Financing Mechanisms For Private Sector Investment In Renewable Energy Access In Uganda

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Rationale of the Study

- Government of Uganda made domestic and international commitments to increase access to modern energy services to all Ugandans through the Vision 2040, National Development Plan II and Sustainable Energy for All (SE4ALL) Action Agenda. NPP I - increase overall access to electricity to 30%, SE4ALL Action Agenda - double the share of RE in the energy mix by

- Despite the recent efforts by government to increase access to electricity by all Ugandans, more than two-thirds of the population lack access to electricity. Uganda is among countries with the lowest electricity access rate; over 93% of the population relying on biomass for energy

- Increasing access to electricity will require a sharp increase in energy access investments. Since public funds are limited the necessary investments cannot be made by the government alone. Therefore, mobilization of private investment and finance, is crucial.

- Studies by Environmental Alert in 2018 and Uganda Solar Energy Association in 2017 found limited access to finance as among the key challenges the private sector faces in investing in RE.

Objectives of the Study

- Provide an overview of the current finance mechanisms for advancing private sector investment in renewable energy access.

- Review the current constraints (both policy and practice) at national and local levels that are limiting accessing to credit for private sector investment in renewable energy access.

- Suggest/propose recommendations for addressing the constraints /limitations to access to credit for private sector investment in renewable energy access.

Methodology

- The study employed both qualitative and quantitative approaches – mainly making use of document reviews, and key informant interviews (KIIs):
  - *Document review*: reviewed secondary data and analytical studies from various sources, including publications by gov't, Dev't Partners, Private sector actors, Financial Institutions, Research institutions, and NGOs

  - *KIIs*: were conducted with 21 institutions at national who included Gov't, Dev't Partners, Private sector actors, Financial Institutions and NGOs.

- **Scope**: The study was carried out at national level and conducted interviews from 21 institutions
- The study was undertaken between June and August 2019.

Limitations of the Study

- *Adequacy, quality and availability of data and information*
  - difficulties in accessing official data on energy financing esp. from financial institutions and DPs
- *Response rate*. The study was not able to obtain data from all potential institutions mainly due to non-response even after several call-backs.
- *Sample Size*: The limited resources, and time frame allocated for the study imposed binding constraints on the geographical scope that could be covered by the study. The study did not cover stakeholders in the Albertine region where the project is being implemented.

Key Findings

Private sector actors in the RE in Uganda

- The Gov't of Uganda electricity reforms on late 1990s led to the unbundling of the UEB; separating generation, transmission and distribution. While transmission remained state controlled, generation and distribution were privatized.

- Thus, Uganda's electricity sector today is one of the most deregulated on the continent with numerous players active within it.

- **Grid players**
  - Generation include: ESKOM, Bujagali HPP, Isimba HPP, Kabalega HPP, Bugoye HPP, Kakira Cogeneration, Ecopower, AEMS, Hydromax, Jacobsen, GETFIT portfolio, and mini-grid players.
  - Eight (8) major distribution companies; Umeme, WENRECo, UEDCL, BECS, KRECS, PACMECS, KIL, & KIS.

- **Off-grid players**
  - Major ones: M-KOPA, SolarNow, Village Power, Village Energy, D-Light, Barefoot among others.

Private sector actors in the RE in Uganda -ctd

- The private sector actors in the RE sub-sector can be categorized as micro, small, medium and large-scale.

- Some are at early stage (start-ups), growth stage and mature stage.
  - Starts-ups usually raise their capital through equity (i.e. Self-investment, friends & family, angel investors, NGOs, Gov't).

  - Growth stage usually raise their capital through Quasi-equity (i.e. Venture capitalists).

  - Mature stage can raise their capital through Debt from financial institutions.

- Major associations that represent private sector interests include: Uganda Solar Energy Association (USEA), Bio-mass Energy Efficient Technologies Association (BEETA), Hydropower Association of Uganda (HPAU), Energy Efficiency Association of Uganda (EEAU), Uganda National Bio-gas Alliance (UNBA).

Available financing opportunities for the private sector

A. **Government.** Mainly through:

- *Uganda Energy Credit Capitalization Company (UECCC).* With products like: Credit support facility (CSF), Solar Loan Programme, Working Capital Facility for Solar Companies, Connection Loan Programme for On-grid Connections, Domestic Biogas Loan Programme, and Transaction Advisory Services and other early stage support, among others.

- *Uganda Development Bank (UDB)*: with various products like; project finance, trade finance, equity and quasi-equity

- *Uganda Development Corporation (UDC)* which is the gov't vehicle for investment in strategic sectors of the economy.

- *Grants, rebates & fiscal incentives* such as Renewable Energy Feed in Tariff (REFIT), Energy Rebates under ERA, & Tax incentives i.e. tax credits to RE generators, or VAT exemptions.

