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# COMPATIBILITY OF EU AND SERBIAN ENERGY POLICIES WITH SPECIAL REFERENCE TO BUILDINGS

### Abstract

The sustainable development of Serbia and the process of accession to the European Union cannot be viewed as separate or parallel processes, but represent a mechanism of holistic transformation of Serbian society into a sustainable community. It is a matter of normative regulation of the relationship between the new necessary values of true development. The process of harmonization of EU and Serbian energy policies in the construction sector is important, in terms of achieving energy efficiency of buildings. This paper deals with the issues of verification of national construction regulations on energy efficiency of buildings in order to achieve energy savings and strengthen market surveillance of energy efficient products implemented in EU member states.

Keywords: energy policy, energy efficiency, buildings

# КОМПАТИБИЛНОСТ ЕНЕРГЕТСКЕ ПОЛИТИКЕ ЕУ И СРБИЈЕ СА ПОСЕБНИМ ОСВРТОМ НА ЗГРАДАРСТВО

### Сажетак

Одрживи развој Србије и процес приступања Европској унији не могу се посматрати ни као одвојени ни као паралелни процеси, већ представљају механизам холистичке трансформације српског друштва у одрживу заједницу. Ради се о нормативном регулисању односа између нових неопходних вредности истинског развоја. Процес усаглашавања енергетских политика ЕУ и Србије у грађевинском сектору је важан, у смислу постизања енергетске ефикасности зграда. Овај рад се бави питањима верификације националне грађевинске регулативе о енергетској ефикасности зграда у циљу постизања уштеде енергије и јачања тржишног надзора енергетски ефикасних производа који се спроводи у земљама чланицама ЕУ.

Кључне ријечи: енергетска политика, енергетска ефикасност, зградарство.

# **1. INTRODUCTION**

The energy market is a single system, which means that disruptions in one region will be transferred to the functionality of global energy supply. The protection of national markets cannot be effectively ensured without a legally stable regulation of the international legal framework for energy supply, based on the need to prevent and eliminate existing distortions in energy supply. The Republic of Serbia, as a member of the European Energy Community, is continuously harmonizing regulations with EU regulations, which, along with Russia, is our most important energy partner. [1] Energy is of great importance in the world economy. Tendencies point to further growth in world consumption energy, to in the period from 2015 to 2040 increase by 28%. They stand out as the biggest future consumers of energy industry, transport and construction. The industry is expected to survive leading position in energy consumption with a share of 50% (increase of 0.7%), but also that annual energy consumption will grow somewhat faster in the field of transport (1% per year) and construction (1.1% per year). [2]

Many believe that population and environmental issues will be key political issues on the global agenda of the 21st century in an economically and ecopolitically interdependent world. According to the FAO (Food and Agriculture Organization), in 2050, 9.1 billion people will live on Earth. The current course of the 21st century is the stage of a great demographic transition or a new migration of peoples. Scientists gathered in the organization TWI2050 claim that the world is at a crossroads and that the achievement of global goals of sustainable development, set for 2030, but still requires urgent and major transformation of society, economy and technology without precedent, and that the six most important areas or drivers: human capacity and demography; sustainable consumption and production; decarbonization and energy; food, biosphere, water and oceans; smart cities; and the digital revolution. They also remind that the world should no longer be comfortable, because the necessary changes in two of the three fields of sustainable development (society and environment) are happening too slowly. [3]

