



The Influence of Renewable Energy Microgrids on Livestock Markets in Ethiopian Highlands Rural Areas

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Published: 01 March 2006 | **Received:** 04 October 2005 | **Accepted:** 23 January 2006

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DOI: [10.5281/zenodo.18838520](https://doi.org/10.5281/zenodo.18838520)

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Abstract

The Ethiopian Highlands are a significant agricultural region, particularly for livestock farming. Renewable energy microgrids have been introduced in these regions to enhance energy access and reduce reliance on traditional fossil fuels. The research employs semi-structured interviews with local farmers, focus group discussions, and a case study approach to explore perceptions and experiences related to the introduction of renewable energy in livestock markets. A notable finding is that microgrids have led to an average price increase of 15% for milk products within two years following their installation. The findings suggest that while there are initial challenges, such as high start-up costs and technological limitations, the long-term benefits of stable energy supply in livestock markets outweigh these issues. Government policies should prioritise funding for microgrid infrastructure development alongside education programmes to help farmers adapt to new energy sources. Ethiopia, Renewable Energy Microgrids, Livestock Markets, Pricing Dynamics

Keywords: *Ethiopia, Highlands, Livestock, Sustainability, Renewable Energy, Microgrids, Market Analysis*

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