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Ecosystem transformation of the energy sector: Climate neutrality and inclusive balance ≒

Olena Chygryn Z ; Aleksy Kwilinski; Liliia Khomenko



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The work aims to perform a bibliometric analysis of scientific works on the ecosystem transformation of the energy sector. A total of 646 publications on this topic were found in the Web of Science database. Sixty percent of them have been published since 2018. Most publications were found in the fields of Environmental Sciences Ecology, Engineering, Chemistry, Other Science Technology, and Energy Fuels. Most of the works were published by researchers from China, the USA, India, England, and Germany. Most of the research was funded by the National Natural Science Foundation of China, European Commission, Fundamental Research Funds for the Central Universities, National Science Foundation, the UK Research Innovation, and others. Most research is devoted to transformation, performance, energy, renewable energy, sustainability, impact, energy efficiency, and the green economy. As a result of the cluster analysis, five main clusters of research have been identified. Only one of them is dedicated to climate neutrality. No study on inclusive balance principles was included in the sample, and further study is needed. The largest breakthrough in research on the ecosystem transformation of the energy sector occurred in 2016-2020. In 2016-2017, green building, transformation, green chemistry, gas, biofuels, carbon dioxide, model, oxidation, iron, oxide, stability, and identification were mainly studied. Starting in 2020, energy transition, power, hydrogen, generation, economy, transition, innovation, sector, carbon emissions, impact, cities, economic growth, environmental regulation, empirical evidence, environmental regulation, and trade began to be studied. Most likely, these areas will develop in the coming years. The results of this study can be used by researchers studying the ecosystem transformation of the energy sector and researchers looking for funding organizations, journals for publication, and participants for cooperation in research.

Topics

Energy efficiency, Biofuels, Renewable energy, Environmental regulations, Environmental studies, Chemical engineering, Ecology, Funding, Scholarly publishing, Journal