Available financing opportunities for the private sector - ctd

B. **Development Partners (DPs)**

- Major DPs providing funding to the private sector investment in RE include: DFID, EU, Norway, China, USAID, SIDA, UNCDF, KfW, etc

- DPs provide funding mainly through:
  - Grant-funded investments such as Global Energy Transfer for Feed-in-Tariff (GET FiT)
  - Risk sharing and blended finance through:
    - Guarantees such as crowdfunding
    - Results based financing (RBF) i.e. Output-based aid (OBA), and Output-based disbursement (OBD)
    - Challenge funds
  - Public-Private Development Partnership (PPDP): DPs working with other public actors in joint-cooperation with the private sector to finance RE projects

Available financing opportunities for the private sector - ctd

c. **Venture Capital, Private Equity and Funds**
   - Equity investments take an ownership stake in a project or company
   - Venture capitalist mainly focus ‘early stage’ or ‘growth stage’ companies.
   - Private equity firms focus on later stage and more mature projects, generally expect to ‘exit’ their investment and make their returns in a 3 to 5 year timeframe
   - Institutional investors (e.g. pension funds) have an even longer time horizon and larger amounts of money to invest, with lower risk appetite
   - Some of these include: Response Ability, ACUMEN, Energy Access Ventures, Alphamundi, Sunfunder, Root capital, Norfund, Novastar, Shell Foundation, Phillips Lighting, among others

Available financing opportunities for the private sector - ctd

D. **Development Finance Institutions (DFIs)**

- Major DFIs include: World Bank (IDA, IFC, and MIGA), Africa Development Bank, East African Development Bank, and Proparco among others

- DFIs provide funding to assist in financial de-risking of private sector lending.

- Aside from providing concessional debt, DFIs help build the capacity of local financing institutions by passing on their experience through the preparation and analysis of technical and financial documents for RE projects

Available financing opportunities for the private sector - ctd

E. **Local Financial Institutions**

- Among these are: Centenary Bank, Post Bank, Finance Trust Bank, Pride Micro Finance, Stanbic Bank, Equity Bank, Exim Bank, CBA, DTB, KCB, Barclays Bank, etc.
- These offer financing through:
  - ✓ *Corporate lending*: provision of finance to companies with few restrictions on how the company use the funds, provided certain general conditions are met.
  - ✓ *Project finance* (or “limited recourse” finance), the amount of debt made available is linked to the revenue that the project will generate over a period of time, as this is the means to pay back the debt.
  - ✓ *Refinancing*, when already borrowed money but decide, or need, to replace existing debt arrangements with new ones.
  - ✓ *Asset backed securities*: are loans or similar instruments, which are backed by the cash flows generated by the project

Available financing opportunities for the private sector - ctd

F. **Other sources**

- The *Currency Exchange Fund* (TCX). TCX is designed to mitigate currency and interest rate risks in order to attract and lock in long-term private equity and private debt in local currency

- *Insurance*: Insurance offer protection to financiers against risk

- *Carbon financing* such Global Environment Facility (GEF), Climate Investment Funds (GIF), and Green Climate Fund (GCF). UDB has 5% of the bank credits to support greening.

- Aggregation: Dedicated 'special purpose vehicles' (SPVs) – or agencies – enables them to draw down resources from donors and gov'ts and channel them to lots of small-scale projects and actors.

Procedures required by the private Sector to obtain the various forms of financing

A. **Government**

- The modalities of accessing funding from UECCC is set by Participating Financial Institutions (PFIs).
  - The PFIs require potential borrowers have to provide a sound business proposal that clearly shows the viability of the project and other requirements as discussed under (f).

- UDB conditions include among others: collateral which could be fixed assets, fixed deposits, First class bank guarantees, GoU bonds, etc; social economic impact; addresses issues of environment and social risk; proven capacity to implement project; and well developed sustainability plan

Procedures required by the private Sector to obtain the various forms of financing- ctd

B. **Development Partners.**
- Grants: (Such as UNCDF): Clear administrative and governance functional structures like a Board, and administration; Audited books accounts; Business plan; Ability to absorb the facility and pay back; and Social Impact of the investment; among others.

- Green Climate Fund (GCF). The private sector company has to respond to the request for Proposals and the company has to be accredited.

C. **Development Finance Institutions (DFIs)**
- DFIs do not lend directly to micro, small, and medium enterprises or individual entrepreneurs, but many of their clients are financial intermediaries that on-lend to smaller businesses.

Procedures required by the private Sector to obtain the various forms of financing- ctd

D. **Local Financial Institutions**

- Ability and integrity of the borrower; present and potential profitability of the business; and the level of capital that the owner has in the business; among others.