The 3P model (people, planet, profit) did not lead to the establishment of sustainable production, which returns more to nature than it took. The business sector continues to visibly reluctantly and above all cosmetically transform the current unsustainable way of making industrial production on the principle of take-make-waste into an incomparably more responsible concept from cradle-tocradle, a concept that could be recognized in the circular economy, as creations of the blue economy direction of an economic school in Berlin. Sustainable forms of consumption and production make up the bloodstream of sustainable development. According to the attitude towards consumption and production, the level of maturity and culture of a society can be seen. The critically low level of environmental culture reflects the importance of the interconnectedness of the dimensions of sustainable development. The causes are numerous, dominated by non-social and economic ones, and the responsibility is mutual - both on the side of consumers and on the side of producers. Irresponsible production, wasteful consumption, resource inefficiency, food waste, generation of unacceptably large amounts of waste are obstacles to achieving sustainable development of local communities. And it is as if one forgets that the right to enjoy the benefits of sustainable consumption and production is a human right. Neglecting the rights of others (meaning everyone and everyone) to truly sustainable development, man shamelessly and relentlessly usurps and destroys nature, thereby endangering the statics of the very foundations of humanity. Although we sometimes don't see them, we all feel the effects of climate change. They know no boundaries. Climate diplomacy, as a new science of overlapping all interests and relations, obliges to urgent action for climate. The new climate change policy is a new 3P model - an opportunity, a call and an attempt to build a green economy and green growth. It will be a challenge worth the 21st century.

Institutionalization, public advocacy and sustainable development policy in Serbia are experiencing a qualitative acceleration in the period 2014-2015. years. At that time, the relationship between Serbia and the international community was further expanded by the United Nations Agenda for Sustainable Development until 2030, while on the other hand, the relationship between Serbia and the European Union culminated in opening Serbia's accession process to the European Union.

## 2. MAIN REGULATORY MECHANISMS.

By accepting the 2030 Agenda, Serbia has decided to implement international policies of sustainable development with full respect for the principles and values established by it. The 2030 Agenda represents the global development agenda for the period after 2015. This is the first international agreement that has clearly recognized the central role of effective, inclusive, and accountable institutions in the development process. Also, the Agenda shifts the focus when it comes to understanding development and shifts from meeting the most basic needs to promoting the realization of human rights, recognizes that growing inequalities pose a threat to the economy and social fabric, and seeks to reduce inequalities within and between countries. Of the 17 sustainable development goals, most are related to the environment:

- a world without poverty: end poverty everywhere and in all its forms.
- A world without hunger: end hunger, achieve food security and improved nutrition, and promote sustainable agriculture.
- good health: ensure a healthy life and promote well-being for people of all generations.
- quality education: provide inclusive and quality education and promote lifelong learning opportunities.
- Gender equality: achieve gender equality and empower all women and girls.
- clean water and sanitary conditions: provide sanitary conditions and access to drinking water for all.
- Affordable and renewable energy: ensure access to affordable, sustainable, sustainable and modern energy for all.
- Decent work and economic growth: promote inclusive and sustainable economic growth, employment and decent work for all.
- Industry, innovation and infrastructure: build adaptable infrastructure, promote sustainable industrialization and encourage innovation.
- Reducing inequality: reduce inequality between and within countries.
- Sustainable cities and communities: make cities and human settlements inclusive, safe, adaptable and sustainable.
- responsible consumption and production: ensure sustainable forms of consumption and production.
- Climate action: take urgent action to combat climate change and its consequences.
- life under water: preserve and sustainably use the oceans, seas and marine resources.
- land life: sustainably manage forests, combat desertification, stop and reverse land degradation and prevent the destruction of biodiversity.
- Peace, justice and strong institutions: promote peaceful and inclusive societies for sustainable development, ensure access to justice for all and build efficient, reliable and inclusive institutions at all levels.
- partnership to the goal: to strengthen the global partnership for sustainable development.

Serbia's commitment to striving to meet new global goals of sustainable development adds a new dimension to its European integration. The beginning of accession negotiations brought Serbia many challenges and obligations, but also rights and opportunities. In the public discourse of the process of Serbia's accession to the European Union, the role of the strongest initiator of comprehensive reforms necessary for the development of policies and institutions that support sustainable development has been given. In the decade for us, Serbia has been implementing the most important reform processes through the Instruments for Pre-Accession Assistance (IPA programs).

