

**A REVIEW OF THE MONOGRAPH BY T. PIMONENKO, O. LYULYOV,
N. LETUNOVSKA "CIRCULAR AND CARBON-FREE ECONOMY: THE ROADMAP
FOR HARMONIZING NATIONAL AND EUROPEAN STANDARDS
FOR ENERGY MARKET"**

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Abstract. Circular and carbon-neutral economic development are the topical areas of implementing the climate strategy in many countries. According to these concepts, the main basis for economic development is the growth of the renewable energy share in the structure of energy consumption. The fact that Ukraine has announced that in the future its evolution will be determined by the European integration vector of development means that a prerequisite for the transition to the next steps of development is the synchronization of the national energy policy in accordance with the strategic guidelines of the European region. To develop an effective roadmap for harmonising Ukrainian and European standards of energy market regulation, it is advisable to analyse the experience of implementing energy efficiency practices in the policies of other countries in the European region. The authors forecast the structure of energy production from renewable sources, based on empirical calculations. The development and implementation of modernized mechanisms for regulating the energy market in European countries is a prerequisite for the successful adaptation of the Ukrainian energy sector and the introduction of effective approaches to the management of local businesses and all industries that depend on energy resources.

Keywords: green economy, green energy, renewable energy, sustainable development goals

JEL Classification: Q28, Q29, Q50

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Citation: Titko, J. (2021). A Review of the Monograph by T. Pimonenko, O. Lyulyov, N. Letunovska "Circular and Carbon-Free Economy: The Roadmap for Harmonizing National and European Standards for Energy Market". *Virtual Economics*, 4(3), 23-25. [https://doi.org/10.34021/ve.2021.04.03\(3\)](https://doi.org/10.34021/ve.2021.04.03(3))

Received: May 28, 2021. Revised: June 12, 2021. Accepted: June 19, 2021.

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Virtual Economics, Vol. 4, No. 3, 2021

The deteriorating environmental situation in the world is one of the most dangerous problems for humanity. Climate change worries all states and the population of many regions. During the long industrial development of the world, there has been a significant increase in anthropogenic impact on the whole planet's climate. Many theorists and practitioners emphasize an urgent need to reduce greenhouse gas emissions in the coming years. It is essential for society to immediately move to a model of sustainable development, which includes economic growth while reducing carbon emissions. A necessary prerequisite for addressing this issue is the introduction of an effective system to promote sustainable low-carbon development.

The authors raise these critical issues in the monograph by analyzing a new document in the European practice regulating the transition to a sustainable economy, the European Green Deal. As Ukraine has proclaimed its European integration vector of development, which provides, among other things, the synchronization of national energy policy with the strategic guidelines of EU member states, this document and its postulates are also relevant for consideration in the domestic practice. In their work, researchers thoroughly analyze the experience of implementing and exercising the principles of the European Green Deal, which precedes the future development of a phased roadmap for synchronization of the Ukrainian energy policy with the European one. The authors emphasize the urgency of such synchronization in the field of export relations in Ukraine, where Ukrainian exporters compete quite closely with European businesses in the European territory of sales and abroad. The authors of each chapter of the monograph emphasize that understanding the mechanism of implementation of the European Green Deal instruments is a prerequisite for the successful adaptation of Ukrainian energy policy to the European one. The introduction of new approaches to the management of industries and individual entities in energy production and consumption remains an important aspect.

The monograph comprehensively examines the types of incentives by governments of national economies to switch to renewable energy sources. It thoroughly studies all the factors that cause climate change. The work presents valuable analytical reviews and statistics on consumption of energy and other resources in the countries of the European region. In several sections, the authors make a rather exhaustive, in our opinion, analysis of existing scientific works, mainly from the reputable scientometric databases Scopus and Web of Science, the involvement of the scientific community in reducing carbon emissions, achieving economic sustainability, transition to more active use of renewable sources of energy. The authors made the review of works by scientists from different geographical areas and other scientific schools.

It is valuable to present the material on the description of the critical areas in which the European Green Deal policy is implemented. Essential principles of this course are the positioning of the EU as a global leader in the development of the circular economy and the creation of competitive advantages for the development of local producers. It is noted that a radical structural reform can change the European model of trade and investment. A large-scale reduction in gas and oil purchases will restructure the European Union's relations with

their leading suppliers. Researchers do not overlook the fact that the European Green Deal is directly related to the postulates of the EU Cohesion Policy, another essential document for the territories of the European Union. The European Green Deal contributes to the goals of this regulated document, as its purpose is to reduce disparities between the regions of Europe through the Fair Transition Mechanism. This mechanism provides attention to the development of areas that may face the most significant difficulties due to restructuring their economies on the path of carbon-free development. Anthropogenic impact on the environment is estimated at 95% of all risks of climate change, primarily due to the rapid growth of carbon emissions, which are significantly ahead of population and economic growth. It is mainly due to the rapid development of carbon-intensive energy, accounting for up to 80% of carbon emissions. The monograph emphasizes that the European Green Deal aims to protect, preserve and strengthen the EU's natural capital, to protect the health and well-being of the region's population. At the heart of this policy are the individual and entire regions and industries. The authors consider the seven central pillars of the European Green Deal. Different types of transformations are considered within the framework of this document. Particular attention is paid to a fair transition to sustainable development that involves structural change. The policy set out in the European Green Deal includes ensuring a fair outcome and is the foundation of all types of transition. A comprehensive analysis of the already implemented measures within the European Green Deal since 2019 is provided. The research conducted by the authors is of significant theoretical and practical value for verifying the adequacy of models of energy intensity forecast in Ukraine. Important conclusions have been drawn on the positive dynamics of changes in the energy intensity of Ukraine's economy during 2010-2019. At the same time, these rates are low due to the declaration and implementation of European approaches to pursuing the state regulatory policy in energy efficiency. The authors presented the results of an empirical analysis of the correlation between energy consumed by each country and the products produced in it.

The monograph "Circular and carbon-free economy: the roadmap for harmonizing national and European standards for energy market" is a thorough study by the team of authors, which has relevance, scientific value and is of interest to a wide range of readers. It gives a holistic view on the modern society's general vector of development in the transition to a carbon-neutral economy. The work traces the idea of the European Green Deal and the maximum approximation of domestic policy to the principles of this document. The above facts give grounds to highly appreciate the work of the authors from Sumy State University.