

**A REVIEW OF THE MONOGRAPH BY T. PIMONENKO, O. LYULYOV,
N. LETUNOVSKA "STOCHASTIC MODELING OF THE ROADMAP FOR
HARMONIZING DOMESTIC AND EUROPEAN STANDARDS OF ENERGY MARKET
REGULATION: TRANSFORMATIONAL SHIFTS TO A CIRCULAR
AND CARBON-NEUTRAL ECONOMY"**

Aleksy Kwilinski

Abstract. The European Green Deal is a new European climate strategy presented by the European Commission in 2019. The central postulate of this strategy is the growth of renewable energy sources share in the energy balance of the European countries. The Pro-European integration vector of Ukraine envisages the country to synchronize the national energy policy with the EU strategic guidelines for transition to a circular and carbon-free economy. This monograph aims to explore the experience in implementing the principles of the European Green Deal and the best practices in improving energy policy among the EU countries. Therefore, the findings would be instrumental in developing a balanced and structured roadmap for Ukrainian energy policy synchronization with the EU requirements. The European Commission poses significant challenges to European producers. In turn, transition to the principles of the European Green Deal is particularly relevant for Ukrainian exporters competing with European producers within the European Union and abroad. The comprehensible implementation mechanism of the new European Green Deal tools is a prerequisite for the successful adaptation of national energy policy and the modernization of approaches to managing local businesses and industries that depend on energy resources.

Keywords: sustainable development goals, energy market, energy balance

JEL Classification: Q28, Q29, Q50

Author:

Aleksy Kwilinski

The London Academy of Science and Business, 120 Baker Street, London, United Kingdom, W1U 6TU

E-mail: a.kwilinski@london-asb.co.uk

<https://orcid.org/0000-0001-6318-4001>

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Aleksy Kwilinski

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In the monograph, the authors consider the importance for the contemporary society of the issue of systemic, strategic development of two concepts: the circular economy and the carbon-free type of economic development. In Ukraine, such a systemic vision has not yet been formed, so it is interesting to frame the basic postulates of these theories, which, according to foreign experts, can enhance the resource efficiency and ensure energy conservation in the country. The paper emphasizes the importance of various stakeholders' cooperation in promoting the development of approaches to circular and carbon-free economies. In particular, public authorities should be more balanced in developing tools and measures within the framework of sustainable development.

In the first chapter, the authors analyze the principles of circular and carbon-neutral economies. There are many practical approaches to addressing the issue of excessive waste from a particular activity. Specific initial differences of the circular economy implementation depending on the area's territorial needs and resources are identified. There are described the tools used in the European Union to accelerate the transition to a circular economy. The authors believe that the transition to circular production can increase the number of new jobs, strengthen the security of raw materials in the country, gain business benefits for national companies, and other advantages. The monograph aptly emphasizes that approaches such as circulation and transition to carbon neutrality can be an effective tool for improving the health of countries and entire regions by solving environmental problems, overcoming difficulties with resource consumption, and shaping correct behavior.

In the second chapter, the authors substantiate the opinion that Ukraine has a significant potential for developing renewable energy sources. Ukraine's implementation of the principles of transition to the green path of development will contribute to economic recovery, including after the COVID-19 pandemic, increase the welfare of citizens, enhance the competitiveness of local businesses, improve environmental conditions and others. The structure of Ukraine's economy is analyzed and conclusions are made about its energy efficiency. With the help of modern software, the authors conducted an empirical study on the convergence of Ukraine's energy policy and the policy of European countries on the example of four countries. We emphasize that the authors use the most modern information processing methods and draw conclusions based on analytical processing of statistical information and balanced economic and mathematical calculations.

The last chapter analyzes in-depth the experience of European countries in improving national energy efficiency, which is carried out through analysing positions in global rankings and the importance of energy intensity of GDP for different countries, including through evolutionary analysis of EU policies. Certain aspects of introducing technological innovations in energy saving with the analysis of innovations implemented in the European Union's member states (including Germany, the Netherlands, France, etc.) are studied. The main challenges to the current development of the European Union's energy market have been identified, namely the security of energy supply, affordability of energy costs for all key consumer groups, energy management efficiency, environmental friendliness and sustainable development in most areas of the European region. Given the international consequences of such challenges, it is

very urgent and retains its relevance even in the COVID-19 pandemic. The authors consider the phenomenon of energy diplomacy in relations between different countries of the European Union. It has been argued that the concept of energy diplomacy in the European region has expanded significantly in recent years. EU policy is focused on achieving and maintaining energy security at all stages of development in the short, medium and long term. In general, the study shows deep processing of theoretical and factual material. The problem chosen by the authors for research is undoubtedly relevant. They disclosed it expertly, involving many different sources of information.

A positive feature of the study, which resulted in the monograph by Pimonenko T., Lyulyov O., and Letunovska N., is the use of methods and techniques of scientific knowledge. The use of modern tools testifies in favor of the thoroughness of the results presented in the monograph, the authors' mastering modern scientific research tools. It could be noted that the research materials presented in the monograph reflect the results of scientific research on an effective system of implementation and development of environmental approaches to the development of the national economy. Finally, we can conclude about the conscientious work of researchers, the theoretical and practical significance of the material presented in the monograph. The authors' research will help address many controversial issues arising from the Ukrainian government's focus on converging national and European policies on environmental transition and achieving the goals of the European Green Agreement. We believe that the monograph has innovative results and provisions important for energy, health and the environment. The practical significance of this work is that the findings can be used to devise strategies for developing countries on the principles of sustainable development. The monograph is of practical and scientific interest. It is a significant contribution to the development of the economic and environmental science of Ukraine and deserves a positive evaluation.

The monograph is made at a high professional level, sufficiently illustrated with graphic and tabular material, is easy to understand due to the language and style of writing, and logic in the structure of presentation. The structure of the material as a whole is logical and consistent. The manuscript of the monograph meets the requirements for such scientific works and deserves to be recommended for publication.