P22 / Energy Justice and Climate Resilience: A Pathway to Equitable and Sustainable Energy Transitions

Topic : ENVIRONMENT, SDGs, ENERGY

Chair : KHALID AHMED (Institute of Policy Studies, Universiti Brunei Darussalam)

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GENERAL OBJECTIVES, RESEARCH QUESTIONS AND SCIENTIFIC RELEVANCE

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1. Background

Energy justice and climate resilience are emerging yet crucial concepts in the debate on sustainable development and environmental governance. The term energy justice refers to equitable access to, distribution of, and decision-making about energy resources—so that all communities, particularly those that are vulnerable and marginalized, have access to affordable, clean energy. This notion aims to rectify the historical and rising systemic inequalities amidt growing climate change adversities within traditional energy systems, which disproportionately affect low-income and marginalised communities (Jenkins et al., 2016). Climate resilience focuses improving the ability of energy infrastructures and local communities to adapt, recover, and prosper amidst climate change-driven derangements such as extreme weather conditions and energy supply disruptions (Meerow et al., 2016).

2. Significance

Integrating energy justice principles with climate resilience strategies is essential to ensure a just transition toward low-carbon energy systems. Conventional approches to energy transitions often prioritize economic growth and technological advancement without adequately addressing the socioeconomic disparities they create. Disadvantaged and low-income communities are often excluded or not even accounted for before undertaking these advancements— thus, bear the brunt of environmental degradation and energy poverty at the same time. By incorporating energy justice into climate resilience frameworks, policymakers can address these inequities, making energy systems not only more sustainable but also inclusive and equitable. This combined approach aligns closely with the SDGs, specifically SDG-7 (Affordable and Clean Energy) and SDG-13 (Climate Action), by promoting inclusive access to clean energy solutions while enhancing societal resilience to climate impacts. Addressing these issues at the public policy levels is critical to mitigation and as well as adpaptation to climate change effects, and promoting sustainable economic development.

3. Potential Research Questions

i. How can principles of energy justice be effectively integrated into national and regional energy policies to ensure equitable access to clean energy resources?
ii. What are the socio-economic and structural barriers to achieving climate resilience in energy systems, particularly in marginalized and low-income communities?
iii. In what ways do decentralized renewable energy systems contribute to the dual goals of energy justice and climate resilience in vulnerable regions?
iv. How can smart grid technologies and innovations in energy storage enhance resilience and promote fair access to energy across diverse populations?
v. What role do social and political frameworks play in shaping energy justice outcomes in the face of climate-related disruptions?

4. Scientific Relevance

Research at the crossroads of energy justice and climate resilience has profound implications for advancing both scientific inquiry and public policy imperative. By examining how socio-economic inequalities intersect with energy access and climate vulnerabilities, scholars can develop frameworks to foster more just and resilient energy systems (McCauley et al., 2019). The growing body of literature argues that without a focus on social equity, energy transitions risk exacerbating existing injustices and creating new forms of socio-economic exclusion (Sovacool et al., 2021).

This research area has broader relevance to innovations in renewable energy technologies. A focus on decentralized, community-based energy solutions can enhance the adaptation startegies and reduce the vulnerability of marginalized groups and communities (Heffron et al., 2018). Furthermore, the integration of smart grids and energy storage technologies plays a crucial role in enabling more equitable distribution of energy resources, enhancing system reliability, and reducing the carbon footprint (Caramizaru & Uihlein, 2020).

Since this research domain helps to addresses not only the technical and economic aspects of energy transitions, but also the ethical and socio-political dimensions essential for achieving a sustainable future. As the impacts of climate change intensify, adopting a framework that integrates energy justice with climate resilience will be crucial in guiding public policy, scientific research, and community-driven initiatives towards more inclusive and sustainable energy practices.

