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SUSTAINABILITY REQUIREMENTS FOR BIOFUELS IN THE EU

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Over the past decades, the attention of the international community has been riveted to the problem of achieving sustainable economic development, the most important elements of which imply a reduction in the level of anthropogenic impact on the environment. In this context, it is important to note the Paris Agreement [1] which is a legally binding international treaty on climate change. Its overarching goal is to hold “the increase in the global average temperature to well below 2°C above pre-industrial levels” and pursue efforts “to limit the temperature increase to 1.5°C above pre-industrial levels.”

The implementation of such a complex task is impossible without increasing energy efficiency and introducing climate-neutral technologies in all areas of human economic activity, including transport sector. As of today, the European Union occupies one of the leading positions in the world in the field of renewable energy development, in particular, in the production and consumption of biofuels. A particularly significant growth of production and consumption of biofuels in the EU occurred as a result of the implementation of Directive 2003/30/EC [2]. This Directive made long-term commitments to the EU member states to achieve targets for biofuel consumption in the total structure of transport fuel consumption.

At the same time, the rapid development of biofuel production in the EU was accompanied by the fact that the main types of transport biofuels were bioethanol and first-generation biodiesel (the production of which is based on agricultural raw materials). This, in turn, has given rise to discussions regarding the “fuel versus food” dilemma and the negative effects of land use change.

The results of an in-depth analysis of these problems, which have a transboundary nature, predetermined the correction of European policy in the development of the biofuel industry and the adoption of Directive 2009/28/EC (RED 1) [3]. Directive 2009/28/EC was aimed, on the one hand, at increasing the production and consumption of transport biofuels, and on the other hand, at ensuring the sustainability and anthropogenic neutrality of the production of this fuel type.

Issues related to sustainability criteria of biofuels have been further developed in the current version of Renewable Energy Directive (RED II) [4], adopted in 2018. In order for biofuel to be considered as meeting the sustainability criteria, the RED II specifies certain requirements regarding

the origin of the biomass from which the biofuel will then be produced. Consequently, biofuels and bioliquids must not be produced from raw materials obtained from lands with a high level of biodiversity (forests and forest areas, protected areas, biodiverse grasslands), as well as from lands with a high carbon stock (wetlands, forests with a defined level of cover) and from peatlands. This Directive also provides criteria for reducing greenhouse gas emissions from the use of biofuels, bioliquids, and biomass fuel.

Conclusions

Today, the European Union is one of the world leaders in the development of renewable energy, in particular, in the production of various types of biofuels. The rapid growth of biofuel production and consumption in the EU was facilitated by the appropriate energy policy. In parallel with the rapid growth of biofuel production, problems related to potential damage to land resources and competition between the cultivation of agricultural products for biofuel production and food production have become more apparent. In order to solve these problems in the EU, the sustainability criteria of biofuels have been established at the legislative level. It should be noted that the experience of EU member states in stimulating the production and consumption of biofuels and implementing sustainability criteria for biofuels is extremely relevant for Ukraine.

References

1. Paris Agreement (as contained in the report of the Conference of the Parties on its twenty-first session, FCCC/CP/2015/10/Add.1).

URL: http://unfccc.int/files/home/application/pdf/paris_agreement.pdf

2. Directive 2003/30/EC of the European Parliament and of the Council of 8 May 2003 on the promotion of the use of biofuels or other renewable fuels for transport. URL: <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=celex%3A32003L0030>

3. Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC. URL: <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:140:0016:0062:en:PDF>

4. Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (recast) (Text with EEA relevance). URL: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018L2001>