

LINKING MINI GRIDS ELECTRIFICATION AND RURAL DEVELOPMENT

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Introduction

Electrification is a critical component in the basic infrastructure that permits rural people to improve their quality of life. Tanzania is endowed with several renewable energy resources which are increasingly being used to generate electricity. The Electricity Act of 2008 and Small Power Producers Regulatory Framework of 2008, has accelerated deployment of mini grids in Tanzania and indeed rural development.



Solar and Biomass Minigrid Power Plants

02

Methodology

A total of eighteen MG sites comprising different technologies, capacities, ownership, operation and business models were visited in nine regions. Interviews and focus group discussions with end users, operators, developers, central and local government authorities, the regulator, national utility and financiers were undertaken to capture among other aspects, how MGs contribute to rural development. These activities took place from September 2021 to October 2022.



Focus Group Discussions at Minigrid Sites

03

Mini grids electricity
impacts on rural
development

The study has revealed that access to reliable mini grids energy services contribute in improvement of the rural livelihoods including promotion of local businesses, impacting on public services, and driving development via productive uses- carpentry tools, welding and agroprocessing machines, cooling facilities and water pumps; improved social and public services provided by medical equipment, cold storage facilities, laboratory equipment, extended hours for reading by students, and retention of staff in rural schools and dispensaries; job creation via new SMEs and MG; access to modern means of communication- radio, TV, internets and mobile phones; introduction of e cooking via highly efficient cooking appliances that protects health, conserves the environment and reduces energy costs at family level; and improved night security from street lighting.



Productive uses and eCooking using Minigrid Electricity

04

Challenges of MG services

Despite the contribution of MG electricity in rural development, following challenges were observed: there is limited data for optimal designs, low participation of local communities at project onset, limited access to financing, and lack of technical expertise to design, construct and operate MGs. Furthermore, limited access to MG energy services is due to customers' low ability to pay, use of inefficient electrical appliances, low awareness on potential benefits in tandem with MG electricity.



Trained Female Operator at Tulila Hydro Power Plant

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Conclusion

In order to sustain the positive impacts of mini grid electricity in rural development, all stakeholders including the government to ensure the supportive regulatory frameworks are enforced, a sustained demand of electricity by supporting end users to acquire and use highly efficient appliances, undertaking regular mini grids infrastructures maintenance.

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