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UNCDF
Unlocking Public and Private Finance for the Poor

Report

Closing the feedback loop: a funder's perspective on why local solar companies miss out on investment opportunities

Lessons from UNCDF's Renewable Energy Challenge Fund in Uganda

Preface

UNEP Copenhagen Climate Centre, with support from Denmark's development cooperation is implementing the 3-year Technology, Markets and Investment for Low Carbon and Climate Resilient Development (TEMARIN) project in Kenya and Uganda. The project aims to: 1) analyze successful case studies of market-led interventions and mechanisms in Kenya and identify key learnings; 2) support technology transfer partnerships in a select climate mitigation and adaptation technology in Uganda; and 3) understand how local PV companies can increase their share of the global value chain - and support them in doing so by co-creating outcomes and recommendations.

This report contributes to the third project aim, as its objective is to undertake a retrospective analysis of why so few local companies are able to access funding.

The report was developed by United Nations Capital Development Fund (UNCDF) - Renewable Energy Challenge Fund Uganda (RECF) in collaboration with UNEP-Copenhagen Climate Centre (UNEP-CCC) under the TEMARIN. It was inspired by the recommendation from the recently published UNEP-CCC report (2022) "Unlocking support for local clean energy companies: insights from the solar PV industry in Uganda" to build synergies between investors such as UNCDF and industry associations and to share feedback from calls for funding proposals on reasons for companies not qualifying for investments. While investors have limited resources and feedback is difficult for companies to access, such feedback is valuable for companies, in order for them to apply the lessons and increase their chances for success with future funding proposals.

The overall objective of this report is to improve investment opportunities for local solar energy companies, by providing feedback on how to improve the quality of submitted documents for investment and funding. Furthermore, the information and recommendations put forward in this report can be used by enterprise support organisations to develop appropriate interventions to improve the investment readiness of renewable energy companies.

Acknowledgements

This report was authored by Julius Magala and Joshua Kabugo (UNCDF); Eddie Sembatya (Finding XY); Padmasai Lakshmi Bhamidipati and Mathilde Brix Pedersen (UNEP Copenhagen Climate Centre).

The authors of this report would like to thank those who reviewed and provided invaluable comments: Job Mutyaba (IRENA), Teresa Le Nguyen (independent consultant), Vincent Wierda (UNCDF), Fakhrul Islam (UNCDF), Regina Rodolico (UNCDF) and James Haselip (UNEP-CCC).

About UNCDF Renewable Energy Challenge Fund

The UN Capital Development Fund makes public and private finance work for the poor in the world's 46 least developed countries (LDCs). UNCDF offers "last mile" finance models that unlock public and private resources, especially at the domestic level, to reduce poverty and support local economic development. UNCDF's financing models work through three channels: (1) inclusive digital economies, which connects individuals, households, and small businesses with financial eco-systems that catalyse participation in the local economy, and provide tools to climb out of poverty and manage financial lives; (2) local development finance, which capacitates localities through fiscal decentralization, innovative municipal finance, and structured project finance to drive local economic expansion and sustainable development; and (3) investment finance, which provides catalytic financial structuring, de-risking, and capital deployment to drive SDG impact and domestic resource mobilization.

PUBLISHED: July 2022
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The Renewable Energy Challenge Fund (RECF) is managed by UN Capital Development Fund (UNCDF) and funded by the Embassy of Sweden in Uganda. The goal of the RECF is to increase access to renewable energy and energy efficiency for domestic, productive, and social uses among underserved poor households, businesses, and communities, especially in rural areas. RECF set out to support 155,000 low-income Ugandans to transition to renewable energy and to create 1300 new jobs by June 2022. To this end, the RECF has funded a portfolio of renewable energy small and medium sized enterprises (SMEs) and/or financial institutions. The RECF has invested in projects that combine the following characteristics:

- **Additionality**: not easily funded by commercial sources of finance; will resonate with the wider market and make a step change in the way modern energy products and services are offered and consumed by low-income people in Uganda.

- **Sustainability**: commercially driven business ideas that companies are ready to co-invest in, with a view to graduate to more commercial investments.

- **Inclusiveness**: prioritizing business models with women and youth as active actors in the value chain, as consumers, as well as owners, employers, and employees.

RECF is part of UNCDF's global clean energy programme that co-invests in early-stage innovations from financial institutions, distributed energy service companies and other providers of wholesale or retail financing for clean energy. The goal is to fill the "missing middle"[1] in energy financing, as well as to facilitate access to additional, more commercial financing for proven business models to scale. The energy programme contributes to achieving SDG 7 on affordable and clean energy for all.

About UNEP Copenhagen Climate Centre

UNEP Copenhagen Climate Centre (UNEP-CCC) is an international advisory institution on energy, climate, and sustainable development. UNEP-CCC provides advisory services to assist developing countries in transitioning more low carbon development paths and supports integration of climate-resilience in national development, and deliver on the Paris Agreement and Sustainable Development Goals.

The current report is part of a three-year (2019-2022) Danish Development Cooperation funded Technology, Markets and Investment for Low Carbon and Climate Resilient Development project (TEMARIN) covering the countries of Kenya and Uganda. The overall aim of the project is to support countries in accelerating the transfer, diffusion, and uptake of specific climate technologies.

The TEMARIN project focuses on strengthening domestic markets for climate technologies, removing bottlenecks for domestic firms operating in these markets, extending business support to local companies, reducing bottlenecks to accessing capital, and increasing cooperation among private actors, public actors, and international actors to build global and national partnerships for upscaling implementation. The main components of the programme are:

- Generate relevant knowledge products and highlight cases of market-led diffusion and market potential of climate technologies including small-scale irrigation, captive solar PV, and ICT-based agricultural extension services.

- Generate a better understanding of the role and growth patterns of domestic solar PV companies/SMEs, profiling them, and identifying critical challenges, and co-creating ideas and their implementation to strengthen support for domestic PV industry.