References:

1. Caramizaru, E., & Uihlein, A. (2020). Energy communities: An overview of energy and social innovation. Publications Office of the European Union.
2. Heffron, R. J., & McCauley, D. (2017). The concept of energy justice across the disciplines. Energy Policy, 105, 658-667.
3. Heffron, R. J., McCauley, D., & Sovacool, B. K. (2018). Resolving society's energy trilemma through the Energy Justice Metric. Applied Energy, 223, 119-131.
4. Jenkins, K., McCauley, D., Heffron, R., Stephan, H., & Rehner, R. (2016). Energy justice: A conceptual review. Energy Research & Social Science, 11, 174-182.
5. McCauley, D., Heffron, R. J., Stephan, H., & Jenkins, K. (2019). Advancing energy justice: The triumvirate of tenets and systems thinking. Applied Energy, 239, 598-608.
6. Meerow, S., Newell, J. P., & Stults, M. (2016). Defining urban resilience: A review. Landscape and Urban Planning, 147, 38-49.
7. Sovacool, B. K., Martiskainen, M., Hook, A., & Baker, L. (2021). Decarbonization and its discontents: A critical energy justice perspective on four low-carbon transitions. Climatic Change, 164(1), 1-18.

CALL FOR PAPERS

Call for Papers: Energy Justice and Climate Resilience in Sustainable Energy Transitions

We invite submissions for a panel dedicated to exploring the intersection of Energy Justice and Climate Resiliencewithin the context of sustainable energy transitions and beyond. As the global community struggles the challenges posed by climate change, achieving equitable access to clean energy and enhancing resilience against climate-induced disruptions have become preeminent priorities. This call for papers aims to bring together innovative research encompassing the socio-economic, technological, and policy dimensions of these critical themes, fostering a deeper understanding of how energy justice can drive the development of climate-resilient solutions for all.

Topics of Interest Include, but are not limited to:

1. Integration of energy justice principles in national and regional energy policies.
2. Socio-economic barriers and solutions for enhancing climate resilience in marginalized communities.
3. Decentralized renewable energy systems and their role in achieving energy equity.
The impact of smart grid technologies and innovations in energy storage on system resilience.
4. Policy frameworks and social innovations that promote fair access to clean energy.
5. Case studies on community-driven energy solutions that build climate resilience.

6. Intersection of socio-political factors with energy justice in climate adaptation strategies.

Submission Guidelines

We welcome contributions from researchers, practitioners, policymakers, and interdisciplinary scholars engaged in energy studies, environmental science, social policy, and related fields. Manuscripts should present original research, case studies, or comprehensive reviews that offer new insights into the challenges and opportunities of integrating energy justice with climate resilience.

Important Dates:

A call for papers: November 15, 2024 - January 31, 202

Submission Process

All manuscripts must be submitted electronically through our submission portal [Link to submission portal]. Submissions will undergo a rigorous peer-review process, and accepted papers will be notified.

Contact Information

For any inquiries regarding this call for papers, please contact the editorial team at [email address].
We look forward to receiving your submissions and to advancing the discourse on how energy justice and climate resilience can shape the future of sustainable development.

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Session 1

Thursday, July 3rd 16:00 to 18:00 (SME-G4)

Debt, Solar Power, and Energy Inequality in Pakistan: The Role of International

KHALID AHMED (Institute of Policy Studies, Universiti Brunei Darussalam)

Harnessing Solar-Powered Cold Storage for Climate-Resilient Agriculture in Rural Bangladesh

Md Adil Ibne Sifat (Independent Researcher)

Who benefits from distributed energy generation in Mexico? A socio-spatial analysis of the latest advances in distributed energy generation

Natalie Ortiz-Guerrero (Secretary of Science, Humanities, Technology and Innovation (SECIHTI))

Michele Gonzalez Galindo (Secretary of Science, Humanities, Technology and Innovation (SECIHTI))

Transformative Potential of Climate Finance on Social Equity in Developing Countries

Ji Qi (Fudan University)

Unlocking Electricity Market Liberalization in ASEAN: The Role of Third-Party Access (TPA) Policy

Chakorn Loetnithat (LKY School of Public Policy, National University of Singapore)

Areeporn Asawinpongphan (Thailand Development Research Institute (TDRI))