

TEMARIN WORKSHOP REPORT

EXPANDING DOMESTIC FINANCE FOR KENYAN SOLAR PV COMPANIES

Project Title	Technology, Markets and Investment for Low Carbon and Climate Resilient Development (TEMARIN)*
Workshop topic	Expanding Domestic Finance for Kenyan Solar PV Companies
Date	7 October 2020, 11 AM - 12.30 PM EAT
Participants	Representatives from African Development Bank, RTI/Power Africa and Hivos Representatives from 5 domestic commercial banks Representatives from 10 Kenyan solar PV firms
Organisers	UNEP DTU Partnership and Strathmore Energy Research Centre
Venue	Zoom meeting online (due to Covid-19)

Download workshop concept note [here](#)

Background

Despite the large deployments of capital into the clean energy sector in Kenya, to date only a few commercial banks in Kenya are involved in financing solar PV companies and markets including off-grid, solar-powered pumps, captive PV installations, and large-scale PV projects. While international investors are crowding in, local commercial banks see these projects as high risk and local companies are perceived to lack proper business models and company structures. On the other hand, the main avenue of local solar PV companies for securing capital is through commercial banks where they face challenges in terms of collateral requirements, high interest rates of 13-14%, and inflexible loan periods.

On this background, and based on the TEMARIN project that supports local companies in the solar PV sector to gain a larger share of the market, this workshop engages local commercial banks and Kenyan solar PV companies to advance the discussion of issues that hinder local companies in obtaining loans from commercial banks. The workshop aims to go beyond problem formulation towards ideation and solutions formulation.

This workshop is part of a larger momentum of actors that are working towards increasing domestic finance. Some of these actors are taking part in the current workshop. AfDB has established the Facility for Energy Inclusion to support small-scale independent power producers delivering power to the grid, mini-grids and captive power projects and SUNREF AFD has been supporting banks with concessional finance along with technical assistance to strengthen capacities over the past 10 years. Some of these efforts are now being adopted by Kenya Association of Manufacturers through its Centre of Green Growth and Climate Change. Power Africa off-grid project extends advisory services to local businesses, and HIVOS has been sharing insights and research reports on this existing gap.

The insights from this workshop is expected to contribute to: i) design of new donor programs (e.g. UGEAP) wanting to support/partner with commercial banks ii) providing input to the Ministry of Industry and Finance as they are planning to provide third party guarantees/ first loss guarantees for SME loans, and iii) collectively creating visibility in the market to draw more investors towards the local energy companies.

*TEMARIN is a 3-year Danida funded project implemented by UNEP DTU Partnership in collaboration with Kenyan and Ugandan partners. Read more about the project at our [project website](#).

Objective of workshop

The objectives of the workshop were to:

1. **Share banks' experience** including existing portfolios and concrete examples of lending to domestic solar PV companies as well as future strategy.
2. **Share domestic companies' experience** in accessing loans from Kenyan commercial banks.
3. **Facilitate a common discussion and find a middle ground** between commercial banks and solar PV companies based on critical issues faced in terms of lending and accessing loans.
4. **Ideate on potential solutions and alternatives to existing practices** to lower the barriers for domestic solar companies in obtaining loans as well as for banks in disbursing loans to domestic firms.

Format

Due to the Covid-19 restrictions, the workshop was held virtually through Zoom. The workshop began with a round of introductions followed by a short presentation by the organiser setting the scene as well as delimiting the scope for the discussion in the workshop. Before the floor was opened up for discussions, banks were invited to present their experiences of engaging with solar PV companies including an overview of their existing portfolios in the energy space as well as concrete examples of when they successfully disbursed a loan to a solar PV company and when a loan application could not be fulfilled. Banks' presentations were followed by an open discussion covering the following three issues: issue of collateral, issue of small sized projects, issue of weak proposals.

