

Welcome to *Energy and Climate Management*

Dear readers,

As the Editor-in-Chief of *Energy and Climate Management*, I am delighted to introduce the new journal and our original aspiration and the mission.

According to the Sixth Assessment Report released by the United Nations Intergovernmental Panel on Climate Change (IPCC), titled Climate Change 2023 (AR6 Synthesis Report): Global surface temperatures have increased by 1.1 °C higher in 2011–2020 compared to the period of 1850–1900, and the world is facing severe changes within the climate system, such as rising sea level, frequent extreme weather events, and rapid melting of the sea ice. The climate's impact on people and ecosystems is far greater than expected, and risks will escalate rapidly if the global temperatures continue to rise.

In order to cope with the severe climate crisis, mankind must get rid of its dependence on fossil fuels and drastically reduce carbon emissions, further promoting the low-carbon transition of energy and accelerating the development of clean, low-carbon, safe, and highly-efficient energy systems. Low-carbon transition and management of energy is a complex systematic project with several challenges and uncertainties, which requires systematic coordination and scientific management. Furthermore, it requires the comprehensive use of knowledge pertaining to atmospheric science, environmental science, management science, economics, behavioral science, information science, statistics and energy engineering to describe the dynamic evolutionary trend of the climate, environmental, energy, economic and social systems, as well as the interaction among these systems. This includes identifying characteristics of the decision-making processes of different spatial and hierarchical entities in the process of low-carbon transition, scientifically assessing the impact of the international climate regimes and national policies on these entities, and subsequently forming an understanding of the dynamic mechanism and laws of governing low-carbon development.

At present, the study on low-carbon transition and management of energy is undoubtedly the trendy topic in scientific research. It is still in the stage of exploration and integration of relevant scientific knowledge, and a mature systematic scientific framework has yet to be established. At this crucial juncture, *Energy and Climate Management*, an open access, peer-reviewed scholarly, and policy-oriented academic

journal dedicated to publishing interdisciplinary scientific papers on cutting-edge research on contemporary energy and climate management, has been launched. The Journal aims to incentivize a meaningful dialogue between academics, think tanks, and public authorities worldwide. Contributions are welcomed from all areas related to energy and climate management, especially those focusing on policy, economics, governance, and finance.

In the inaugural issue of *Energy and Climate Management*, we offer five excellent papers to our readers. The issue covers energy and climate management model tools, international cooperation methods in the area of renewable energy development, and renewable energy technology transfer. In the future, we aim to invite outstanding researchers from around the world to join us, addressing to the challenge of climate change, building a clean, low-carbon, safe and efficient energy system, and promoting people's wellbeing.

Welcome to *Energy and Climate Management*, a journal for the future, based on the present.

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Xiliang Zhang is a professor of management science and engineering and director of the Institute of Energy, Environment and Economy, Tsinghua University. He holds a Ph.D. in Systems Engineering from Tsinghua University. He is a member of the National Experts Panel on Climate Change, President of the China Emissions Trading Association, Chinese Society For Environmental Sciences (CSES), and the Chair of the Energy Systems Engineering Committee of the China Energy

Research Society. He has been heading the expert group of national carbon market design since 2015. He was a lead author of the fourth and fifth IPCC Climate Change Assessment Report. He was granted the Leading Talent Award by Ministry of Ecology and Environment and the First Award for Humanity and Social Science Research by Ministry of Education in 2020. His current research interests include low-carbon energy economy transformation, climate change economics, and climate change policy and mechanism design..