- Facilitating and enabling partnerships to increase the uptake of select climate mitigation and adaptation technologies.

1 The lack of financing solutions available for entrepreneurs who have grown out of microfinance but are not yet able to access mainstream finance.

Contents

Executive summary

The solar market has seen tremendous growth over the last decades. In addition to falling world prices and increased performance levels of solar PV modules, the growth of the solar industry is largely driven by progressive government policies and impact-driven private sector players. This includes investors and solar companies that have innovated on business models, provided investments, and developed human resource and technical expertise to continue serving and growing the market.

In Uganda, over 200 solar companies are operating with the majority being Ugandan owned. Recent research from UNEP Copenhagen Climate Centre (UNEP-CCC) on "Unlocking support for local clean energy companies: insights from the solar PV industry in Uganda" (UNEP-CCC, 2022[2]) found that local solar companies are attracting 4.5 times less investments than their international counterparts. The report highlights several reasons why local companies are lagging behind in raising investments and offers recommendations for a broad set of stakeholders on what can be done to improve support to these companies.

One of the recommendations of the report was for investors to provide feedback to companies on the reasons for not qualifying for investments. Such feedback is rarely provided yet is crucial for companies to improve future pitches and applications and to strengthen their overall investment readiness.

Since 2015, UNCDF Uganda has been providing grant funding and technical assistance support to clean energy companies through the Renewable Energy Challenge fund to address bottlenecks of access and affordability of solar products and energy efficient appliances, low demand for electricity and access to finance with the aim of contributing to increased electricity access for underserved populations.

As a response to the above-mentioned recommendation, United Nations Capital Development Fund (UNCDF) has collaborated with UNEP-CCC to publish this feedback note based on an analysis of proposals and reasons for companies not obtaining finance through Renewable Energy Challenge Fund.

The overall objective of this report is to increase investment opportunities for local solar companies. The immediate aim is to provide insights into the reasons for unsuccessful funding proposals, using the RECF as a case, and to put forward recommendations to companies, to funders and to industry associations & capacity building organisations. This information is especially intended for enterprise support organisations to develop appropriate interventions to support companies in improving the quality of submitted documents for investors and to improve the investment readiness of renewable energy companies in general.

Key reasons why local companies failed to access finance through the RECF:

- Out of the total 65 expression of interests (27 Ugandan and 38 International), 27 (42%) were **ineligible** (17 Ugandan and 10 International).

- The majority of the ineligible EoIs (88% of the local companies and 80% of the international ones) were ineligible due to **incomplete applications**. Among the incomplete applications, the key missing information was budget and financials indicating the applicant's turnover, total assets and liabilities, net profit margin and investment raised.

- Out of the 38 applications that were eligible (10 Ugandan and 28 international) 22 were not shortlisted as they scored low or insufficiently based on the evaluation process (5 Ugandan and 17 international)

- Reasons for not shortlisting local companies were **low innovation of the proposed business idea, low commercial viability prospects after completion of RECF project, unrealistic price points for the target customer segment and setting low or too ambitious targets compared to the company's track record.**

- The identified key risks for investing in the projects proposed by local companies were **operational risks, product risk** and **organizational capacity risk**. The companies and the partners **lacked experience** and **qualified staff** and proposed **products had not been tested in the market.**

- The fact that the projects were risky did not deter RECF from investing as it's the role of catalytic grants to support businesses to test and prove the innovations and business models, before raising concessional and commercial finance.

2 https://unepccc.org/publications/unlocking-support-for-local-clean-energy-companies-insights-from-the-solar-pv-industry-in-uganda/

Recommendations

Below are recommendations to the various stakeholders on what could be done to increase local solar companies' opportunities for funding.

Local solar companies

- Companies should carefully review eligibility criteria and carry out a self assessment to determine whether they meet the criteria, before completing the application. In cases of uncertainty companies should consult with the funders for clarification, make use of the information sessions, frequently asked questions (FAQs), and pre-investment technical assistance such as application reviews, where these are offered by the funder. This will reduce spending resources on submitting an application that does not meet the eligibility criteria.

- Given the high number of incomplete applications without financial information, domestic companies should consider the use of experienced financial managers and grant proposal writers who can support completion of the financial information and proposals in the applications and business plans. Company managers should be closely involved in the proposal writing to ensure that content aligns to the company's experience.

- Companies should invest in research to understand new market potentials and to scope out innovations that will support improvements in their business model and/or to support their market expansion. Research will be useful in generating insights to understand the technology-market fit, willingness and ability to pay for products and incorporate lessons learned to improve on level of innovation, have realistic assumptions for the business models and set realistic expectations for investments.

Industry associations and capacity building organisations

- Based on the findings of this report, industry associations should work with investors to increase the quality of applications for investment opportunities and highlight specific issues that should be addressed to increase investment flows to domestic solar companies.

- Industry associations should collaborate with business development service (BDS) providers and funding partners to tailor investment readiness initiatives for domestic solar companies. These capacity building initiatives should initially focus on supporting domestic solar companies to assess their financing needs and how they align with available investment opportunities. Thereafter support should be offered in preparing required investment documentation and in strengthening the soft skills of CEOs and managers including proposal writing and communicating pitches and bottom-line performance indicators with investors.

- Industry associations should develop and implement advocacy strategies and plans to increase the share of local content in the solar industry. These strategies should spell out the opportunity for increased local content, the barriers facing local solar companies to compete and make suggestions on how to overcome these barriers. Goals for local content should also be set and a monitoring framework put in place to assess progress towards achieving the goals.

Funders

- Funders should include a detailed market analysis of the needs and challenges of local clean energy businesses as part of the design of their investment facilities. Acknowledging and finding ways to account for the greater challenges these local companies face could potentially help tailor the application process and criteria to ensure a more inclusive investment opportunity.

