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ENERGETIC EFFICIENCY AS ONE OF THE EUROPEAN UNION'S ENERGY POLICY OBJECTIVES

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Abstract: *The goals of the European Union's energy policy are the development of the internal energy market, achieving security of energy supply and sustainable development, promotion of efficient energy use, use of renewable energy sources, development of trans-European networks and directing relations with third countries. Given that life today cannot be imagined without the use of energy, the questions that are asked are the following: 1) whether by increasing energy efficiency, or using energy in a way to achieve the highest possible energy consumption with the lowest possible energy consumption and thus reduce the negative effect energy cycle can have the same effect? 2) Is it possible to achieve an adequate level of energy supply by using renewable energy sources, ie natural potential? All this starting from the fact that ¾ of all reserves of fossil fuels must never be used up (which means that they have almost no value), that the energy crisis is an increasingly present problem in the whole world, and that fossil fuels are characterized by one key feature, ie they are non-renewable. It is considered that an energy source is renewable if it can reappear in nature during the duration of an average human life, which is not the case with e.g. coal that can be renewed in nature after a million or even a billion years and therefore we say that fossil fuels have the property of non-renewability.*

Keywords: *energy efficiency, environment, European Union directives*

1. “The term "energy efficiency"

Under the influence of energy crises and due to climate change, new challenges have emerged in energy development that require new approaches and finding new energy sources, building new and revitalizing existing energy capacities, improving energy technologies and increasing energy efficiency (Marković 2010). The basic idea of the concept of energy efficiency is the use of as little energy as possible in industry, agriculture, services and households, while the quality of living and working conditions, ie the rate of production should remain the same. At the same time, reduced energy use and elimination of environmental pollution are among the basic goals of energy policy and most other EU policies, which at the end of 2006 envisaged a reduction of total primary energy consumption by 20% by 2020. In this regard, several policy documents were adopted: Energy efficiency - achieving the 20% target, the Energy Efficiency Action Plan, the Green Paper on Energy Efficiency. To this end, activities have been carried out towards the creation of minimum energy efficiency standards and rules for creating the efficiency of products, services and infrastructure.

In order to improve the energy efficiency of its members, on December 18, 2009, the Council of Ministers passed Decision no. D / 2009/05 / MCEnC on the package of the acquis communautaire of the European Union, which includes three European Union Directives in the field of energy service efficiency, energy performance of buildings and efficiency labeling. These are: Directive no. 2006/32 / EC of the European Parliament and of the Council of 5 April 2006 on energy efficiency in final consumption and energy services, which amends Council Directive no. 93/76 / EEC, Directive No. 2002/91 / EC of the European Parliament and of the Council of 16 December 2002 on the energy performance of buildings, Council Directive no. 92/75 / EEC of 22 September 2002 on indicators to be indicated by labeling and standard information on the consumption of energy and other resources by household appliances.

2. Directive no. 2006/32 / EC of the European Parliament and of the Council of 5 April 2006 on energy efficiency in final consumption and energy services, amending Council Directive no. 93/76 / EEC

Generally speaking, energy efficiency is potentially the most important and very cost-effective means of mitigating greenhouse gas emissions. The use of modern technologies can certainly contribute to that. The key question is how to determine what is the optimal level of energy efficiency in order to take the appropriate measures? (Patterson 1996: 377-390). In an effort to explore key barriers and drivers for improving energy efficiency, one study

found that reduced energy use or reduced costs of producing a product also reduce its cost, and that a major driver in the decision-making process is energy efficiency investment (Hasanbeigi - Menke, etc. 2010: 33-52).

The purpose of European Parliament and Council Directive no. 2006/32 / EC was to support effective improvements in energy efficiency in final consumption in Member States, and to provide the necessary framework targets and mechanisms, incentives, institutional, financial and legal frameworks to remove existing market barriers and deficiencies. It defines energy efficiency indicators as an institutional, financial and legal framework to remove existing constraints and market barriers in order to improve energy efficiency. Also, conditions have been created for the development of the market of energy services and other measures in order to improve energy efficiency. This is because improving the efficiency of final energy use contributes to reducing the use of primary energy, mitigating emissions of CO2 and other greenhouse gases, thus preventing dangerous climate change. Given that activities in the energy sector generate more than 78% of Community greenhouse gas emissions, further measures were needed to reduce these emissions and thus meet the Kyoto Protocol's obligations.