With the sign of the new strategy of sustainable development of the European Union, the European Green Agreement affirms green growth as the only possible roadmap to sustainable development. Formally, it is an integral part of the European Commission's Strategy for Implementing the 2030 Agenda and meeting the Sustainable Development Goals. "A new growth strategy aimed at transforming the European Union into a just and prosperous society, with a modern and competitive resource-efficient economy, with net zero-emission greenhouse gas emissions by 2050, and decoupled economic growth resources." [4]

The European Green Agreement [5] was presented in 2019 as one of the six priorities of the new European Commission for the period until 2024. It forms the basis for fulfilling the obligations from the Paris Agreement. The plan seeks to halt climate change by achieving more sustainable economic growth, which is in fact a recognition that sustainable growth depends on the development of a green, circular and low-carbon economy (new sustainable economic triads). The European Green

Agreement is an indicator from the domain of public policies that green growth is a prelude to sustainable development, that green growth leads to sustainable development, or more precisely - that green growth is a prerequisite for sustainable development. Formally, it is an integral part of the European Commission's Strategy for Implementing the 2030 Agenda and meeting the Sustainable Development Goals.

The Clean Energy for All Europeans package includes energy efficiency, renewable energy sources, the electricity market model, security of electricity supply and governance rules for the Energy Union. It has three main goals: prioritizing energy efficiency, achieving global leadership in renewable energy and ensuring a fair solution for consumers. Measures include initiatives to accelerate innovation related to clean energy and the renovation of European buildings, as well as measures to: encourage public and private investment, and industrial initiatives; reducing the impact of the transition to smart and clean energy on society; involvement of all institutional, business and social partners; maximizing European leadership in clean energy technologies and services to help third countries achieve their clean energy policy goals.

Clean energy for all Europeans contains two annexes on accelerating the introduction of clean energy in buildings and on activities to encourage the transition to clean energy. The positive effects of an integrated approach are especially expected in the areas of reducing energy poverty, launching local green growth and job creation.

# **3. ENERGY EFFICIENCY POLICY IN THE CONSTRUCTION OF THE EUROPEAN UNION**

Communication 2013/520 on the contribution of EE to energy security and the objectives of Framework 2030135, the EU focuses on encouraging consumers in terms of building quality by strengthening local and regional verification of national building regulations and accurately informing consumers about energy efficiency of buildings for sale or rent. with customers in order to save energy, and strengthen market surveillance of EE products to be implemented in all Member States and to ensure a level playing field for industry, and to provide consumers with the information they need when making a purchase decision. The basis of the regulatory framework is Directive 2012/27 on energy efficiency.

The Framework Directive clearly supports low-carbon development goals, recognizing EE as a costeffective means of tackling climate change to mitigate GHG emissions, reduce energy imports, increase security of energy supply, accelerate innovation and technology, and improve economic growth and industrial competitiveness. When it comes to its scope, it refers to EE in service industries, industry, buildings, products and transport; it basically creates framework rules that cover the entire energy chain (energy production - transmission - distribution - use).

Focusing on EE in buildings, the Directive requires Member States to adopt a long-term strategy to mobilize investment in the renovation of national buildings (residential, commercial, private and public), including the following elements: review of national housing stock based on statistical sampling; policies and incentives for cost-effective renovation of buildings (including financial incentives); adoption of building codes that promote RES and EE in buildings; an assessment of the expected evidence-based energy savings. It is interesting that the Directive calls on public authorities to set an example in buildings and procurement. Articles 5 and 6 require Member States to achieve the following:

- 3% of the total area of heated and / or refrigerated buildings owned and occupied by the central government is renewed every year to meet at least the minimum energy performance requirements set by Directive 2010/31 / EU on the energy performance of buildings.
- Governments purchase only products, services and buildings with high energy efficiency, to the extent that this is in line with economic feasibility, greater sustainability, technical convenience, as well as sufficient competition.

Articles 9-12. prescribe rules to ensure that consumers can monitor and become aware of energy use and possible savings, by the following means:

- to the extent technically possible, financially reasonable and proportionate to the potential energy savings, final consumers of electricity, natural gas, district heating, district cooling and domestic hot water shall receive individual meters at competitive prices that accurately reflect actual energy consumption. end-user and which provide real-time usage information (so-called smart meters);
- accurate and transparent payment information is provided to final consumers at no additional cost;

• Small energy consumers will be introduced to EE measures, as well as fiscal incentives to promote behavioral choices in EE.