- The design of investment opportunities should clearly define the investment purpose and set reasonable eligibility criteria that encourage greater participation of local companies based on findings from the market analysis. Criteria such as ticket sizes, financial information required, proof of company's contribution and implementation periods should consider the context and realities of local companies.

- Fund managers and implementing agencies should incorporate a pre-review process into the application process to address outstanding or missing information to complete the applications. Given the high number of applications submitted, the capacity of the fund management team needs to be increased to meet this demand for review and to provide feedback to the businesses. Therefore, funders should provide adequate time and budget for pre-investment support.

- To improve the quality of financial information, investors should consider offering accounting and auditing support to companies. This support would help companies recruit qualified staff, ensure they produce periodic financial reports and train or coach the CEOs or managers to use the financial reports for making operational and strategic decisions for the business.

1. Introduction

1.1. Scope and Objectives

The report covers the Ugandan UNCDF Renewable Energy Challenge Fund's Solar application process from the expression of interest to the full business plan stage for the duration November 2017 to June 2018. The main focus of this report is to analyse data from RECF and share observations to explain why local solar companies that applied for the RECF were unsuccessful. For comparison purposes, reference is also made to international solar companies.

The specific objectives of the report are:

- To identify and share key information on reasons why the funder did not invest in domestic solar companies in Uganda.
- To provide practical recommendations on how to improve the quality of documents required for screening and due diligence by the funder.

1.2. Approach

The findings are derived from analysis of RECF applications, full business proposals, due diligence (DD) reports and recommendations from the investment committee. In addition, the conclusions and recommendations that are provided in this document are validated through 16 interviews with local company representatives, investors and sector experts conducted as part of the TEMARIN project. The process taken to analyse the information is outlined below:

- Review of the RECF Solar Window call for Expression of Interest, Portfolio Analysis, due diligence (DD) report and Investment committee decision note.
- Identification of domestic and international companies from the list of applicants who were not successful with the application to RECF. See figure 1 with number of RECF solar window applicants.
- Reviewing and analysing the reasons for unsuccessful application to RECF. At the EOI stage, the analysis for not being long listed and shortlisted were based on the screening of EOI's by RECF team and investment committee decision respectively whereas at the full proposal stage, the reasons for not being funded were derived from the DD reports and the investment committee decision notes.
- Finally, recommendations to local solar companies, industry associations and investors are drawn from UNCDF's experiences and UNEP- CCC's interviews with sector experts and investors.

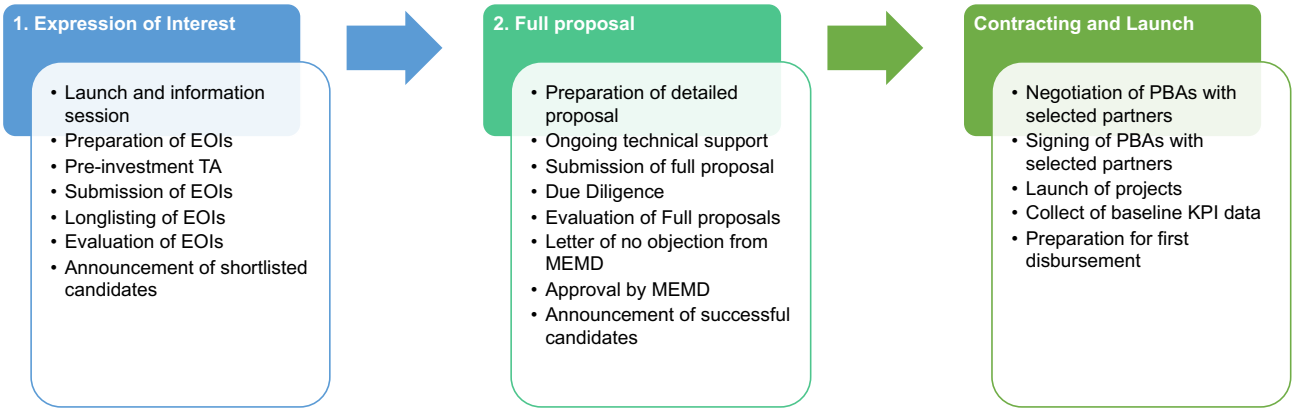
1.3. Structure

Section 2 provides an overview of the RECF process. Section 3 presents the 65 projects proposal received in the 2017/2018 window. Section 4 presents the key findings of the RECF application window (i.e. reasons for not being shortlisted), followed by Section 5 which reflects on the risks for investing in local companies. Section 6 concludes the report and provide recommendations for companies, investors, and industry associations/capacity building organisations.

2. The Renewable Energy Challenge Fund Application Process

This section will give a brief description of the two-stage competitive application process of the RECF as well as of the evaluation process and criteria. See figure 1 for an overview of the application process.

FIGURE 1. RECF Application process



Source: Authors' elaboration

2.1. Stage 1: expression of interest

In November 2017, UNCDF launched the call for Expression of Interests (EoI) for the RECF Solar Window. Following the launch of the call, UNCDF with support from Ministry of Energy and Mineral Development, Uganda Solar Energy Association and other development partners organised and invited potential applicants to a half day, in-person **information session and Networking Event in Kampala on 8th November 2017 and a virtual session on 10th November 2017**. attended by more than 140 participants. During these sessions, UNCDF provided guidelines on the application process and requirements and answered questions from participants. In addition, experts from UNCDF also made presentations on how solar can be used to improve agricultural productivity and different distribution and financing models that can be piloted with microfinance institutions. Companies were invited to bring promotional materials to showcase their products and services during the in-person information session.

Interested companies were invited to schedule a meeting with a member of the UNCDF team in Kampala (or remotely via telephone or Skype). One-on-one pre-investment technical assistance **was provided to more than 40 companies** before the application window closed.

