P52 / From Policy Design to Household Adoption: Behavioural and Structural Determinants of Rural Energy Transitions in the Global South

Topic : Policy Change/Continuity/Dynamics

Chair : Cecy Balogun (University of Johannesburg)

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GENERAL OBJECTIVES, RESEARCH QUESTIONS AND SCIENTIFIC RELEVANCE

Background

Achieving universal access to affordable, reliable, and sustainable energy remains a major challenge across the Global South, where many rural households continue to rely on traditional biomass fuels for cooking and heating. These practices contribute to environmental degradation, greenhouse gas emissions, health risks, and deforestation. In response, governments, development agencies, and private-sector actors have promoted renewable and decentralized energy technologies such as improved cookstoves, biogas systems, solar home systems, and mini-grids to support energy security, poverty reduction, climate resilience, and sustainable development. However, adoption and sustained use of these technologies often remain below expectations despite substantial investments and policy support. This gap raises important policy questions regarding the factors influencing technology adoption and the effectiveness of intervention strategies. Emerging research suggests that technological solutions alone cannot explain adoption patterns. Instead, energy decisions are shaped by a combination of social, cultural, economic, political, and institutional factors, including infrastructure availability, financing, governance, gender relations, social norms, risk perceptions, and local knowledge systems. Understanding rural energy transitions therefore requires attention to both behavioural and structural determinants.

This panel seeks to advance scholarly understanding of how public policy can facilitate sustainable and equitable rural energy transitions across the Global South by contributing to debates concerning policy design, implementation, governance, sustainability transitions, and development outcomes. To address the concerns raised here, the panel focuses on these four objectives:

1. First, it aims to advance theoretical debates regarding the relationship between behavioural dynamics, structural conditions, and policy outcomes in rural energy transitions.

2. Second, it seeks to identify empirical evidence on the effectiveness of policy interventions promoting renewable energy adoption among rural households.

3. Third, it aims to foster interdisciplinary dialogue among scholars working in public policy, energy governance, environmental studies, development studies, economics, sociology, behavioural science, and sustainability transitions.

4. Fourth, it seeks to generate policy-relevant insights that can inform future efforts to design, implement, and evaluate renewable energy programs in developing-country contexts.

These objectives will address the following overarching questions:

1. What behavioural factors influence the adoption and sustained use of renewable energy technologies among rural households in the Global South?

2. How do structural factors, including institutions, governance arrangements, market conditions, infrastructure, and socio-economic inequalities, shape rural energy transitions?

3. How do behavioural and structural determinants interact to facilitate or constrain technology adoption?

4. Which public policy instruments and governance mechanisms most effectively support renewable energy transitions in rural communities?

5. How can policymakers design context-sensitive interventions that promote equitable and inclusive adoption of clean energy technologies?

6. What lessons can be drawn from comparative experiences across countries and regions in the Global

South?

Scientific Relevance of the Panel to the Conference

This panel advances public policy scholarship by examining how governance, institutions, and policy interventions shape sustainable energy transitions in the Global South. It foregrounds context-specific challenges, behavioural and structural determinants of adoption, supports evidence-based policymaking, and contributes to achieving multiple SDGs, including energy access, climate action, health, gender equality, and poverty reduction.

CALL FOR PAPERS

Call for Abstracts

We invite abstracts for our panel during the ICPP8 2027. The panel will critically engage the theme “From Policy Design to Household Adoption: Behavioural and Structural Determinants of Rural Energy Transitions in the Global South”. The panel seeks contributions that examine how governance, institutions, and policy interventions shape sustainable energy transitions in the Global South. Papers should critically analyse context-specific topics on energy access, climate action, challenges, behavioural and structural determinants of adoption of green energy technologies, evidence-based policy design that contributes to adoption of green energy technologies in rural communities in the Global South, and intersecting cross-cutting issues that contributes to achieving the SDGs, including health, gender, climate change and environmental sustainability.

Preferred paper types

The panel is particularly interested in studies examining the adoption, sustained use, and scaling of renewable energy technologies, including policy pathways. Therefore, the following formats will be considered:

1. Empirical papers that are based on fieldwork, case studies, or evaluations of rural energy transitions that address the behavioural and structural determinants of green technologies by rural households/communities.

2. Theoretical papers that offer new frameworks or challenge dominant models of policy design linked to enhanced adoption of technologies that can enhance rural energy transitions.

3. Methodological papers that propose innovative approaches or tools for capturing and analyzing how the inclusion of rural communities in the Global South can mainstreamed into green energy transitions in line with global priorities.

Key themes

Papers can focus on any of the thematic areas

1. Behavioural determinants of technology adoption
2. Public policy and governance mechanisms
3. Market and financing interventions
4. Gender and social inclusion in energy transitions
5. Community participation and local governance
6. Comparative and cross-national perspectives
7. Climate policy and sustainability transitions
8. Policy implementation and evaluation
9. Cross-cutting themes, including gender, climate change, and environmental sustainability

Submission guidelines

Abstracts should contain the title of the paper, thematic area, author (s) names, affiliation, and contact information. Abstract should not be more than 250 words with 5 keywords. Abstract should indicate the paper type: whether empirical/theoretical/methodological.

Panel format

Panel sessions will include paper presentations and moderated discussions. Selected papers will be considered for publication in a peer-reviewed journal, special issues, or edited volume. We welcome submissions from scholars, practitioners, and policymakers working across disciplines.