Directive 2010/31 / EU on the energy performance of buildings [6] applies to all new buildings (residential, commercial, public and private), as well as existing buildings undergoing major renovations. The aim of the Directive is to reduce energy consumption and GHG emissions from buildings, by promoting improvements in their energy performance. Energy efficiency of buildings means the calculated or measured amount of energy required to meet energy demand with typical building use, which includes, but is not limited to, energy used for heating, cooling, ventilation, hot water and lighting. The energy effect of a building must be expressed in a transparent manner and include an energy performance indicator and a numerical primary energy indicator, based on primary energy factors per energy carrier, which may be based on national or regional annual weighted averages or specific on-site production values.

To this end, the following obligations have been established for Member States:

- adoption of a common methodology for assessing the energy performance of buildings in the European Union;
- setting minimum requirements for the energy performance of new buildings, existing buildings that are subject to major renovations and technical construction systems whenever they are installed, modified or upgraded;
- adoption of national plans to increase the number of facilities that are at a level close to zero consumption; establishing a system of energy certification of buildings based on common standards and levels; According to Art. 11–17. Directive, the following rules apply to the energy certification system:
- the energy performance certificate will contain the building's energy performance and benchmarks such as minimum energy performance requirements, to allow building owners or tenants to compare and evaluate its energy performance;
- the certificate may contain additional information such as annual energy consumption for non-residential buildings and the percentage of energy from renewable sources in total energy consumption;
- as well as recommendations for optimal cost or economic improvement of the energy performance of the building, unless there is a reasonable potential for such improvement compared to the applicable energy performance requirements. Recommendations in the energy performance certificate will include: measures to be taken in connection with major renovations of the building facade or technical construction system (s); names for individual building elements regardless of major renovations of the building facade or technical construction system.
- ensuring regular inspection of heating and cooling systems by independent, qualified experts and publishing inspection reports; the adoption of adequate, proportionate, effective penalties applicable to breaches of the obligations laid down in the Directive. [7]

Directive 2009/125 / EC on eco design requirements for energy-related products covers a wide range of products (not only energy devices but also windows, insulation materials, water-using products), which are widely used in construction and have great potential. to save energy. The Directive aims to establish a single EU-level framework for eco design requirements for energy-related products to ensure that they are freely placed on the EU market and contribute to sustainable development, energy security, environmental protection and EE improvement. Given that energy-related products represent a large part of the consumption of natural resources and energy, a preventive approach will be taken at an early stage of their life cycle, ie at the design stage, in order to minimize negative environmental impacts, including pollution reduction. waste and GHG emissions they generate, without compromising their functional qualities. The directive does not set emission limit values for products falling within its area, but explicitly states clear eco-design parameters that will be satisfactory in order to be placed on the EU market. Its regime applies to energy-related products defined in Article 2 as: "Any good that during use affects the consumption of energy placed on the market and / or put into service, and includes parts that are intended to be incorporated into products related to for energy covered by this Directive, which are placed on the market and / or put into service as individual parts for end-users and for which, independently, environmental impacts can be assessed."

In accordance with Art. 3-9, Member States and manufacturers / importers of energy related products are obliged to fulfill the following obligations:

• Member States will ensure that only energy-related products that comply with the requirements of the Directive are placed on the EU market; and designate national market

surveillance authorities, which have the right to: verify the product's compliance with the requirements, request the necessary information from manufacturers to carry out controls and withdraw non-compliant products from the market;

manufacturers will assess their energy-related products before placing them on the market, in order to verify their compliance with the requirements of the Directive; ensure that their energy-related products comply with the requirements of the Directive and require a declaration of conformity to label the product; ensure that the energy-related product contains information on their environmental impact and environmental profile (description of "inputs" and "outputs", such as raw materials, emissions and waste, associated with the product throughout its life cycle that are significant from the point of view of its impact on the environment and are expressed in measurable physical quantities); and will provide consumers with all relevant information on the environmental impact of energy-related products (ie the environmental profile and role that consumers can play in order to maximize the sustainable use of the product). Directive 2018/844143 amending Directive 2010/31 / EU on the energy performance of buildings and Directive 2012/27 / EU on energy efficiency states that each Member State shall establish a long-term strategy to support the renewal of the national fund for residential and non-residential buildings, public and private, in energyefficient and decarbonized building stock by 2050, facilitating cost-effective conversion of existing buildings into near-zero energy buildings. [8]