Prior to completing the online form, applicants were urged to download and carefully read the General Information document and the FAQ document. Once the applicant completed the EOI, they were required to submit it online with the attachments such as the **EOI Financials**[3] and **Budget Template** (excel file) based on the amount of the grant they requested. The RECF Solar window call for proposal with **general information, FAQs, Budget** and **Financial templates** and **launch presentation** can be viewed here.

3 Financials include information on the applicant's turnover, total assets and liabilities, net profit margin and investment raised.

The RECF team carried out a first screening of the received expression of interests and submitted the eligible concept notes to an independent investment committee (IC). The role of the investment committee was to **evaluate, select and recommend** challenge fund grants based on the "**concept notes**" and "**full application business proposals**", to ensure that RECF achieves its objectives in the most efficient and effective manner. It was comprised of 7 public and private sector experts with diverse experiences in renewable energy technology and access, innovations, investments and private sector development.

2.2. Stage 2: full proposal

In the second stage of the process, shortlisted applicants were requested to submit a detailed business proposal with budget and financial details. The RECF team continued to provide on-going technical support to applicants while they developed their full proposals. Applicants had 5 weeks to complete and submit the full proposal.

Once full proposals were submitted, the UNCDF team conducted due diligence (DD) visits to companies' facilities. The DD report validated information provided by each RECF applicant. The validation included i) confirming eligibility for grant funds by reviewing corporate documents; ii) confirmation of the company's ability to raise the proposed contribution (cash and in-kind) for sharing the cost of the proposed project; and iii) assessing the ability of the applicant to execute the proposed project and to reach its targeted impact of customers served and jobs created. The RECF team reviewed the business proposals and submitted them together with DD reports to the IC for evaluation.

The IC met, deliberated and made final recommendations of proposals to be funded based on their assessment of the proposals, findings from DD carried out by the UNCDF RECF team and discussions and consensus amongst IC members and put those recommendations forward to the UNCDF clean energy programme board for approval.

Prior to the approval by the UNCDF clean energy programme board, a letter of no objection was sought from Ministry of Energy and Mineral Development seconding investment in the applicants recommended by the IC. With the approval from the UNCDF clean energy programme board, the RECF team communicated to both successful and unsuccessful applicants of the final decision by the board. Successful applicants negotiated the final targets, milestones, and disbursement conditions to be achieved with the RECF team and then signed a Performance Based Agreement (PBA). The projects were launched after signing the PBA with the first activities involving orientation and collection of baseline data for monitoring and evaluation. Implementation of some of these projects will be finalised in June 2022.

2.3. Evaluation criteria

The evaluation process was managed by the RECF team who set the selection criteria to meet the objectives of the RECF in collaboration with an independent investment committee.

Once EOI's were submitted by the applicants, the RECF team carried out the long listing/ first screening of the applications. The first screening involved carrying out an eligibility check based on the set criteria and quality verification of applications also known as "longlisting". The purpose was to make sure that all submitted EOIs were complete, compliant with eligibility criteria and that they contained sufficient information and were of sufficient quality to be further assessed by the investment committee. The eligibility screening included checking the following.

- Has the application been submitted on time?
- Are all relevant questions completed?
- Did the applicant submit all required documents (budget and financials) on time?
- Is the lead applicant a legally registered for private-company in Uganda or an international company with atleast two years operational experience?
- Is the technology an acceptable decentralised solar PV solution?
- Are the products tested and certified?
- Was the proposal for Uganda and does it target atleast 50% of the underserved low-income customers in rural areas?
- Will the project be launched by June 2018?
- Will the project generate new sales/installations by Q3 2018?
- Is the applicant's contribution atleast 40%, 50% or 60%?
- Is the applicants cash contribution atleast 50% of the total cost-sharing contribution?
- Does the proposal promote women and youth employment?

For both the expression of interest and full proposal stages, the investment committee uses the evaluation criteria below to shortlist concept notes and make final recommendations for proposals to be funded under RECF to the UNCDF clean energy Board. The criteria used to evaluate the concept notes and full proposal is listed below.

1. Technical merit (55%) – Proposed project's potential to meet the RECF's objective of promoting innovations with wider market significance, including design, relevance, innovation, impact on customers (including women and youth);

2. Women and Youth Employment (5%) – Project ideas were required to promote women and youth employment. Business ideas that incorporated this element in an innovative way and demonstrated a strong potential to deliver tangible and sustainable employment opportunities received a higher score.

3. Organizational capacity (35%) – Ability of applicant to launch and implement the project ideas and deliver the expected outputs and results within the project period. The applicants must also be able to sustain the initiative even after funding ceases.

4. Cost-sharing (2.5%) – Partners must contribute 40%, 50% or 60% of the total project costs, depending on the requested grant amount, with at least half of that in cash and the remainder in-kind. The higher the applicant's contribution (than the minimum 40%, 50% or 60%) the higher the score.

5. Additionality (2.5%) – Applicants must be able to demonstrate that funding for the business idea cannot be secured through mainstream forms of commercial finance or that the project would not take place at the same scale or have the same development impact without support from the RECF.

3. Characteristics of projects received

This section provides an overview of the received projects.

UNCDF **received 65 EOI** from applicants from different countries. Out of the 65 applications, 27 (42%) applicants were submitted by Ugandan companies and 38 (58%) by international companies from Denmark, Kenya, India, Norway, UK, and US. See figure 2 for the breakdown of both Ugandan and international applicants across the various selection steps for RECF.

