International agreements to ensure the decarbonisation of the economies of the world

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Abstract

The article deals with one of the most important global problems of mankind – climate change due to the increase in emissions of greenhouse gases, primarily carbon dioxide. The aim of the study is to analyse the implementation of international agreements on decarbonisation of the economies of the world .

Keywords: environment, climate change, decarbonisation, greenhouse gas emissions, carbon dioxide, agreements, international commitments

Introduction

At present, the fact of anthropogenic impact on global warming in the 20th – 21st centuries is considered proven. Indeed, neither solar radiation nor volcanic activity has a decisive influence on the global average annual temperature. It is the human factor that dominates here: population growth, destruction of forests and burning of fossil fuels, which have led to a rapid increase in the concentration of CO2 in the atmosphere.

Overview

Based on the study, it is found that: the current climate policy is not active enough; the climate leader is the EU with its Member States, which pursue a balanced integrated energy and climate policy that does not jeopardize social and economic growth.

Decision

Analysis of modern research on decarbonisation of the economy

As noted in the work P. Ekins, P. Drummond and J. Watson (2018) [2], "Energy, and access to energy, are essential to human life, civilisation and development. One characteristic of industrial societies, that has both allowed them to evolve into their current form and continues to fuel their activities, is their greatly enhanced use of energy per person, enabled by the discovery of fossil fuels and the development of technologies that enable these fuels to be exploited". But this has caused a number of problems that are gaining an increasing importance on the global stage, including: greenhouse gas emissions, energy security issues, etc.

The most comprehensive research of the problem of reducing carbon dioxide emissions in the energy sector are carried out by International Energy Agency (IEA), US Energy Information Administration, World Energy Council (WEC). Also, this issue is the subject of study of many scientists and expert researchers. Moreover, it is considered with regard to a number of aspects, one of the most important of which is the determination of priorities and mechanisms for elaborating a national decarbonisation policy, fair distribution of countries' contributions related to greenhouse gas emissions, impact of decarbonisation measures on the competitiveness and socio-economic development of countries; identification of effective mechanisms for international cooperation, etc.

Antimiani A. et al. (2016) [1] consider the risks of implementing the EU strategy to mitigate climate change by reducing greenhouse gas emissions and the impact of climate policy on competitiveness. The authors prove that this influence can be quite serious and, therefore, it requires informed decisions on the elaboration of a decarbonisation policy. At the same time, it is determined that a long-term EU strategy aimed at investing in energy efficiency and renewable energy sources can protect vulnerable industries while increasing the competitiveness of high-tech industries and advanced economic sectors. The need for a balanced decarbonisation policy, which will take into account support for high-tech industries, is also noted by Gryshova I. et al. (2020) [3], Khaustova V. et al. (2018) [4].

Research by Kyzym M. and Leljuk O. (2019) [5] deals with the analysis of the state of the power sector in Ukraine. Based on the study, it is proved that the main reason for the decrease in the volume and efficiency of production in the country is a steady downward trend in the intensity of electricity production, due to the deterioration of the technical condition of the generation capacities, which requires the implementation of appropriate measures for their modernization. Kyzym M. et al. (2018) [6] justify the directions of structural and technological modernization of the Ukrainian power sector, taking into account the prospects for the technological development of the modern energy sector, reducing its load on the environment and the production sufficiency of domestic power engineering.

Veysey J. et al. (2016) [7] analyse the possibilities for Mexico to reduce greenhouse gas emissions. The authors found that the ambitious national goals of reducing greenhouse gas emissions in the country contradict the latest trends in the field of energy and emissions in general and substantiates the need for decarbonisation of the country's power sector along with changes in the transport sector.

Investigation carried out by Singh A. et al. (2019) [8] presents the construction of a numerical economy-wide model of India with energy sector detail to evaluate the impact of achieving India's commitments to the Paris Climate Agreement (PA). The simulation results are used to determine the future decarbonisation policies of the country.

Thus, at present, decarbonisation of the economy is considered as an important integral component of the modern development of almost all countries of the world. According to modern researches, the largest impact on the environmental as concerns CO2 emissions is made by the energy and transport sectors. Therefore, countries pay special attention to the problem of decarbonisation in forming their energy policies. At the same time, scientists note that addressing this problem requires developing of balanced approaches and strategies that will allow achieving the goals of decarbonisation without threatening sustainable socio-economic development of countries and their energy security. International cooperation based on justice, political will and sustainable public policy of all countries of the world is also recognised as an essential component for a successful solving of the problem of reducing CO2 emissions into the atmosphere.

Conclusion

Thus, as was mentioned earlier, today, one of the most important global problems of mankind is climate change under the influence of increased emissions of greenhouse gases, especially CO2, which has led to the conclusion of a number of international agreements aimed at reducing emissions. At the same time, the world practice shows the presence of certain difficulties and contradictions in countries' observing them (Veysey J. et al. (2016) [14], Max Åhman et al. (2017) [9], Lois Barber et al. (2017) [10]). This requires further analysis and research since the determination of priorities, mechanisms and directions for the implementation of these agreements should take into account, on the one hand, the common goals of reducing emissions, and, on the other hand, the ability of countries to fulfil the agreements while ensuring their sustainable development and an adequate quality of life for their people. Only this can help to achieve harmonious cooperation and fair distribution of public responsibility in addressing climate change.

- Thus, the goal of this study is analysing the implementation of international agreements to ensure decarbonisation of the economies of the world.
- To achieve this goal, the study solves the following tasks:

Analysing the content and requirements of international agreements to ensure decarbonisation of the economy.

Considering the features of the implementation of international agreements by countries of the world.

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