



# Solar-Powered Stations and Rural Livelihoods: A Mixed-Methods Evaluation in Eastern Kenya

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## Abstract

This study examines the impact of solar-powered charging stations on rural livelihoods in Eastern Kenya. A mixed-methods approach combining quantitative surveys and qualitative interviews was employed. Data collection took place from to across 15 villages. Approximately 70% of respondents reported increased income due to improved access to electricity, with a notable improvement in the operation of small businesses such as shops and agricultural enterprises. Solar-powered charging stations have significantly contributed to rural economic development by reducing reliance on traditional power sources and facilitating technological innovation among local entrepreneurs. Government authorities should consider expanding solar infrastructure and providing subsidies for renewable energy technologies to further support rural livelihoods in Kenya. Renewable Energy, Rural Development, Entrepreneurship, Mixed-Methods Study

**Keywords:** Kenya, Geographic Focus, Rural Development, Mixed Methods, Solar Energy, Community Impact, Livelihoods Analysis

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