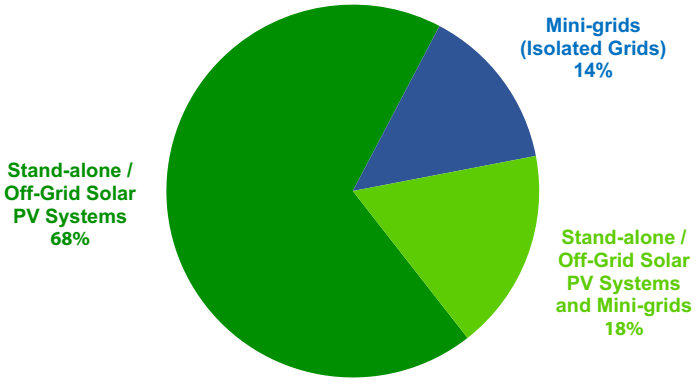
Proposed projects

The applicants proposed a variety of solar solutions and business models for funding. Of the 65 received EOIs, 44 applicants (68%) proposed projects focused on distribution, marketing, and sales of standalone off-grid solar systems, 12 (18%) proposed projects including both standalone off-grid solar PV and minigrids while 9 (14%) applicants proposed projects to deploy only isolated minigrids in areas without electricity in Uganda (see figure 3).

FIGURE 2. Number of applicants for the RECF's Solar Window November 2017 to June 2018

Source: Authors' elaboration

FIGURE 3. Proposed renewable energy technologies



Source: Authors' analysis

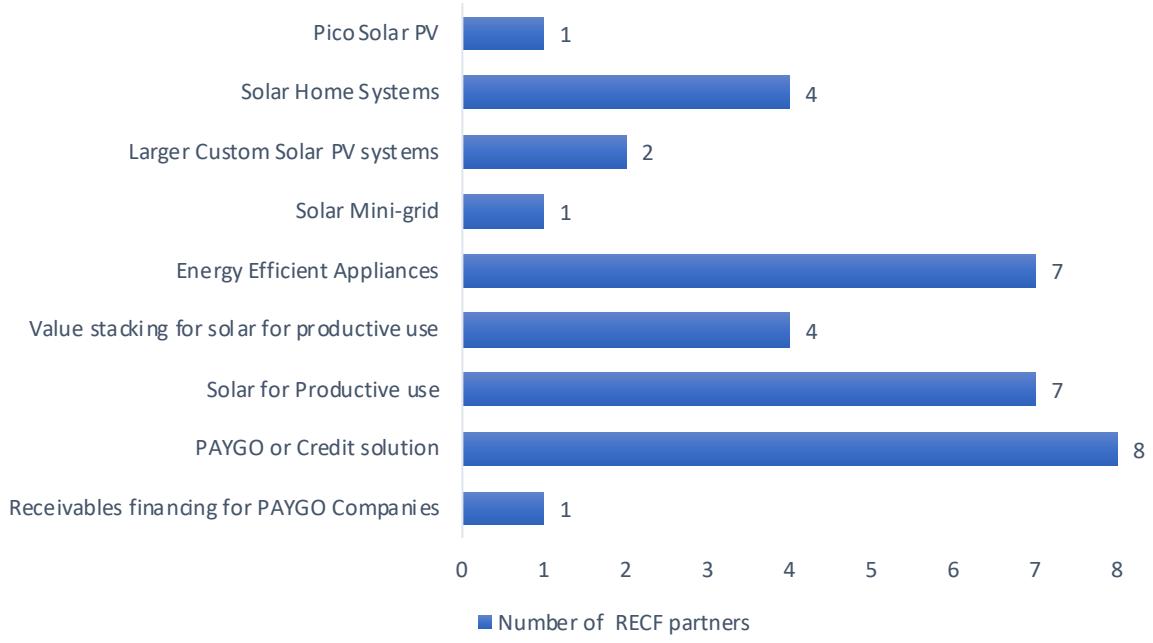
Of the 65 applications received, 38 were complete and eligible, whereas 27 were incomplete and/or non-compliant with the eligibility criteria as stated by RECF. Of the 27 incomplete/non-eligible applications, 62% (17 out of 27) came from local companies and 38% (10 out of 27) came from international companies.

After the evaluation of the 38 complete and eligible proposals, the IC Members recommended 16 proposals for the full business plan development stage (5 from local companies and 11 from international companies). From the 16 full business proposals, the IC recommended 8 projects (3 for local companies and 5 for international companies) to the programme board that were all approved to receive funding. These are hereafter termed RECF partners.

Of the 8 successful partners, 4 proposed to distribute solar home systems, 2 proposed large custom solar systems for businesses and institutions, 1 proposed deployment of a solar minigrid and 1 proposed pico solar PV solutions.

In addition to the renewable energy technologies, 7 of the partners offered energy efficient appliances such as radios, MP3 players, TV, fridges, solar powered mills, and water pumps to increase value of the technologies. Figure 4 shows a disaggregation of the products and services entailed in the solutions of the 8 successful projects.

FIGURE 4. Type of solutions (products and services) proposed by the RECF partners



Source: Authors' analysis

To solve the challenge of affordability, all 8 partners proposed innovations to increase affordability for the products via PAYGO or credit solutions to the customers. One partner proposed debt finance to PAYGO companies based on the size and quality of their credit portfolio.

7 of the partners included productive use aspects as part of their solution. The 7 partners piloted and tested solar fridges for business, solar powered mills and solar for water pumping and irrigation.

4 of the partners proposed value stacking solutions within solar powered irrigation by bundling the solar water pumping and irrigation solution with smart phones for information access, complimentary agriculture services and sharing and micro insurance to mitigate risks of poor harvest and natural disasters.

4. Key findings

This section presents the key findings from the analysis of EOIs and full business proposals to explain why local solar companies were not successful in obtaining funding. Part 1 summarises why local companies were not selected during the steps of longlisting and shortlisting at the EOI stage while part 2 analyses the main risks identified for investing in the projects at the full proposal stage.

4.1. Reasons for unsuccessful application during the EOI stage.

As previously mentioned, the selection of applications at the EOI stage involved two steps i.e., longlisting and shortlisting. The long listing was done by the RECF team to ensure that only applications that were complete and met the eligibility criteria were submitted to the IC for evaluation. The IC then evaluated the complete and eligible applications and shortlisted those that qualified for the next step of developing a full business plan. Of the 65 applications received, 27 applications were not longlisted out of which 17 were local solar companies.

