



26 - 28 February 2026

Rotterdam , Netherlands

Understanding Justice Perceptions in Rural Renewable Energy Projects: Evidence from Marginalised Communities in India

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Abstract

Renewable energy interventions in marginalised rural communities often face challenges related not to technology, but to how fairness, accountability, and institutional behaviour are perceived by local communities. This study examines justice perceptions among marginalised households, focusing on how interactions with project actors—such as non-governmental organisations, government departments, and private providers—shape community evaluations of renewable energy satisfaction and project acceptance. The study is grounded in qualitative fieldwork conducted across villages in Kerala, where renewable energy projects had been implemented. Insights from interviews and community discussions were used to identify key justice-related concerns experienced by households during project implementation and post-installation phases. Based on these insights, a structured household survey was developed and administered to 270 respondents from the Scheduled Tribe and the Schedule caste. To identify the dominant dimensions underlying justice perceptions, Principal Component Analysis (PCA) was employed as an exploratory tool to organise community perceptions into interpretable components.

The findings indicate that justice perceptions are shaped by multiple, interrelated factors. Key dimensions include the perceived competence of project actors, transparency in decision-making processes, responsiveness to community needs, and a commitment to long-term maintenance and grievance redressal. The study highlights that perceptions of justice in renewable energy projects are primarily shaped through everyday institutional interactions, rather than technical performance alone. By foregrounding community-defined understandings of fairness and responsibility, the findings offer practical insights for improving the design, implementation, and governance of renewable energy interventions in marginalised rural settings.

This study contributes to the literature on renewable energy and governance by providing an empirically



grounded understanding of justice perceptions and demonstrating the value of combining qualitative insights with exploratory quantitative analysis to capture community perspectives in marginalised contexts.

Keywords: Project Acceptance, Marginalised Communities, Governance