency in modern Ukrainian law is interpreted as a quantitative indicator of the ratio of the result (work, service, product or energy at the output) to the energy consumed at the input. This definition is enshrined in Art. 1 of the Law of Ukraine dated 21.10.2021 No. 1818-IX "On Energy Efficiency" (hereinafter referred to as the Law on Energy Efficiency) and corresponds to EU approaches focused on the optimal ratio of energy consumption and useful result [6].

At the same time, the special concept of "energy efficiency of a building" is formulated in the relevant law in the field of construction. In accordance with the provisions of Part 1, Article 1 of the Law of Ukraine dated 22.06.2017 No. 2118-VIII "On Energy Efficiency of Buildings" (hereinafter referred to as the Law on Energy Efficiency of Buildings), the energy efficiency of a building is defined as "a property of a building characterized by the amount of energy required to create proper living conditions and/or life activities of people in such a building" [7]. In other words, it is an integral indicator of the quality of a building in terms of energy consumption to ensure a comfortable environment.

For the sake of completeness of the conceptual apparatus, the Law on Energy Efficiency of Buildings introduces a number of related terms. In particular, the legislative level establishes the definition of a building with a near-zero energy consumption level – that is, a building whose energy efficiency exceeds the minimum established requirements and which uses energy from renewable sources to a significant extent. The aforementioned concept implements the European concept of nearly zero-energy building (NZEB) and sets a benchmark for the future development of the industry. The law also defines the energy certificate of a building as a document of a prescribed form that reflects the indicators and class of the building's energy efficiency and contains recommendations for their improvement. The concept of minimum requirements for energy efficiency or a set of regulatory indicators for buildings and their engineering systems, the implementation of which ensures an acceptable level of energy consumption, deserves special attention [7]. Thus, it can be argued that at the legislative level, criteria and indicators are clearly formulated through which the concept of energy efficiency of buildings is revealed.

It is worth noting the evolution of the state's approaches. For example, if the previous Law of Ukraine "On Energy Saving" of 1994 focused on the rational use and economical consumption of fuel and energy resources (the term "energy saving" was defined as an activity aimed at saving energy) [13], then modern legislation has moved to the term "energy efficiency", the meaning of which focuses more on the final useful result from the energy consumed. This change in concept reflects a shift from quantitative consumption limitation ("savings") to improving the quality of energy use ("efficiency"). In our opinion, the transformation of focus is justified, because it is precisely increasing energy efficiency, and not just energy savings, that can ensure long-term energy consumption reduction without compromising comfort and development.

It should be noted that the modern system of regulatory legal acts in the field of energy efficiency of buildings is formed primarily by two basic laws. The first is the already mentioned Law on Energy Efficiency of Buildings of 2017, which came into force in July 2018. It defined the legal, socio-economic and organizational principles of activities in the field of ensuring the energy efficiency of buildings and was aimed at reducing energy consumption in buildings. Simply put, the adoption of the law laid the foundation for the legal regulation of relations related to the assessment of the energy efficiency of buildings, the establishment of standards and the implementation of measures to increase the energy efficiency of existing and new buildings.

The main innovations of the Law on Energy Efficiency of Buildings were the introduction of a system of mandatory energy certification of buildings and energy audits. According to Part 1 of Article 7 of the Law, energy certification is mandatory for a number of categories of objects, in particular:

- for newly built buildings (or those undergoing reconstruction or major renovation) of significant and medium impact class (CC2, CC3);
- for state-owned buildings with a heated area of over 250 m², which are frequently visited by citizens and which house state authorities;
- for buildings of local government bodies with a heated area of over 250 m² (in case of thermal modernization);
- for buildings that are thermally modernized with state support (provided that the result is not lower than the established minimum energy efficiency class) [7].

Thus, the legislator has determined that the most significant public sector buildings and new projects are subject to mandatory control of their energy performance. In other cases, certification is carried out voluntarily by the owner's decision, but in the event of the sale or lease of a building, the owner is obliged to provide the potential buyer with information about the availability of an energy certificate. The certificate contains the energy efficiency class assigned to the building (from A to G) and recommendations for improving efficiency, which strengthens the motivation for energy modernization [10].

The Law on Energy Efficiency of Buildings also established requirements for energy audits. Energy certification is actually a separate type of energy audit of a building, which is carried out by independent certified energy auditors. In addition, regular inspections of heating and air conditioning systems in buildings are provided for, the results of which are recorded in reports with recommendations (the so-called energy audit of engineering systems). Liability has been introduced for failure to comply with these requirements. In accordance with the provisions of Art. 17 of the Law, violation of the requirements for mandatory certification and failure to provide relevant information entails sanctions provided for by the Code of Ukraine on Administrative Offences (hereinafter referred to as the Code of Administrative Offences of Ukraine). In particular, in 2017, Art. 96-2 was added to the Code of Administrative Offences, which provides for a fine for failure to place an extract from the energy certificate of a building in an accessible place or other violations in the field of energy efficiency of buildings [14]. Thus, the state has created mechanisms to control and encourage compliance with the requirements of the law.