4.2. Reasons for not longlisting local solar companies

There are five main reasons why local solar applicants were not longlisted (see Figure 5). These reasons are presented below.

Incomplete application: Applicants submitted expression of interests with missing, incomplete and/or unclear or inconsistent information. The majority of applicants comprising – 15 out of 17 (88%) submitted incomplete applications. Out of the 15 incomplete applications, 7 applicants did not attach a budget and/or financials[4] , 1 did not share management accounts for the past 6 months and audited financial statements for the past two years at the time of applying to RECF.

One applicant did not state the legal form of the company, and another did not state the company track record in terms of sales of solar products. 7 applicants submitted applications with incomplete information in the budget, financials, and/or the development impact to be delivered in terms of jobs created. Applications were mostly missing financial information such as revenues, gross and net profit margins, assets, and liabilities, and PAYGO portfolio size and quality.

Ineligible company: For applicants to be eligible, the lead applicant had to be legally registered as a business and operating in Uganda since at least 2 years. 5 (29%) of the applicants did not have a registered office in Uganda or had less than 2 years operational experience with no sales track record in solar. These ineligible companies also submitted applications (EOIs) which were incomplete.

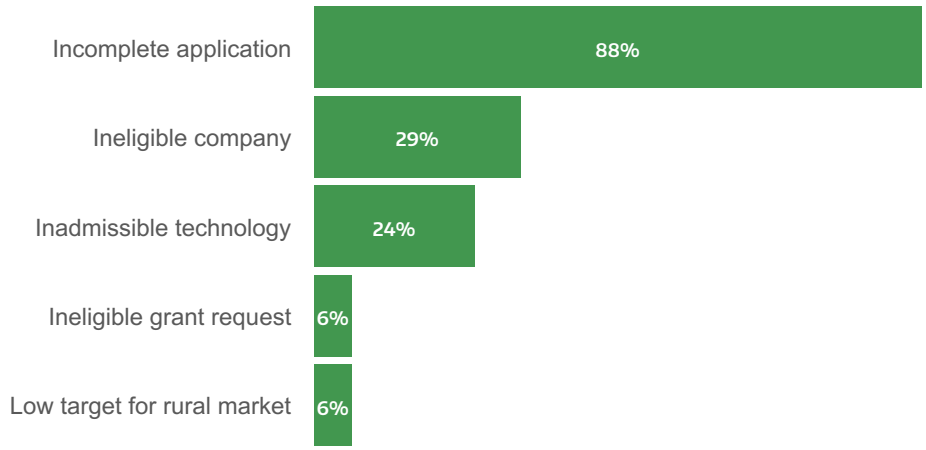
Inadmissible technology: One applicant proposed a non-solar PV technology and three applicants proposed solar mini-grid technologies without required permits and licenses to operate. Whereas solar mini-grids were an eligible technology, there was a requirement for them to be either an existing mini-grid in operation or a mini-grid that were in an advanced stage of development, with all the necessary licenses and permits in place at the time of application. These 4 (24%) applicants also submitted EOI's with missing and incomplete information.

Ineligible grant request: For applicants to be eligible, they should have been requesting for grants ranging between USD 100k to USD 500k, but one applicant requested for less than USD 100k. The one (6%) applicant also did not complete the budget.

Low portion of rural market targeted: One company proposed to target a rural market less than the required 50%.

4 Financials included information on whether they had management accounts and audited financial accounts. It also included information on annual turnover, total assets, total liabilities, portfolio size for PAYGO companies, net profit margin, and total investments raised over the past 2 years.

FIGURE 5. Reasons for not longlisting local solar companies



Source: Authors' analysis

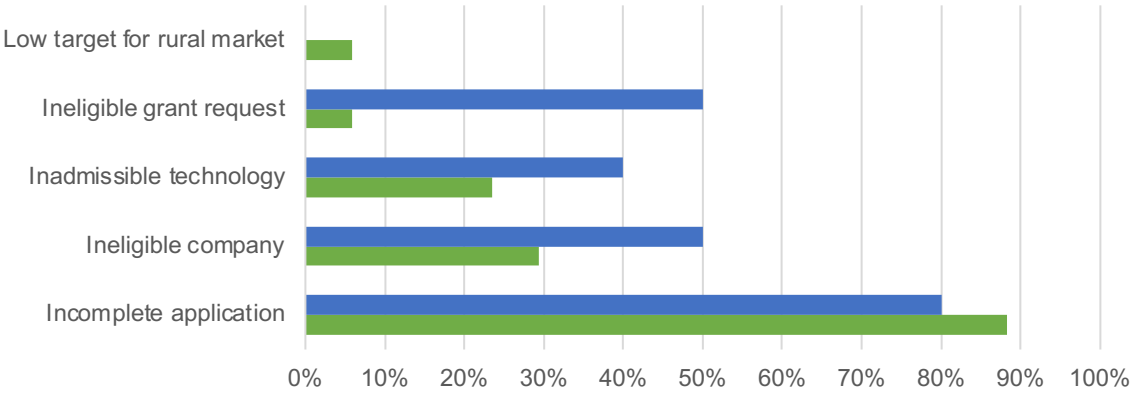
4.3. Reasons for not longlisting international companies

Similar to the local applicants, many international applicants were not longlisted because they submitted incomplete applications. Also here, budget, and financial information was mostly missing in the applications.

Of the 10 ineligible international companies, 50% (5) were ineligible because they were not registered in Uganda, did not complete information relating to the legal form of the company and/or had been in operation for less than 2 years. Furthermore, they were proposing to spend a sizeable amount of the grant on costs which were not allowed (such as purchase of stock). There was a higher proportion of international companies than domestic companies who were not longlisted because they were not registered in Uganda or included unallowed expenses in their budgets(-none of the local companies had requested unallowed expenses). For example: international companies allocated funds to purchase of inventory and raw materials which is one of the not allowed expenses.