D. **Venture Capital, Private Equity and Funds**

- Sufficiency of the project cash flows for making the expected (or a reasonable) profit for the equity investor.

Opportunities for financing of private sector investment

a. *Supportive policy and regulatory framework.*
   - Elaborated through the Electricity Act 1999; Energy Policy 2002, Renewable Energy Policy 2007, Rural Electrification Strategy and Plan (RESP) 2013-2022, Biomass Energy Strategy, 2013, Scaling-Up Renewable Energy Programme Investment Plan, and Energy Efficiency Strategy for 2010-2020.

b. *Fiscal incentives*, such as:
   - Renewable Energy Feed-in Tariff (REFIT) designed to provide price certainty to renewable energy generators;
   - Tax incentives under the Income tax act and VAT Act; and
   - Concessions i.e. to UMEME and ESKOM.

c. Funding through Uganda Energy Credit Capitalization Company with subsidized funding provided through PFIs to enable them offer lower interest rates on the RE loans they provide to the private sector.

Opportunities for financing of private sector investment -ctd

d. *Supportive Institutions* such as:
   - MoFPED, MEMD, ERA, REA, Bank of Uganda, and Capital Markets Authority among others, who are mandated to development and implement the law and policy frameworks for financing for private sector investments.

e. *International financing opportunities*
   - *Feasibility study funding opportunities* from i.e. Belgian Investment Organisation (BIO), the Nordic Project Fund (NOPEF), the Norwegian Development Agency (NORAD), etc
   - *Debt or equity* (i.e. mezzanine finance, corporate finance, project finance, venture capital and dedicated funds) from regional banks such as EABD. Others like ElectriFI
   - *Grants* - reduce the risks of investing in RE projects i.e. UNCDF
   - *The Currency Exchange Fund (*TCX).
   - *Climate finance financing.*

Opportunities for financing of private sector investment -ctd

f. *Domestic financial institutions*
   - A number of financial institutions are offering loans for private sector investments in RE.
   - Among the key ones are: CBA, DTB, KCB, Centenary Bank, Barclays Bank Uganda, Stanbic Bank Uganda, Finance Trust Bank, and Post Bank Uganda

Constraints limiting financing of private sector investment

a. **International level**

- *Small Scale of Projects*. The sums of finance often required by RE projects in their start-up phase are often too small for mainstream investors, banks, or even DFIs

- *Investor returns and short-termism*. Investments in low income energy markets like in Uganda are often longer-term, higher risk, and generate a lower financial return

- *Uncertainties over Carbon Financing* - there are significant uncertainties over the timing and amounts of revenues from the sale of Certified Emissions Reductions (CERs) through the Clean Development Mechanism (CDM).

- *Foreign exchange risks*. Private sector actors face higher foreign exchange risks when sourcing international funds.

Constraints limiting financing of private sector investment -ctd

b. **Domestic Level**

- *Underdeveloped financial markets and inappropriate financing terms and conditions for RE projects*. The financial sector in Uganda is competitive but so far it has failed to engage considerably in financing renewable energy technologies.

- *Inadequate long-term financing*. RE projects are generally characterized by relatively high up-front capital costs and low ongoing operating costs

- *Lack of early stage financing*. A study by UNREEEA in 2017, found that over 90% of companies were in 'early stage' of project development. However, only 20% in Kampala and 11% of the companies reported receiving some sort of early stage financial support.

Constraints limiting financing of private sector investment -ctd

b. **Domestic Level**

- *Limited awareness of energy financing opportunities*. A study by UNREEEA in 2017, found that 65% in Kampala and 85% upcountry of companies did not know any relevant upcoming funding/financing opportunities in Uganda.

- *Lack of well-defined bankable projects*. A study by UNREEEA in 2017, found that At least 63% in Kampala & 78% upcountry of the companies either had no previous experience writing funding proposals or have failed.

- *Poor credit profile and financial records*. Most local RE companies do not have credit profile that is attractive enough to receive the necessary credit enhancements needed

Constraints limiting financing of private sector investment -ctd

b. **Domestic Level**

- *Unclear taxation and subsidies.* Most tax and subsidy regimes favour large-scale electricity generation rather than small-scale renewable energy projects. In addition, there is unclarity of VAT exemptions (especially components and inconsistent application of import duties).
- *Crowding out of private sector*. Since public finance is generally at lower cost than private finance, there is always a preference to use public funding even where a project would be more suitable for private financing.
- Fragmented funding landscape and a scattergun approach to private sector support. There are many DPs and financial institutions supporting private sector investment in RE, however, they are not well coordinated and some of their interests are hurting the industry.