Time	Agenda Item	Speakers
11:00-11:15	Brief Round of Introductions	All attendees
11:15-11:20	Purpose and Context Setting	UNEP-DTU Partnership
11:20-11:45	Bank Portfolio and Experiences	Kenya Commercial Bank Co-operative Bank Equity Bank Absa Bank DTB
11:45-12:30	Discussion Session	Open discussion by all participants and concluding points

Context setting

Unlike foreign companies, **local companies are limited in terms of receiving funding from international investors and development banks**. In Sub-Saharan Africa, in the off-grid market segment, it is estimated that more than 90% of total investments has gone towards international companies (G4A). This overall trend is expected to hold true for other segments as well. From in-depth interactions with 14 local companies, we know that only few have accessed international funds, while most either turn to commercial banks or rely on personal savings. While international investors need to tailor their products better, there is also a need to expand domestic financing further to support the local solar industry and local solar companies.

The point of departure for discussions in the workshop is that commercial **banks are an important lever in building the domestic industry**. They have the scope to better understand needs, share a common language for the market and risks and could tailor their products accordingly. Many banks have already indicated a large lending volume for the clean energy sector.

However, **before companies and banks can reach a common ground there are certain realities and perceptions at both ends that needs to be unfolded**. On the one hand, banks' perceive that "the local businesses are not well-structured" and "they are too small and risky". Moreover, "local businesses need to improve on how they package their products: financial, technical, contractual" and "they do not have the ability to make good quality presentations and robust financial models." On the other hand, from the companies' perspective, banks lend at "high interest rates, high collateral" and "they have low familiarity with solar technology and business models". In addition, banks are limited in lending to smaller firms or projects because the transaction costs are the same for 1 million USD vs 100,000 USD projects. Furthermore, banks are limited in regards to flexibility, due to their internal credit policies and external stringent measures specified by the Central Bank. Companies, on the other hand, have their own limitations in terms of lack of financial modelling skills, writing convincing proposal and often lacking relevant supporting networks.

While these realities and perceptions are true, these **simplified perceptions also need to be broken down and nuanced further**. Local companies have evolved and matured over the past years. There are companies with long track records and good understanding of the market and customer needs. They operate in multiple market segments; they bring in different specializations, strengths and working hard to enhance their skill sets. Other companies are growing slowly but steady and have showed resilience by managing to survive through many market uncertainties. This point to a need for building new risk metrics including a broader set of variables and some kind of gradation when evaluating different companies. At the same time, we also know that banks are already evolving from offering traditional services to enhancing their market knowhow with the help of donors and businesses and some banks are even offering more tailored products to suit the local businesses.

Domestic solar businesses are mostly cash-strapped, whether it is to run regular business operations, purchase equipment from the supplier, or to implement the project and therefore need debt finance for cash flows. However, often they are not able to access that finance without high interest rates and without mortgaging their land or house. From this perspective, companies would need **alternatives to what is already being offered by banks**. On the other hand, banks need to invest in a reliable company with a good track-record and assurance of companies' ability to pay back the loan. So in order to reduce their own credit risk banks are relying on a set of financial, contractual and technical requirements. Companies are already familiar with these expectations, and many are evolving and working hard towards writing good proposals, coming up with better cost planning, business models, etc. However, there's still a way to go.

Banks' profiles and experience

Co-operative Bank of Kenya (Coop Bank)

Coop Bank has been lending to the renewable energy (RE) sector the past 6-7 years in collaboration with SUNREF. They continue to focus on this market going forward. Key target market is independent power producers feeding into the grid as well as the C&I sector and a few projects in the education and hospitality sector. The bank has dispersed 37 million USD over the past 5 years and have financed 2-3 projects in the range of less than 100 kW. There is limited opportunities in utility IPPs and going forward, the bank will focus on the C&I, domestic rooftop and solar water solutions as well as on agriculture solar water pumps.

Example of a successful project through the SUNREF programme: 600 kW plant. The power generated was for the consumers' own use and excess was to supply to the national Grid. Loan Tenor: 120 months. Cost of finance was subsidised through the SUNREF programme. IRR: 12%, payback period: 7 yr. Collateral: Legal charge and debenture over the solar equipment. Technical aspects of the project was approved by SUNREF/AFD.

Absa Bank

In the past, Absa has not been active in the RE sector. Lending has been customer driven rather than the bank having a strategy for this segment. This is changing now as Absa is looking to set up partnerships in the RE sector and to develop a strategy for this segment. Some of the issues with banks having difficulty lending to domestic solar firms includes i) bankers do not have sufficient understanding of the technical aspects of projects and need technical assistance from third parties to assess proposals like in the case of SUNREF, ii) equity component: most borrowers cannot put up 60-80% in equity that is required by the banks. From the banks' perspective, these requirements are necessary as these technologies are constantly changing. In the past cost has dropped significantly and banks do not know whether the frontier has been reached yet. Therefore, banks see that lending for longer tenures possess a risk. The same goes for collateral/security; banks are not comfortable taking solar panels as collateral, but will require additional safeguards such as guarantees and risk sharing.

