



# Socioeconomic Impacts of Solar Power in Off-Grid Ghanaian Communities,

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## Abstract

Solar power has emerged as a viable alternative to traditional fossil fuels in off-grid communities across sub-Saharan Africa, including Ghana. The research employs qualitative methods, utilising semi-structured interviews and participant observation among solar power users in selected off-grid communities in Ghana. Solar power installations led to significant improvements in household energy security, reducing reliance on kerosene lamps by 80% and increasing access to lighting for an average of 12 hours daily per household. The findings suggest that solar power can substantially enhance livelihoods and quality of life in off-grid communities, though challenges related to initial investment costs remain a barrier. Policy makers should consider subsidizing or incentivizing solar installations for off-grid communities as part of broader energy access strategies.

**Keywords:** *Sub-Saharan, Africa, Socioeconomic, Qualitative, Development, Ghanaian, Communities*

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