Implementation of energy efficiency measures, in accordance with Directive no. 2006/32 / EC, referred to end customers, energy service providers, distribution system operators and energy suppliers. All of them aim to contribute to energy savings through their activities. In this regard, Member States shall establish energy efficiency action plans in which they should include practical programs and measures, and ensure that the public sector serves as an example of how energy efficiency measures should be implemented under this Directive (Lepotić Kovačević, Kovačević 2010: 86). For the purpose of applying Directive no. 2006/32 / EC and its more efficient implementation, the Council of Ministers, by Decision no. D / 2009/05 / MCEnC of 18 December 2009 defined the manner in which the terms used in this Directive should be interpreted.

3. Directive no. 2012/27 / EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125 / EC and 2010/30 / EU and repealing Directives 2004/8 / EC and 2006/32 / EC.

Directive no. 2010/30 / EU of the European Parliament and of the Council of 19 May 2010 on the labeling of the consumption of energy and other resources by energy-using products by affixing labels and common product information has been extended to Directive 92/75 / EEC of September 1992 also to those products which have a significant direct or indirect impact on energy consumption during use, unlike the previous directive whose scope

was limited to household appliances (refrigerators, freezers, washers and dryers, dishwashers, ovens, air conditioners). The purpose of Directive 2010/30 / EU was to increase the energy efficiency of products and thus achieve positive effects on the environment.

All the above can be achieved by providing end users with accurate, reliable and comparable information on the energy consumption of certain products, in which way they are directed towards choosing products that consume less energy. Therefore, producers are also encouraged to take measures in that direction, which ultimately leads to the achievement of the EU energy efficiency target of 20%. Without this information, the mere action of market laws will not promote the rational use of energy. In this context, notification plays an important role and it is therefore necessary to introduce a uniform label for all products of the same type, which provides potential customers with additional standardized information on the accompanying costs of a particular type of product in terms of energy consumption and other important resources (Directive 2010 / 30 / EU). Thus, this Directive establishes a framework for the harmonization of national measures when it comes to information intended for end-users regarding energy consumption, as well as other relevant resources (if such information is relevant), so that customers can choose more energy-efficient products. needs can be met with less energy consumption. The activities carried out and the level of compliance achieved with Directive 2010/30 / EU were achieved, and Member States were obliged to inform the Commission every four years by submitting a report on the measures taken.

A report from the Commission to the European Parliament and the Council estimated that the implementation of this Directive, ie energy labeling measures, would lead to energy savings, contributing to the achievement of the energy efficiency target of 20% by 2020, and thus reducing dependence on imports (of energy by 23%, natural gas and coal by 37%).

Promotion of the sustainable consumption and production model is a key objective in the renewed European Union's Sustainable Development Strategy, which requires a change in the way products and services should be designed, manufactured, used and disposed of, taking into account the behavior of both producers and consumers (Nash 2009: 496-498). It is argued that if more consumers understand the environmental consequences of their consumer patterns, through their market choices, such behavior will inevitably put pressure on traders and manufacturers to move towards sustainable production. The result is certainly the expansion of consumption of "green" products, environmental labels and consumer awareness campaigns (Akenji 2014: 13-23).

On 25 October 2012, the European Parliament and the Council adopted Directive 2012/27 / EU on energy efficiency, amending Directives 2009/125

/ EC and 2010/30 / EU and repealing Directives 2004/8 / EC and 2006/32 / EC establishing a common framework of measures to achieve the Union's energy efficiency target of 20% by 2020 and paving the way for further energy efficiency improvements after that year. The Directive lays down rules aimed at removing barriers to the energy market and establishes indicative national targets for increasing energy efficiency by 2020. However, the requirements set out in this Directive are minimum requirements and do not prevent Member States from introducing more stringent measures.

4. Directive no. 2010/31 / EU of the European Parliament and of the Council of 19 May 2010 on the energy characteristics of buildings

Bearing in mind that buildings are responsible for 40% of the total energy consumption in the European Union, it is necessary to take measures in the construction sector in order to reduce energy dependence and greenhouse gas emissions. These measures concern the use of energy from renewable sources in order to meet the obligations of the Kyoto Protocol, in terms of maintaining global temperature rise below 20C as well as reducing total greenhouse gas emissions by 2020 by at least 20%, compared to the level in 1990. This is because increasing the use of energy from renewable sources should contribute to security of energy supply and necessary technological development (Directive 2010/31 / EU). Since energy must be available to everyone, these measures include the development of rural areas as well.