It should be noted that the Law on Energy Efficiency of Buildings simultaneously amended other acts in order to harmonize the legal field. In particular, as already noted, it supplemented the Code of Administrative Offences of Ukraine with a new Article 96-2. However, scientists have critically assessed certain provisions of these amendments. According to O.O. Kravchuk, it was premature to introduce administrative liability of the customer of thermal modernization for unforeseen consequences. In particular, the requirement of the Law to notify the energy supplier of the expected reduction in energy/water consumption after thermal modernization and fines for failure to comply with this requirement (new Article 96-2 of the Code of Administrative Offences) are debatable. In his own work, the researcher proposed to exclude the aforementioned norm from the Code altogether, since it is premature and insufficiently substantiated [8]. Along with O.O. Kravchuk's position on the prematurity of certain obligations, Ukrainian authors also draw attention to other challenges of practical law enforcement. The already mentioned S. B. Smereka and S. M. Lifirenko, in particular, rightly point out that without procedural consistency of instruments (energy management, certification, ESCO), the effects of the policy are not verified and "dissolve" at the implementation stage [9]. Representative of the Volyn scientific community V.S. Hrachuk emphasizes the need for legal certainty and compatibility with EU requirements to ensure predictability [15].

A similar position can be found in P.V. Rekotov and V.L. Kovalenko, who rightly note that the effectiveness of energy conservation/energy efficiency policy is determined by the creation of norms and the coherence of organizational and legal mechanisms (market methods of regulation, the introduction of program documents, technical regulation (technical regulations, DSTU, TU), the implementation of self-regulation elements with delegated powers). In their own work, the authors argue that without proper institutional capacity, standardization of procedures and resource/staffing, new requirements are not converted into the expected result. For the building sector, this means the

need to synchronize technical regulation (minimum requirements, methodologies), management practices (energy management, MRV) and financial incentives (ESCO, etc.) so that the assessment of effects has proper verifiability and legal certainty [16].

Considering the gradual development of the regulatory framework, it should be noted that no less important act was the Law of Ukraine dated 08.06.2017 No. 2095-VIII "On the Energy Efficiency Fund", adopted in a package with the previous one. In accordance with the provisions of the Law, a new state institution was created – the Energy Efficiency Fund, the purpose of which is to support the implementation of energy-efficient measures in buildings (primarily in the residential sector) by financing thermal modernization projects. The Energy Efficiency Fund provides grants to associations of co-owners of apartment buildings (OSBB) and other entities for insulation, modernization of heating systems, installation of energy-saving equipment, etc. By applying to the Fund's support programs, Ukrainian households received a financial incentive to increase the energy efficiency of their buildings, which is an important component of national experience [17].

The next important stage was the adoption of the Framework Law on Energy Efficiency of 2021. It entered into force partially in 2022, and in full in 2023–2024, replacing the outdated Law "On Energy Saving". It should be noted that the Law has a broader subject of regulation, going beyond the construction industry, and establishes general rules for ensuring energy efficiency in the production, transportation, distribution and consumption of energy. In the part concerning buildings, Law No. 1818-IX supplemented and expanded the previous norms. In particular, it established a requirement that state authorities and local governments can rent or purchase only those buildings whose energy efficiency class is not lower than the minimum requirements. In our opinion, the innovation stimulates the public sector to switch to energy-efficient premises. The law also introduces mandatory implementation of energy management systems in government bodies, which is implemented in practice through the creation of units or appointment of responsible persons responsible for monitoring energy consumption and implementing energy efficiency measures. Large enterprises are required to conduct an energy audit of their facilities every 4 years, which indirectly affects commercial real estate (office and industrial buildings). It is important that the Law also provides for the development of a National Action Plan for Energy Efficiency and the creation of an information system for monitoring energy efficiency, which also covers the field of buildings [6]. Thus, legal regulation goes beyond purely building codes and covers the full cycle of energy efficiency management (standards, minimum requirements, energy management, regular audits, national planning). The combination of legal regulation with the use of an effective monitoring information system allows for measurability and reporting, making the consequences of the policy predictable and accountable.

It should be noted separately that the regulatory concept of energy efficiency of buildings also includes by-laws and technical standards. At the by-law level, the specified strategic approach is reflected in interrelated resolutions of the Cabinet of Ministers, orders of the central body in the field of construction and technical standards, which set a transparent trajectory for construction entities from measurement to verification of the results of thermal modernization. In accordance with par. 1, clause 1 of the resolution of the Cabinet of Ministers of Ukraine dated 23.12.2021 No. 1460 "On the implementation of energy management systems", state authorities and institutions implement energy management systems with fixation of policies, roles and procedures for energy monitoring, which creates an organizational framework for planning and controlling activities in buildings [18].