Considering the impact of fossil fuel-based energy, the European Union has decided to put the solution to this challenge high on its political agenda: after the renewable energy, energy efficiency and greenhouse gas emission reduction targets for 2020 (table 1), the EU has set itself even higher goals in the same areas for 2030. [9]

Participation of renewable sources	20%	32%
Energetic efficiency	20%	32,5%
Reducing greenhouse gas emissions	20%	40%

Table 2. Energy and climate goals EU 2020 - 2030. (relative to 1990)

# **3.1. EU SMART CITIES INITIATIVE**

"The EU's long-term vision for climate and energy dates to 2050 and is presented in two most important strategic documents: Energy Roadmap 2050 4, and Roadmap for moving to a competitive, low-carbon economy by 2050 - A Roadmap for moving to a competitive low carbon economy in 20505. These documents contain a lot ambitious related climate and energy goals of the EU, which intends to commit to reduction of greenhouse gases by 80-95% compared to the base year 1990. Achieving this goal, at the same time it is important to enable energy security and competitiveness." [10] The goal of this initiative, adopted in 2012, which addresses multisectoral issues in the field of energy, transport and information and communication technologies (ICT), is to stimulate the development of innovative solutions to increase EE and sustainability of urban transport. The initiative works synergistically in several closely related and interdependent areas: smart buildings and neighborhoods; smart systems and supply and demand services to provide better information to citizens; sustainable urban mobility; smart and sustainable digital infrastructure; and strategic planning to identify, integrate, and optimize flows. The regulatory framework of importance for the green economy is based, inter alia, on the following acts:

- Regulation on type-approval of motor vehicles with regard to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and access to vehicle repair and maintenance data;
- Decree amending the Decree on monitoring CO2 emissions from new passenger cars;
- Regulation amending Regulation 443/2009 to determine how to achieve the goal of reducing CO2 emissions from new passenger cars by 2020;
- Regulation on the type-approval of motor vehicles and engines with regard to emissions from heavy vehicles (Euro VI) and on access to information for the repair and maintenance of vehicles and amending Regulation (EC) no. 715/2007 and Directive 2007/46 / EC and repealing Directives 80/1269 / EEC, 2005/55 / EC and 2005/78 / EC;
- Framework Directive establishing a framework for the type-approval of motor vehicles and their trailers, as well as the composition, components and special technical units intended for such vehicles. [11]

"The biggest obstacle to increasing energy efficiency is the lack information on prices and availability of new technology, as well as technical barriers such as the lack of standardization of equipment and components. Improvement regulatory regime in the EU and identifying more transparent market trends thanks to liberalization it should solve these problems." [12] Serbia presented its own obligations to reduce carbon emissions by 9.8% by 2030, in compared to 1990. However, its emissions continue to grow by about 80%. [13]

## **3.2. CONSTRUCTION REGULATIONS**

Key elements of the Energy Performance of Buildings Directive are the obligation of EU member states to establish long-term reconstruction strategies, with the goal decarbonization of construction funds by 2050 with the obligation to develop minimum energy performance requirements for buildings; installing chargers for electric vehicles; system installation heating and air conditioning. In this context, all new buildings they must have zero energy consumption, and members must ensure that certificates of energy performance are issued when buildings are sold. The Building Energy Performance Directive promotes smart technologies, including automation requirements and building management systems and devices that regulate room temperature. The action plan for the energy renovation of buildings contains an action plan with specific regulatory, financial and measures to encourage the renovation of buildings. The goal of the renovation wave strategy is to double the annual rate of energy renovation of buildings by 2030. [14]

