

Bringing economic development and light to those not on the bottom rung of the ladder.

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Keywords nano-grid, poverty

Abstract

Modern energy access underpins Sustainable Development Goals. The Sustainable Energy Access for All programmes aims to bring electricity to the entire world population by 2030. Yet 1.3 billion people are still excluded from this aspiration and scenarios suggest the likelihood of reaching the targets is unlikely, particularly in Sub-Saharan Africa. Furthermore, providing basic energy services such as lighting and phone charging does little to alleviate poverty and costs of such systems can exclude those suffering in extreme poverty. Indeed, introducing modern energy services should include opportunities for economic development.

One such approach has been taken with the Solar Nano-Grid project. This development aims to deploy low cost photovoltaic systems for two impoverished communities in rural Kenya. Using multidisciplinary practises that included techno-socio-economic methods, a two stage community consultation process identified household and community energy service desires and the socio-cultural make-up of the community, including income and affordability.

This paper reports on the outcomes of the social surveys and consultation with the results indicating the number of households, and the price they could afford, that could sign up for being part of the scheme. These values also informed the design of the community nano-grid that itself had to be modified to minimise costs for end-users. Initial findings and feedback from the installed Solar Nano-Grid are presented.