In accordance with the provisions of the Order of the Ministry of Community and Territorial Development of Ukraine dated October 27, 2020 No. 260 "On Approval of Minimum Requirements for Energy Efficiency of Buildings", threshold values of energy efficiency indicators for building envelopes and engineering systems have been established, which are subject to periodic review and directly applied in design and operational documentation [19].

In addition, according to the orders of the Ministry of Regional Development, Construction and Housing of Ukraine dated 11.07.2018 No. 169 "On approval of the Methodology for determining the energy efficiency of buildings", No. 171 "On approval of the Procedure for applying calculation

elements of software for determining the energy efficiency of buildings", No. 172 "On approval of the Procedure for conducting energy efficiency certification and the form of an energy certificate" and No. 173 "On approval of the Methodology for inspecting building engineering systems", calculation algorithms, software suitability criteria, certification procedure and instrumental inspections of systems have been standardized, which makes it impossible to make technical conclusions arbitrary and increases the reproducibility of results [20-23].

In accordance with the provisions of the order of the Ministry of Community and Territorial Development of Ukraine dated October 28, 2024 No. 1196 "On approval of the Procedure for monitoring the achievement of the energy saving target indicator in buildings of state authorities", an annual MRV cycle has been introduced with formulas for calculating the target achievement indicator and a fixed list of typical measures with a regulatory effect, which translates monitoring into the plane of mandatory management procedures for public buildings [24]. Also worth mentioning are the Resolution of the Cabinet of Ministers of Ukraine dated 21.10.2015 No. 845 "On Approval of the Model Energy Service Agreement" and the Law of Ukraine dated 09.04.2015 No. 327-VIII "On the Introduction of New Investment Opportunities, Guaranteeing the Rights and Legitimate Interests of Business Entities for Large-Scale Energy Modernization", which establish the legal model of ESCO contracting with the methods of the baseline level of consumption and verification of the achieved result, which allows financing modernization without initial budget investments [25, 26].

In accordance with the provisions of DBN V.1.2-11:2021 "Basic requirements for buildings and structures. Energy saving and energy efficiency" and DBN V.2.6-31:2021 "Thermal insulation and energy efficiency of buildings", the requirements for achieving target energy efficiency classes and the methodology for thermal engineering calculations of enclosing structures, which are mandatory during design, reconstruction and overhaul, are established [27, 28].

Additionally, in accordance with the provisions of the Resolution of the Cabinet of Ministers of Ukraine dated December 29, 2021 No. 1803-r "On Approval of the National Energy Efficiency Action Plan for the Period until 2030", public policy sets indicators and consumption reduction trajectories for the construction sector, which are integrated into local energy plans [29]. In our opinion, this combination of measurability through commercial accounting, management capacity through energy management systems, and technical certainty through DBN and methodologies forms a meaningful construct of "energy management as a right" in construction, reducing regulatory uncertainty for the customer and designer.

The analysis of the above documents and scientific works gives the author reason to assert that the regulatory and legal conceptualization of energy efficiency of buildings in Ukraine has undergone intensive development over the past decade. Today, it can be stated that a modern conceptual apparatus has been formed, harmonized with the European one (energy efficiency, building class, minimum requirements, Nearly Zero Energy Building, etc.), and an institutional infrastructure has been created (Energy Efficiency Fund, energy audit system, energy management, state monitoring of indicators). The practical implementation of the energy efficiency concept is already bringing results in the form of numerous thermal modernization projects. For example, according to the official results of the Energy Efficiency Fund, within the framework of the "Energodim" program in 2019–2024. hundreds of thermal modernization projects of apartment buildings have already been implemented or partially completed; the average confirmed level of energy savings after the measures is 31.3% (insulation of enclosing structures, installation of ITP, modernization of engineering systems, etc.), which empirically fits into the typical ranges of 20–50% for complex solutions. Detailed aggregated indicators (675 projects in progress, over 380 implemented; annual energy savings of ≈ 310 million kWh; reduction of CO₂ emissions of ≈ 84 thousand tons/year) are provided in the FEE report on the five-year anniversary of the program [30].

Mandatory certification of public sector buildings revealed the real state of energy consumption and stimulated the implementation of energy-saving measures in schools, hospitals, and institutions. Thus, the Ukrainian experience of regulatory and legal support for energy efficiency of buildings can be considered a successful example of how legislative initiatives are

transformed into specific changes in the construction industry and housing and communal services. At the same time, challenges remain, in particular, the need to ensure full implementation of the adopted standards. In practice, far from all owners and managers of buildings conscientiously comply with the requirements for certification or energy audit, so a more effective system of control and incentives is needed. Sanctions for violations in the field of energy efficiency are still infrequently applied, and therefore, the mechanisms for their implementation should be improved. The issue of updating building standards is also relevant, technologies are developing rapidly, and regulatory requirements require periodic revision (which, by the way, is foreseen, the Ministry of Regional Development reviews the minimum requirements every 5 years) [31].

