

Towards Development of Effective Policies and Regulations for Sustainable Off-Grid Solar Electronic Waste Management Systems in Kenya

DAVID KARIUKI MUGENDI¹, Caleb O Mireri², and Martin E Korch³

¹Africa Nazarene University

²Kenyatta University

³Technical University of Denmark

July 12, 2023

Abstract

Off-grid solar systems provide clean and affordable energy. Adoption of off-grid solar energy is becoming increasingly popular in Kenya as a source of renewable energy, with an estimated 6 million people now using off-grid solar power systems. However, the rising off-grid solar systems technology uptake comes with a growing amount of solar e-waste, which can have harmful environmental and health effects if not managed properly. Current data on the exact amount of solar e-waste being generated in Kenya is unavailable and this amount will continue to rise with the expiry of many of these off-grid solar systems lifespans. This study through stakeholder's workshop engagement and document analysis approaches, established that the country has robust general waste policy, legal and institutional framework but there is no specific policies and regulations on off-grid-solar electronic waste management, just like it is the case in many developing countries. In addition, there is a lack of awareness on hazardous nature of off-grid solar systems e-waste to both consumers and institutions of governance. Furthermore, there is little enforcement of the general regulations in addition to inadequate management infrastructures. This calls for development of effective off-grid solar e-waste management policies and regulations within the backdrop of the rising uptake of off-grid solar energy systems in Kenya.

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Mugendi David¹, Caleb Mireri², Martin Korch[?]

Department of Spatial and Environmental Planning Kenyatta University P.O. Box 43844-00100^(1,2)

and Department of Environment and Natural Resource Management Africa Nazarene University P.O. Box 53067 – 00200 Nairobi, Kenya¹

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Kobra Advice, Kontor Charlottenlund Stations lads 22920 Charlottenlund

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ENGINEERING REPORT JOURNAL ARTICLE ON SOLAR WASTE MGT.docx available at <https://authorea.com/users/638375/articles/654194-towards-development-of-effective-policies-and-regulations-for-sustainable-off-grid-solar-electronic-waste-management-systems-in-kenya>