



Africa-EU Renewable Energy Research and Innovation Symposium, RERIS 2016, 8-10 March 2016, Tlemcen, Algeria

Risk Clustering as a finance concept for rural electrification in Sub-Saharan Africa to attract international private investors

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Abstract

Projects in the energy sector in Africa suffer from a number of barriers. Especially the combination of political instability and an unclear regulatory framework hampers the private sector to realize the investment possibilities in the field of decentralized rural electrification. For debt based projects these barriers result in prohibitively high interest rates – roughly 15 % while the return on investment does not exceed the low 10% area. This situation leads to strong reluctance from private investors to provide equity. A possibility to encourage private investors to step in could be a separation of the different risks, especially separating the typical high sovereign risk of a country from the commercial risk of the energy project. As a result, the separated risks can be clearly allocated to different investor groups looking for investment opportunities going along with distinct risks. A structured approach is proposed through which private international investors are exposed only to the general political risk while international development banks cover mainly the regulatory risk. Finally, the newly invented financial instrument convertible grant by the electrifi initiative of the EU provides an equity substitute to take over the commercial risk. With this additional financial support, decentralized electrification projects in Africa have the possibility to be implemented and the potential to be scaled up.

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Peer-review under responsibility of the organizing committee of RERIS 2016

Keywords: Renewable energy projects; investment; risk clustering; senior debt; mezzanine debt; equity substitution.

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1. Introduction

For the time being finance is one of the most important bottlenecks for a further extension of renewable energy projects in the Sub-Saharan rural electrification field. Typically funding hurdles are given for every part of the capital side and for the typical groups of equity and debt provider. There is widespread lack of equity of private investors due to a low return / high risk business profile. “Lacking transparency, the risk of retroactive changes to the FiT [Feed in Tariff] scheme as well as the creditworthiness of the single off-taker are major barriers for private sector investments in renewable energy projects. Compared to other investments in developing countries and even investments in fossil fuel power projects, RE [Renewable Energy] projects have a higher exposure due to their [initial] capital intensity and resulting high level of fixed costs.” [1].

Particularly local debt funding is cumbersome as the lending willingness of local banks is extremely low mainly due to their lack of knowledge in energy project finance. “Sub-Saharan Private Lending market is characterized by a low level of long term liquidity. As a consequence, local banks and financial regulation institutions limit the maximum maturity terms to a few years and interest rates are high due to high local inflation (above 8% in 2012 in most of the priority countries) and the lack of adequate guarantees” [2] Generally, banks in Africa have hardly any experience in financing small-scale renewable energy projects. The reason of the reluctance of African Banks lies on the one hand on the population’s poverty and on the other hand in the fear of unsteady project cash-flow. Another reason is that they are not used to finance projects which are only profitable in the medium to long-term [3,4,5].

Interest rates in the African banking sector are prohibitively high for long-term investments in the rural electrification area, especially as these projects typically show a return on investment in the range of 10 % to 15 % (Table 1). In addition, the Sub-Saharan private lending market in the field of renewables is characterized by a low level of long-term liquidity necessary for long-term investments in the energy sector. Renewable energy projects typically require huge investment costs and a long term horizon for profitability combined with a high risk-profile. “With higher capital costs and more complex delivery and O&M requirements, the potential of mini-grids to significantly impact the access to energy scenario across the energy poor regions of Asia has not yet been able to be realized.” [6] Furthermore the participation of the international private investor base is prohibited due to the underlying risk-profile.

In addition, it is difficult to motivate development finance institutions (DFI) due to the low funding size of projects in the rural electrification area. Besides the political risk, the commercial risk is the most important one. It is mainly given by the payment risk of the purchaser of electricity, the off-taker [7,8]. Therefore, it has a large influence on the profitability of the project. Typically, in the case of African countries, commercial and political risks are mixed. A differentiation of these risks would be supportive to attract private investors. “In infrastructure financing, private equity investors and lenders are driven by return on investment considerations, which must be adequate to compensate them for the risks they assume by making an investment.” [9] Private investors are not risk averse in general – they just require distinct sources of risks willing to be exposed and to be compensated by the typical prices of the selected risk.

Table 1: Loan conditions in some Sub-Sahara African Countries. Source: [2].

	Longest maturity terms available for loans (Years)	Average lending rate (%)
Kenya	10	14
Malawi	5	29
Mozambique	10	19
Rwanda	10	16
Tanzania	5	15
Uganda	20	19
DRC	3	67

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