No less important is the further integration of Ukraine into the European Green Deal. The implementation of updated EU requirements is expected, in particular, regarding the complete decarbonization of buildings by 2050, the introduction of even more ambitious standards (for example, class A0 - buildings with a zero energy balance). The legislative framework will develop in accordance with these goals, providing legal instruments to achieve them.

Conclusions. The regulatory and legal conceptualization of energy efficiency in buildings in Ukraine currently includes clear definitions of basic concepts and a set of legal mechanisms for the practical implementation of energy efficiency policy. Requirements for buildings at all stages of the life cycle have been established (through building codes, energy certification, energy audit and monitoring). European approaches have been integrated into national legislation, which is confirmed by the consistency of Ukrainian norms with EU directives. The state has taken a course towards a systematic reduction in energy consumption in buildings by legally regulating the minimum permissible indicators and stimulating an increase in the energy efficiency class of each building.

Thus, we can speak of a legal concept of energy efficiency in buildings formed in Ukraine, which is based on the priority of rational use of energy without loss of comfort and functionality of buildings. The aforementioned concept serves as an important element of the strategy of sustainable development and energy security of the state. Further improvement of legislation in this area, taking into account scientific recommendations and European experience, will contribute to achieving the set goals (reducing energy consumption, financial savings for citizens and improving the environmental quality of the architectural environment). In summary, the regulatory concept of energy efficiency of buildings in Ukraine meets modern challenges and forms the basis for future generations of energy-saving and comfortable buildings.

Prospects for further research. In our opinion, the following are relevant areas for future scientific exploration:

- empirical validation of the relationship between energy efficiency requirements and actual consumption indicators in different types of buildings;
- comparative legal analysis of the implementation of the updated EU Buildings Directive (EPBD recast) in the part of nZEB/zero-emission buildings and its adaptation to Ukrainian realities;
- assessment of the effectiveness of MRV procedures and data standards for energy certification (including the quality of input parameters and reproducibility of methodologies);
- study of the proportionality of administrative obligations and incentives (in particular for the public sector) through the prism of law enforcement practice;
- legal models of financing deep thermal modernization (ESCO, "green" banking, municipal instruments) and risk sharing between participants.

In our opinion, the institutional capacity of local governments to implement energy management and integrate local energy plans with the National Energy Efficiency Action Plan requires separate study.

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**НОРМАТИВНО-ПРАВОВА КОНЦЕПТУАЛІЗАЦІЯ ЕНЕРГОЕФЕКТИВНОСТІ
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Анотація. Стаття присвячена комплексному дослідженню нормативно-правової концептуалізації енергоефективності будівель в Україні в контексті імплементації європейських стандартів та формування національної системи правового регулювання. Проаналізовано еволюцію понятійного апарату від терміну "енергозбереження" до "енергоефективність", що відображає перехід від кількісного обмеження споживання до підвищення якості використання енергії відповідно до вимог Директиви 2010/31/ЄС про енергетичні характеристики будівель та Директиви 2012/27/ЄС про енергоефективність. Досліджено базові законодавчі акти, зокрема Закон України "Про енергетичну ефективність будівель", Закон України "Про енергетичну ефективність" та створення Фонду енергоефективності як інституційного механізму підтримки термомодернізації житлових будинків із загальним фінансуванням понад 2 млрд грн. Визначено основні правові інструменти регулювання: систему обов'язкової енергетичної сертифікації будівель, енергоаудит, мінімальні вимоги до енергоефективності новобудов та концепцію будівель з близьким до нульового рівнем споживання енергії. Здійснено аналіз підзаконних актів та технічних стандартів, що формують комплексну систему регулювання від проєктування до експлуатації будівель, включаючи методики розрахунку енергетичних характеристик та класифікацію енергоефективності. Встановлено, що українське законодавство успішно інтегрує європейські підходи, створюючи правові основи для системного зменшення енергоспоживання у будівлях та досягнення кліматичних цілей до 2050 року. Практична реалізація концепту демонструє позитивні результати у період 2018-2023 років. Середній рівень економії енергії після термомодернізації становить 31,3%, що підтверджує ефективність правових механізмів стимулювання енергоефективності та необхідність подальшого вдосконалення регуляторної бази.

Ключові слова: енергоефективність будівель, правове регулювання, енергетична сертифікація, термомодернізація, європейська інтеграція, енергоаудит, сталий розвиток.

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