

Review of: "Analysis of Renewable Energy Deployment and Investment for Rural Health Facility Electrification: A Case Study of Kenya, Ghana, and Rwanda"

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Potential competing interests: No potential competing interests to declare.

- This study addresses a relevant and important topic—the impact of electricity access on health deliveries and outcomes, particularly in rural areas. However, while the research question is pertinent, there are several areas where the study could be improved to enhance its rigor and effectiveness. In particular, the methodology needs to be more clearly defined, and stronger connections should be made between the case studies and the existing literature. Additionally, the policy recommendations could be further refined to offer more practical, evidence-based insights.
- Abstract: "This study is limited to evaluating the impact of poor electricity access to rural health facilities and how renewable energy systems can offer quick cheap solutions in the case study countries using credible secondary data qualitatively." Here I think it's too strong to talk about evaluation, considering that the study is qualitative. Consider rephrasing 'evaluating the impact' to something like 'exploring' or 'assessing' to better align with the qualitative nature of the analysis. This suggestion also applies to other instances in the paper where 'evaluation' is mentioned, as it may create expectations of a quantitative or more formal impact analysis.
- While the paper aims to assess the impact of electricity access on health deliveries and outcomes, the current methodology provides limited information regarding how electricity affects these dimensions. This makes it challenging to draw meaningful conclusions about the relationship between electricity access and health outcomes. To improve the robustness of the methodology section, I recommend a clearer and more detailed explanation of the method used, i.e., a comprehensive literature review that thoroughly explores the existing research on the impact of electricity access on health outcomes. This literature review should serve as the foundation for each of the case studies. Hence, in the case study sections, it would be key to explicitly connect each step to relevant literature. This has been done only partially, but you need to provide more information and findings from the literature to strengthen all your Steps. This would strengthen the credibility of the analysis and provide a clearer methodological framework for readers to follow.
- The policy recommendations presented in the paper are a good start, but they could benefit from further development. Given the limited data on the electrification status of the country and the qualitative nature of the analysis, the recommendations may not fully capture the complexities of implementing renewable energy solutions in rural health facilities. To further strengthen the policy recommendations, it would be beneficial to tie them more closely to the findings of the literature review and the case studies. This could include offering more specific, actionable insights based on examples of successful interventions in similar contexts. Additionally, incorporating considerations of financial sustainability, scalability, and local capacity building would provide more well-rounded guidance for policymakers. This

would ensure that the recommendations are both practical and aligned with the current body of evidence on electricity access and healthcare improvements.