

Approaches to financing off-grid energy development in sub-Saharan Africa: Traditional government-led models vs. innovative private sector options

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Abstract

Financing off-grid energy development in sub-Saharan Africa is critical for achieving Sustainable Development Goal 7 (SDG 7) which is to ensure access to affordable, reliable, sustainable and modern energy for all people. This is due to the fact majority of the people in sub-Saharan Africa are located in the rural areas which have very poor electricity penetration rates which impacts the quality of life experienced by rural dwellers negatively. For practical and economic reasons, the national grid cannot be extended to every community in sub-Saharan Africa, yet, access to affordable modern electricity is necessary for improved quality life for rural dwellers. This study explores the approaches to financing off-grid energy development, examining government-led approaches through which most rural electrification projects are accomplished, with private sector financing options which are far less popular due to risks associated with rural electrification projects, but have the potential to accelerate electrification in the rural areas of sub-Saharan Africa to impact development. The study analyses the impacts of both financing approaches taking into account critical factors that include electricity costs, project completion time, economic impacts of the projects and the feasibility of rapidly replicating the project. Furthermore, the paper also analyses critical external factors and aspects that impact project implementation including local governance and financing structures, project delivery channels, business models for private sector firms and policy frameworks for government. The study concludes that a higher level of cooperation between governments and private sector firms on policy development, investment criteria analysis, geographical concessions and power purchase guarantees to lower financing risks is critical for accelerated financing of affordable, clean, modern off-grid energy in the rural communities of sub-Saharan Africa.

Key words: Off-grid; finance; government; private sector; sub-Saharan Africa

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