Both international and local applicants proposed installation of solar PV mini grids without having the required permits and licenses for installation, operation, and maintenance. A comparative overview has been provided in the Figure 6 below.

FIGURE 6. Comparison for reasons for not longlisting local and international applicants



	Incomplete application	Ineligible company	Inadmissible technology	Ineligible grant request	Low target for rural market
International	80%	50%	40%	50%	0%
Local	88%	29%	24%	6%	6%

Source: Authors' analysis

4.4. Reasons for not shortlisting local solar companies

Out of the 10 local companies that were longlisted, 5 were not shortlisted to proceed to the full proposal stage. The main reasons for not shortlisting the 5 companies were the following:

- **Low level of innovation**: The degree of innovation in the proposed solutions was low. Most of the proposed business ideas were a continuation of existing business models or ideas which did not live up to the RECF grant criteria to promote innovations with wider market significance.

- **Low commercial viability prospects post-RECF funding**: The proposed financial model did not specify how the RECF grant would be used to generate revenues that would enable continued implementation of the proposed business idea beyond the RECF grant.

- **Unrealistic price points for target customer segment**: Due to RECF's focus on underserved markets which tend to also be low-income earners, some products and solutions proposed were too expensive for the target market with no innovation to increase affordability.

- **Under- or over ambitious targets**: Applicants set development impact targets for sales and job creation which were too low to create the necessary transformation or too high compared to their demonstrated track record. In some cases, even the implementation plans did not support the ambitious targets.

5. Key risks for investing in local solar companies at full proposal stage

A total of 16 companies were shortlisted to submit a full project proposal of which 5 were local and 11 were international. As part of the due diligence process conducted after submission of full business proposals, the RECF solar due diligence team conducted a risk assessment.

RECF recognized that every company and project in the portfolio was associated with risks. Given the intent to accelerate the deployment of decentralised solar energy solutions with innovative technologies, deployment strategies and financing mechanisms, risks were expected. Emphasis in the evaluation was thus put on the identification of risks and the way in which mitigation of the risks had been planned for.

The RECF solar due diligence team scored each company based on the risk level definitions outlined in Table 1.

TABLE 1. Risk definition

Risk Score	Risk level	Definition	Local	International
1-2	High	Too many risks with no defined mitigation. The chance of the company successfully executing the project and reaching targets is near impossible	1	1
3	Moderate	There are several risks potentially affecting the implementation of the project and mitigation measures defined were weak or insufficient.	4	7
4	Low	There are a few risks (1-2) potentially effecting the implementation of the project and mitigation measures are defined.	0	3

Source: Authors' elaboration based on UNCDF RECF risk assessment definitions.

From the DD assessment, 4 out of the 5 local companies that submitted full business proposals were ranked at a moderate risk level and 1 company was ranked at a high risk level. 3 international companies were ranked at a low risk level, 7 at a moderate risk level and 1 at a high risk level.

The DD team identified the following key risks associated with investing in the projects submitted by local solar companies: i) market, ii) organisation and capacity risk iii) operational risk (partnership, human resource, and logistics), iv) product, or technology risk, v) financial, vi) policy risk and vii) resource risk. Table 2 provides illustrative examples of the key risks identified.

TABLE 2. Key risks identified by RECF

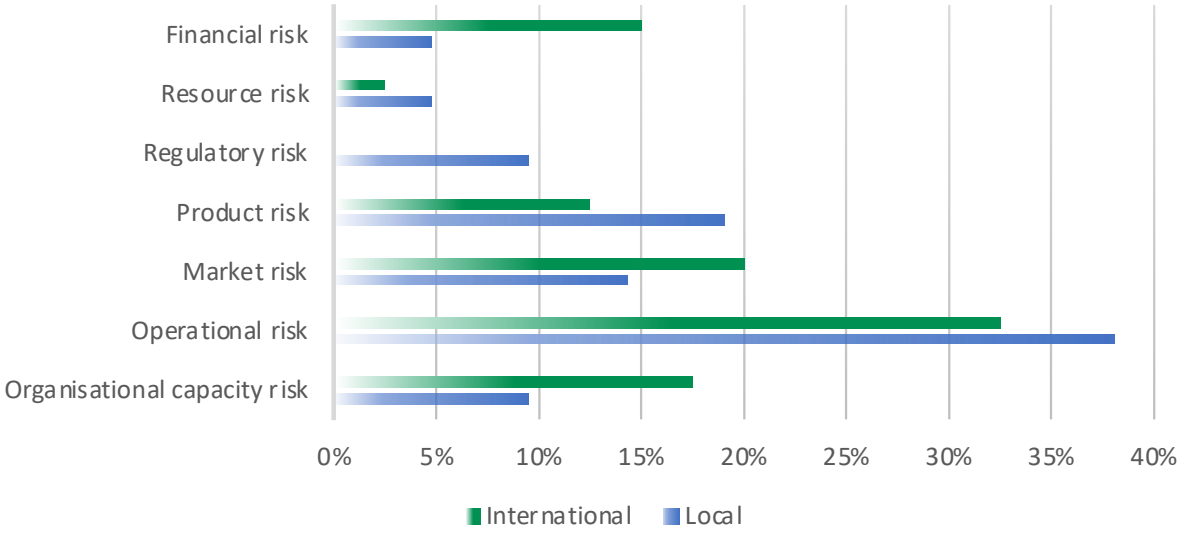
Key risks	Illustrative examples of risks
Market risks	· Lack of information and understanding of market potential for products and services. · Low demand for electricity generated from the mini-grids. · High cost of the products. Even with a payment plan the initial deposit and monthly costs are not affordable especially for customers with seasonal incomes
Organisational capacity risks	· Applicant lacks experience in implementation of the proposed business idea. · Too ambitious targets compared to the company's current market penetration and the company's track record.
Operational risks	**Partnerships** · The applicant's proposed project partners have no experience and/or track record in implementing similar projects and business models. · Limited buy-in and performance incentives for project partners. · Unclear roles and responsibilities for project partners. · Over-reliance on one project partner without a back-up plan.
	Human Resource · Lack of expertise and complimentary skills e.g., within agriculture advisory and extension service for solar powered irrigation. · Have no qualified accountant and auditor
	Logistics · Delays in product procurement. · High costs of transporting bulky products and servicing hard-to-reach areas like islands.
Product/ Technology risks	· Products are new and not yet tested in the market. Could get out competed in the market and fail to reach the target numbers. · Possible delays in digital payments integration.
Financial risks	· No commitments for applicants' cash contribution. · Delayed payments for executed contracts.
Policy risk	· Inconsistent application of tax exemptions which could cause price volatility.
Resource risk	· Unavailability of market information on water access for irrigation.