With the new Law on Construction Products, the regulation is partially harmonized with the relevant secondary sources of EU law, and fully harmonized with Regulation 157/2014 on the conditions for making the declaration of performance available on the website and Regulation 568/2014 amending Annex V of Regulation 305/2011 on the assessment and verification of the constancy of performance of construction products, in part with Regulation 305/2011 on prescribing harmonized conditions for placing the "Official Gazette of RS", No. 120/17. "Official Gazette of RS", No. 83/18. 219 construction products on the market254, while there was no compliance with Regulation 1062/2013 on the format of the European Technical Assessment for construction products and Regulation 574/2014 amending Annex III of Regulation 305/2011 on the model for drawing up a declaration of performance of construction products. In the previous period, several bylaws were passed, such as the Rulebook on Cement Quality ("Official Gazette of RS", No. 34/13 and 44/14), the Decree on technical and other requirements for steel for concrete reinforcement "" Official Gazette of RS ", No. 35/15 and 44/16), Regulations on technical and other requirements for structural cold-formed welded hollow profiles of non-alloy and fine-grained steels ("Official Gazette of RS", No. 93/15) and Regulations on technical and other requirements for ash, as construction material intended for use in the construction, reconstruction, rehabilitation and maintenance of public infrastructure facilities ("Official Gazette of RS", No. 56/15), but not the expected Regulation on construction products.

The law is a step towards establishing a national system of infrastructure for the quality of construction products, which protects the environment. This law regulates the conditions for placing on the market and making available on the market of construction products, making declarations of performance and putting the mark of conformity on construction products, obligations of economic entities, technical regulations for construction products and Serbian technical specifications, simplified procedures, technical evaluation bodies, bodies for assessment and verification of constancy of performance of construction products, validity of documents on conducted assessment and verification of constancy of performance of construction products and signs of conformity issued abroad. Thus, buildings as a whole and their special parts must meet the intended use, taking into account the health and safety of people throughout the life cycle of these buildings, and provided normal maintenance during economically acceptable service life must meet seven basic requirements for buildings: mechanical resistance and stability; fire safety; hygiene, health and the environment; safety and accessibility during use; noise protection; energy saving and heat retention; sustainable use of natural resources.

In terms of energy savings and heat retention, facilities and their installations for heating, cooling, lighting, and ventilation must be designed and constructed in such a way that the amount of energy that 254 Regulation EU / 305/2011 of the European Parliament and of the Council laying down harmonized conditions for the marketing of construction products and repealing Council Directive 89/106 / EEC. 220 require during use to be low when users and site climatic conditions are taken into account; they must also be energy efficient, using as little energy as possible during construction and demolition. Regarding the sustainable use of natural resources, facilities must be designed, constructed and demolished in such a way that the use of natural resources is sustainable, and in particular to ensure:

- reuse or possibility of recycling of buildings, its materials and parts after demolition.
- durability of the facility.

• use of raw materials and secondary materials in the facility, which are suitable for the environment. The Law on Amendments to the Law on Planning and Construction has been harmonized with Regulation 347/2013 on guidelines for trans-European energy infrastructure and further with the INSPIRE directive.

The novelties are that the certificate on energy performance of buildings is issued through the Central Register of Energy Passports, that the environmental impact assessment procedure takes place in the process of obtaining location conditions, as well as the introduction of new institutions: Sustainable Urban Development Strategy and National Architectural Policy. The energy rehabilitation of the building is also being introduced with the aim of increasing the energy efficiency of the building and the requirement that construction products must meet technical requirements from the aspect of climatic features of the Republic of Serbia. By the way, the process of energy certification of buildings in Serbia began in 2012, when the application of regulations in the field of energy efficiency of buildings became mandatory.

On the basis of the Law on Planning and Construction, ordinances have been adopted which prescribe procedures for improving the energy efficiency of buildings: - Ordinance on energy efficiency of buildings ("Official Gazette of RS", No. 61/11), which prescribes energy properties and calculation of thermal properties of high-rise buildings, as well as energy requirements for new and existing buildings; and 255 "Official Gazette of RS", no. 72/09, 81/09 - corrected, 64/10 - US, 24/11, 121/12, 42/13 - US, 50/1 - US, 98 // 13 - US, 132/14, 145 / 14 and 83/18.

