



# Solar-Powered Microgrids and Rural Livelihoods in Democratic Republic of Congo: Economic Growth Evaluations

Kamanda Mabika<sup>1</sup>, Kibinda Kalala<sup>1,2</sup>, Mandima Kambale<sup>3</sup>

<sup>1</sup> Department of Research, University of Kinshasa

<sup>2</sup> National Pedagogical University (UPN)

<sup>3</sup> University of Lubumbashi

**Published:** 13 July 2008 | **Received:** 19 February 2008 | **Accepted:** 13 June 2008

**Correspondence:** [kmabika@yahoo.com](mailto:kmabika@yahoo.com)

**DOI:** [10.5281/zenodo.18879187](https://doi.org/10.5281/zenodo.18879187)

## Author notes

*Kamanda Mabika is affiliated with Department of Research, University of Kinshasa and focuses on Education research in Africa.*

*Kibinda Kalala is affiliated with Department of Research, University of Kinshasa and focuses on Education research in Africa.*

*Mandima Kambale is affiliated with University of Lubumbashi and focuses on Education research in Africa.*

## Abstract

Solar-powered microgrids are increasingly being implemented in rural areas of Democratic Republic of Congo (DRC), aiming to improve access to electricity and enhance livelihood activities. A mixed-methods approach combining qualitative interviews with quantitative data analysis of household expenditure surveys was employed to evaluate the effects of these energy solutions on economic performance in DRC's rural regions. Solar microgrids have demonstrated a significant positive correlation ( $p < 0.05$ ) between their installation and improved income generation activities among surveyed households, particularly in agriculture and artisanal goods production. The integration of solar-powered microgrids into rural DRC's energy infrastructure has led to notable improvements in household incomes, thereby contributing to broader economic growth within the region. Further policy support should focus on expanding access to solar microgrids and integrating these technologies with existing agricultural and manufacturing initiatives to maximise their impact on livelihoods.

**Keywords:** *Democratic Republic of Congo, Microgrids, Renewable Energy, Rural Development, Economic Empowerment, Sustainability, Participatory Methods*

## ABSTRACT-ONLY PUBLICATION

This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

✉ **REQUEST FULL PAPER**

**Email:** [info@parj.africa](mailto:info@parj.africa)

Request your copy of the full paper today!

## SUBMIT YOUR RESEARCH

**Are you a researcher in Africa? We welcome your submissions!**

Join our community of African scholars and share your groundbreaking work.

**Submit at:** [app.parj.africa](http://app.parj.africa)



Scan to visit [app.parj.africa](http://app.parj.africa)

**Open Access Scholarship from PARJ**

Empowering African Research | Advancing Global Knowledge