Solar Electrification and Well-Being of Marginalised Communities: Role of Microfinance Institutions in Rural India

ABSTRACT

Access to clean and affordable energy remains a critical challenge for sustainable development, particularly for marginalised rural communities in India. As this research highlights, Microfinance Institutions (MFIs) and Self-Help Groups offer a pathway to encourage rural electrification with solar technology for underprivileged communities in India, where access to clean energy remains insufficient. By examining these two models that provide access to renewable energy for rural communities, we can understand how best to overcome many of the systemic barriers, such as a lack of knowledge, inadequate financial resources, and insufficient institutional support, that currently prevent access to clean renewable energy. In addition, as significant correlations exist between economic development and energy demand, we must transition away from fossil fuels, as this will benefit the economy and help reduce CO_2 emissions. The research used a mixed-methods approach, incorporating secondary data and governments and various institutes' reports to achieve three core objectives. First, it examines the micro-level solar electrification programmes & structure of microfinance institutions in India. Second, it examines how microfinance-supported solar electrification arrangements can enhance living conditions and foster opportunities for improved socio-economic well-being. The third objective of this research is to evaluate existing solar electrification policies to recommend policy reforms and institutional arrangements for scaling up micro-level solar electrification through collaboration with MFIs. The analysis focuses on what constitutes an effective renewable energy policy framework that promotes a positive feedback loop between environmental sustainability and economic development. It also considers several barriers to implementation, such as the high capital requirements, the lack of institutional capacity, and the unclear nature of renewable energy policies in developing countries. In conclusion, the research illustrates that by promoting access to renewable energy systems through energy diversification and reduced dependence on fossil fuels, increased access to electricity improves energy security. In addition, the findings provide policymakers and other stakeholders with useful guidance as they design an inclusive energy policy that integrates renewable energy and microfinance mechanisms, thereby promoting sustainability, improving the quality of life, and supporting the economic advancement of disadvantaged populations.

Keywords: Renewable Energy, Energy Access, Financial Inclusion, Socio-Economic Development, Sustainable Development Goals, Renewable Energy policy.