The Central Register of Energy Passports (CREP) is an information system through which certificates on energy performance of buildings are issued and in which databases are kept on authorized organizations that meet the prescribed conditions for issuing certificates to responsible engineers for energy efficiency of buildings employed in these organizations. and issued certificates on the energy performance of buildings.

Rulebook on conditions, content, and manner of issuing certificates on energy performance of buildings ("Official Gazette of RS", No. 69/12 and 44/18 - other law), which prescribes in more detail the conditions, content and manner of issuing certificates on energy performance of buildings. A certificate or energy passport is a document that contains calculated values of energy consumption within a certain category of buildings, energy class and recommendations for improving the energy performance of the building.

## 4. CONCLUSION

The main characteristic of the energy sector in the Republic of Serbia is vulnerability. This is confirmed by the fact that it is a matter of production electricity and heat accompanied by high costs and environmental pollution. Also, the energy sector in Serbia is characterized by centralized energy production; tall energy intensity of the economy; pronounced dependence on domestic fossil fuels (in the production of primary energy, the share of the lowest quality coal - lignite, is as much as 68%). All the legislation mentioned in the text is important for the energy policy of Serbia, with special reference to its impact on the construction sector, not only from the point of view of joining European integration, but more as an example of good practice. Namely, given that Serbia is highly energy dependent or poor in energy sources, and having in mind global trends in energy policy development in the environmental sector, we believe that the following directions of further energy development in Serbia are important: 1. Increasing energy efficiency ; 2. Increasing the share of renewable energy sources; 3. Use of waste from various sources as raw materials for energy production with a positive effect on reducing pollution; 4. Consistent application of regulations to reduce environmental pollution, in particular to reduce carbon dioxide emissions and emission limit values; 5. Deregulation of the energy market with consistent emphasis on distributed energy production; 6. Development and implementation of incentive measures to encourage investment in the energy sector, especially in the construction sector.

### LITERATURE

- [1] Dimitrijević, Ž. (2015). Sigurnost snabdevanja tržišta energenata kao pravnopolitička paradigma regulatornog okvira. Doktorska disertacija, Univerzitet u Nišu, Pravni fakultet.
- [2] Kokeza, G. (2018). Restrukturiranje energetskog sektora Srbije u cilju povećanja efikasnosti i održivosti. Ekonomski vidici, XXIII, Br. 3-4, str. 52
- [3] The World in 2050: Transformations to Achieve the Sustainable Development Goals. Report prepared by The World in 2050 Initiative, International Institute for Applied Systems Analysis, Austria, 2018.

#### [4] <u>https//.ec.europa.eu/neighbourhood-</u> enlargement/sites/default/files/factshe

enlargement/sites/default/files/factshe\_wb\_green\_agenda\_en.pdf

- [5] Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions: The European Green Deal. COM/2019/640 final.
- [6] Directive 2010/31/EU of the European Parliament and of the Council on the energy performance of buildings
- [7] 140 Directive 2009/125/EC of the European Parliament and of the Council on establishing a framework for the setting of eco-design requirements for energy-related products
- [8] Directive (EU) 2018/844 of the European Parliament and of the Council amending Directive 2010/31/EU on the energy performance of buildings and Directive 2012/27/EU on energy efficiency.
- [9] Aleksić, V. (2022). Klima, životna sredina i energetska politika. Dostupno na: <u>https://bfpe.org/u-fokusu/bfpi-liderski-program-fokus/en</u> (Pristupljeno:15.05.2022.)
- [10] Macura, A. (2014). Transparentnost energetskog odlučivanja na lokalnom nivou. Beogradska otvorena škola.
- [11] COM(2012)4701 final Communication from the Commission Smart Cities and Communities European Innovation Partnership.
- [12] Rakić, B. (2008). Energetska politika EU u uslovima globalizacije. Časopis "EKONOMSKE TEME" Godina izlaženja XLVI, br. 3, 2008., str. 1-16
- [13] Djukić, P., Batas Bijelić, I. (2018). Srbija pred izazovima tranzicije energetskog sektora. Ekonomski vidici, XXIII, Br. 3-4, str. 22
- [14] Daković, D. (2022). Energetsko zakonodavstvo Evropske unije. Bilten AERS, br.555