



# Women's Empowerment Through Solar Microgrids: Energy Access and Household Income in Rural Burkina Faso,

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Women's Empowerment  
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## Abstract

Solar microgrids are a promising solution for energy access in rural areas of developing countries like Burkina Faso. The study employed mixed methods including quantitative surveys ( $N = 300$ ) *to assess energy access*  $\wedge$  *qualitative interviews* ( $n = 50$ ) *to explore the socio-economic impact of solar microgrids*. Women who gained access to solar microgrids reported a significant increase in household income by an average of 24% compared to those without such access, highlighting the multiplier effect on economic empowerment. The findings underscore the critical role of women's energy access in enhancing household incomes and advocate for policy interventions that prioritise gender-sensitive infrastructure development. Public-private partnerships should be encouraged to fund solar microgrid projects with a focus on beneficiary inclusion, particularly targeting rural areas where women are underrepresented.

**Keywords:** *African Geography, Empowerment Studies, Mixed Methods, Rural Development, Gender Studies, Energy Access, Microgrids*

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