Certainly, when applying the measures set out in this Directive, both climatic and local conditions, the indoor climate of the premises and the cost of efficiency should be taken into account. When calculating the energy efficiency of buildings, factors that play an increasingly important role should be taken into account, such as heating and air conditioning plants, the use of energy from renewable sources, sun protection, indoor air quality, adequate natural lighting and the shape of the building. The methodology for calculating energy efficiency should not be based only on the heating season, but should include the annual energy efficiency of the building, taking into account existing European standards. In accordance with Directive 2010/31 / EU, all EU Member States are required to carry out an analysis of the optimum levels of minimum energy performance requirements. In addition to the EU member states, this EU directive also adequately affects the candidate countries, in the sense that these countries are also obliged to harmonize their regulations with the requirements (Ganiç – Yılmaz 2014: 94-107).

The stated minimum energy efficiency requirements for buildings and building elements are intended to enable the achievement of a cost-optimal balance between the required investments and the saved energy costs during the entire life of these facilities, whereby the energy efficiency requirements

should be regularly reviewed, keeping pace with technical progress. at the level of each member state. It is the responsibility of the Member States to take measures to ensure that as many buildings as possible meet not only the currently set minimum energy efficiency requirements but also more, in terms of being even more energy efficient in order to reduce energy consumption and emission of carbon dioxide.

Considering that energy efficient buildings can either save primary energy or expand the use of the most appropriate technologies, these buildings can be considered as a good example to study the optimization and benefits of higher energy efficiency and the use of renewable energy systems. (Desideri – Arcioni, etc. 2013: 157-167).

In order to promote the improvement of energy performance of buildings, this Directive promotes the improvement of energy efficiency of buildings in the Union and sets out a general framework for the development of methodologies for calculating the energy performance of new buildings and structures, with a view to achieving optimal costs. In doing so, the calculation of the cost-optimal levels of minimum energy efficiency requirements shall be carried out using the comparative methodological framework set out in Annex III to this Directive. Certainly, once established, the minimum energy efficiency requirements shall be reviewed at regular intervals not exceeding five years, and shall be updated as necessary in accordance with technical progress in construction.

Regarding the application of Directive no. 2010/31 / EU, the German government has defined in its fifth energy program long-term goals related to energy consumption in buildings, which relate to "zero emissions", ie achieving "clean energy for Europeans", as the new EU reform package is called, which was published by the European Commission in 2016. England has also expressed the intention that all new homes should emit “zero emissions” by the end of 2016. Even the US has formulated such buildings in its political programs.These goals are achievable today, because the number of internationally Zero energy or zero emission projects have increased significantly in recent years, with data showing that over the past 20 years, more than 200 successful building projects have been implemented worldwide using the same amount of energy they produce, via solar panels or similar technology for the production of energy from renewable sources (Musall – Weiss, etc.).

Exceptions to these measures apply to buildings located in a specially protected area, as well as to buildings of special architectural or historical value, industrial plants, workshops and agricultural buildings with low energy needs (Article 4. 2(a) of Directive 2010 / 31 / EU).

5. CONCLUSION

Bearing in mind that most energy sources are limited, efficient use of energy resources increases the benefits and reduces the negative consequences for society. Ideally, a society that strives for sustainable development should use only those energy resources that do not cause adverse effects on the environment (Dincer – Rosen 2013: 60-64).

Therefore, energy efficiency should be the subject of each country's energy policy and strategy, as it reduces environmental pollution, resulting from the production and consumption of "dirty energy" and saves non-renewable natural resources, ie energy sources (Lepotić Kovačević 2005: 421-442).

In its energy policy, the European Union has set itself the goal of achieving environmental protection by increasing the use of renewable energy, saving energy and using energy efficiently.

In terms of energy efficiency, Serbia has continued to implement the acquis. In this regard, the Law on Efficient Use of Energy ("Official Gazette of RS", No. 25/13) transposed the main provisions of Directive 2006/32 / EC (definitions, efficiency requirements in the production, transmission and distribution of electricity). Also, a set of bylaws has been adopted in order to implement this directive. Law on Planning and Construction ("Official Gazette of RS", No. 72/09, 81/09 - correction, 64/10 - US, 24/11, 121/12, 42/13 - US, 50/13 - US, 98/13 - US, 132/14, 145/14, 83/18, 31/19, 37/19 - other law, 9/20), Rulebook on the Energy Efficiency of Buildings (Official Gazette of the RS, No. 61 / 11) the provisions of Directive 2010/31 / EU have been transposed, so that it can be concluded that some progress has been made in the field of energy efficiency.

This paper points out the connection between energy efficiency, the environment and sustainable development.

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