Source: Authors' elaboration.

Overall, the operational risks were the highest for both local and international applicants. The DD assessment further indicated that there were more operational risks identified for local companies compared to international companies. This is followed by the market risk and product risk due to introduction of new and untested products in new markets. The market risk was lower for local companies than for international applicants and the reverse was true for the product risk.

Organisational capacity risk was higher for international companies than local companies. This is because the international companies proposed to work through partners who did not have experience in the Ugandan market and in selling and distribution of solar or related products. Financial risks in relation to applicants raising the required cash contribution was high for international companies and a few applicants, especially those who proposed solar power water pumping, demonstrated a resource risk. Local companies also had a regulatory risk resulting from inconsistent application of tax exemptions which could affect the stability of the end-user price. Figure 7 provides an overview of the identified risks for local applicants and international applicants.

FIGURE 7. Key risks identified for RECF Local and international Applicants



Source: Authors analysis

In summary, local companies were viewed as riskier than international companies with an average risk score of 2.8 while international applicants had a moderate risk score of 3.1. The fact that they are riskier did not deter RECF from investing in the projects as it uses the catalytic grants to prove the business models before commercial fundraising.

6. Conclusions and Recommendations

Experience from the Renewable Energy Challenge Fund show that most of the local solar companies were not shortlisted because they submitted incomplete expressions of interests which did not meet the eligibility criteria. Mostly finance related information was missing which is an indication of the lack of qualified/certified financial staff to submit accurate budgets, a lack of skilled personnel to write quality proposals, and a failure to comprehend the eligibility requirements to submit expressions of interest.

The local companies were viewed as riskier than international companies because of the high organisational, operational and product risks that did not have clear mitigation strategies. The overall riskiness of the applicants and proposed projects did not deter RECF from investing as it uses the catalytic grants to prove the business models before commercial fundraising.

From the interactions with stakeholders and experience from UNCDF, we put forward a list of recommendations to local companies and industry associations that support the solar companies on what could be done to increase chances of investing in local companies.

Local solar companies

- Companies should carefully review eligibility criteria and carry out a self assessment to determine whether they meet the criteria before completing the application. In cases of uncertainty, companies should consult with the funders for clarification, make use of the information sessions, frequently asked questions (FAQs), and pre-investment technical assistance such as application review if it is being offered by the funder. This will reduce spending resources on submitting an application that does not meet the eligibility criteria.

- Given the high number of incomplete applications without financial information, domestic companies should consider the use of experienced financial managers and grant proposal writers who can support completion of the financial information and proposals in the applications and business plans. Company managers should be closely involved in the proposal writing to ensure that content aligns to the company experiences.

- Companies should invest in research to understand new market potentials and to scope out innovations that will support improvements in their business model and/or to support their market expansion. Research will be useful in generating insights to understand the technology-market fit, willingness and ability to pay for products and incorporate lessons learned to improve on level of innovation, have realistic assumptions for the business models and set realistic expectations for investments.

Industry associations and capacity building organisations

- Based on the findings of this report, industry associations should work with investors to increase quality of applications for investment opportunities and highlight specific issues that should be addressed to increase investment flows to domestic solar companies.

- Industry associations should collaborate with business development service (BDS) providers and funding partners to tailor investment readiness initiatives for domestic solar companies. These capacity building initiatives should initially focus on supporting domestic solar companies to assess their financing needs and how they align with available investment opportunities. Thereafter support should be offered in preparing required investment documentation and in strengthening the soft skills of CEOs and managers including proposal writing and communicating pitches and bottom-line performance indicators with investors.

- Industry associations should develop and implement advocacy strategies and plans to increase the share of local content in the solar industry. These strategies should spell out the opportunity for increased local content, the barriers facing local solar companies to compete and make suggestions on how to overcome these barriers. Goals for local content should also be set and a monitoring framework put in place to assess progress towards achieving the goals.

Funders

- Funders should include a detailed market analysis of the needs and challenges of local clean energy businesses as part of the design of their investment facilities. Acknowledging and finding ways to account for the greater challenges these local companies face could potentially help tailor the application process and criteria to ensure a more inclusive investment opportunity.

- The design of investment opportunities should clearly define the investment purpose and set reasonable eligibility criteria that encourage greater participation of local companies based on findings from the market analysis. Criteria such as ticket sizes, financial information required, proof of company's contribution and implementation periods should consider the context and realities of local companies.

- Fund managers and implementing agencies should incorporate a pre-review process into the application process to address outstanding or missing information to complete the applications. Given the high number of applications submitted, the capacity of the fund management team needs to be increased to meet this demand for review and to provide feedback to the businesses. Therefore, funders should provide adequate time and budget for pre-investment support.

- To improve the quality of financial information, investors should consider offering accounting and auditing support to companies. This support would help companies recruit qualified staff, ensure they produce periodic financial reports and train or coach the CEOs or managers to use the financial reports for making operational and strategic decisions for the business.

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