Best practices of private sector financing from other countries

Aggregation of Solar PV projects in Jordan.

Aggregation of projects is one way to overcome the barriers of financing small RE projects due to associated transaction costs. Public and private finance institutions can join forces to standardize contract templates and other project documents to allow for an aggregation of smaller projects.

In 2014, Jordan through IFC arrangement aggregated 7 projects Solar PV projects (102 MW) with USD 207 million. This was done through establishment of standardized terms and template contracts that were almost identical across all projects, with variations permitted only to deal with unique project characteristics. By aggregating multiple, small-scale projects, the IFC was able to reduce the cost of due diligence and make financing requirements more attractive to the lender community.

Conclusion

- The study found that there various mechanisms for financing private sector investments which include among other grants, debt financing, venture capital, private equity, and fiscal incentives.

- However, there various barriers which hinder the private sector in Uganda from accessing finance. Some of these include: underdeveloped financial markets; uncertainties over Carbon financing; appropriate financing terms and conditions; limited long-term financing; limited awareness of energy financing opportunities; few well-defined bankable projects; poor credit profile and financial records; and Unclear taxation and subsidies

Recommendations

Key Constraint	Recommendations
1. Underdeveloped financial markets and inappropriate financing terms and conditions for RE projects. Most local financial institutions have limited awareness and interest in lending to RE projects in the context of their wider loan product since they view RET and products as having high levels of risk.	a. MoFPED needs to work with the Bank of Uganda, DPs, and financial institutions to simplify lending requirements and repayment process for RE projects b. Gov’t through BoU needs to establish an innovation fund, linked to the RE strategy to provide access to finance for entrepreneurs and local businesses. c. The UECCC needs to provide more incentives for more financial institutions, especially MDIs and MFIs, to participate in the scheme. d. Financial Institutions should train their loans officers on different RET products and their benefits.

Recommendations -ctd

Key Constraint	Recommendations
2. ***Limited awareness of energy financing opportunities.*** **Most private sector actors in the RE often are unaware of the available finding. A study by UNREEEA in 2017) found that over 65% in Kampala and 85% upcountry did not know any relevant upcoming funding/financing opportunities in Uganda.**	e. UECCC needs to raise awareness of on-lending facilities for RE projects among market participants through developing marketing materials and organizing promotional events. f. MoFPED needs to undertake a comprehensive review of the performance of the UECCC towards financing the private sector to ascertain whether it's meeting the set objectives. g. PFIs should increase awareness of the private sector about the RE financing especially from UECCC through extensive dissemination of information on the scheme in the media

Recommendations -ctd

Key Constraint	Recommendations
3. ***Lack of well-defined bankable projects.*** **Funders are looking for proven business models and well-developed business plans. However, a study by UNREEEA in 2017, found that At least 63% in Kampala and 78% upcountry of the companies either have no previous experience writing funding proposals or have failed.**	h. Financial Institutions should build the capacity of small scale borrowers; teach them how to write bankable proposals and give them financial literacy training sessions to enable them access and effectively utilize borrowed funds. i. The associations representing the different actors in the RE sub-sector should build the capacity of their members to improve their business operations through training and advisory, establish market and financial linkages and carry out the necessary policy research and advocacy.

Recommendations -ctd

Key Constraint	Recommendations
4. ***Uncertainties over Carbon Financing.*** **The sale of CERs through CDM is a widely recognized source of revenue for RE projects in developing countries. However, there are significant uncertainties over the timing and amounts of revenues from the sale of CERs (World Bank, 2013).**	j. Private sector actors should build their capacity to solicit for climate finance (such as GCF) to finance RE projects. The GCF's Private Sector Facility could be used to create a risk mitigation facility dedicated to supporting RE projects. k. Government and DPs need to build the capacity of private sector players to enable them access to climate finance.
5. ***Unclear taxation and subsidies.*** **Most tax and subsidy regimes favor large-scale electricity generation rather than small-scale RE projects. Also, there are high levels of unclarity on the VAT exemptions and inconsistent application of import duties.**	l. MoFPED should put in place a stable and predictable taxation regime for the RE sub-sector, for instance reviewing the VAT regulations as far as the exemption of developers as well as providing uniform incentives for all RETs including cookstoves.

Recommendations for EA and partners

a. Advocate for increased private sector investments in off-grid power systems for purposes of breaking up the binding constraints towards energy access for all.

b. Advocate for increased access to information on RE loans especially under the UECCC and financial institutions. Increased access to information on RE will require undertaking a study to review the performance of the UECCC towards financing the private sector to ascertain whether it's meeting the set objectives.

c. Advocate for the government to establish an innovation fund linked to the renewable energy strategy to provide access to finance for entrepreneurs and local businesses.

THANK YOU!