In general, lack of finance for solar companies is mostly driven by lack of knowledge of benefits rather than availability of credit in commercial banks.

Kenya Commercial Bank

The bank is looking at their own carbon footprint and want to move into green investments. Focusing on production sectors and SMEs. Internally, there are ongoing discussions on how to work with solar SMEs. Overall, the bank is interested in the whole value chain in RE. The most common issues that the bank is facing when dealing with solar companies are the lack of well-kept books, inability to determine cash-flows, and lack of data in regards to the energy saving. In addition, there is often an issue in getting the right value for the securitisation, which is a policy from the bank.

Development partners are doing a good job by providing guarantees, which is an avenue that will help the bank in solving some of the challenges in regards to lending to SMEs.

Equity Bank

Equity bank has some success stories in the solar PV market, and has so far dispersed 100 million dollars into the sector. Equity has evolved over the past 6 years from initially concentrating on the retail side, financing consumers accessing Solar Home Systems, financing distributors and retailers and later starting to work with PAYG companies in the SHS space. They are now covering the whole value chain from customers to manufacturers in the SHS space. Moreover, they are also financing solar for productive use like solar water pumping, solar drip irrigation, storage and cooling. They are now moving into the captive solar/commercial and industrial (C&I) space where they are looking for bankable projects and looking to deploy 20 million USD in Q4 2020. They are working with the IFC with a target of dispersing 200 million USD into the RE sector. Last week, Equity Bank signed a contract with the government on 100 million USD to finance SMEs, 30% of which are going towards renewables.

However, the main challenge is to find bankable projects. Challenges relate to issues of PPAs and there have been examples of projects not going through. In September 2020, the bank had a 1.5 MW project that did not go through the PPA process. In general, Equity bank is dealing with the same set of issues highlighted by the other banks in the workshop, including: companies not being able to meet collateral and equity requirements, need for guarantees, difficulties of assessing future cash flows of companies as well as uncertain calculations on savings. However, Equity Bank is increasing their participation in the RE sector. Risk sharing guarantees from Development Finance Institutions (DFIs) will be an important mechanism to support them in increasing their contribution.

Summary of discussion and takeaways

This section provides an overview of the discussions and key takeaways from the workshop covering the following points.

State of the sector

Banks' view of the market

There is a shift happening in the banking sector where banks are increasingly recognising the renewable energy market as a future growth market. Over the past decade, technical assistance programmes such as the SUNREF programme have led to increased knowledge and capacity about the solar PV market within the banks who took part in the programmes. Moreover, this knowledge is slowly spreading across the banking sector, which is especially happening when banking staff move from one bank to another, bringing along this knowledge. Alongside, the solar PV market itself has matured and banks are now beginning to recognise the solar PV market as an increasingly viable investment arena. Especially the C&I market, where the off-takers of solar energy are the commercial and industrial sectors, which have a high ability to pay. While most banks in the past have not had a particular strategy for this market, banks are now increasingly formulating strategies and internally discussing how to move into this market and expand lending to solar companies. At the same time, DFIs are increasing their technical assistance activities in this space, which is encouraging banks to pursue this market even further.

Private sectors' view of the market

The solar PV market has evolved and matured significantly during the past years. Cost of solar has decreased dramatically and it can no longer be questioned that solar energy investments can provide a return. Solar PV is now a proven technology and solar PV projects are no longer new and risky business. This evolution has taken place across all solar PV segments, driven in particular by new and innovative business models.

Business opportunities within solar are big and it is therefore not a question of whether commercial banks should be part of this market but rather a question of how they can take part and support domestic solar companies. From an investment point of view, prices makes sense, financial models make sense even in short term projects such as 4 -5 years, and even in small-scale projects such as 100 kW. The situation for domestic firms is therefore more optimistic now than just 3 to 4 years ago.

Exciting gap between solar PV companies and commercial banks

Collateral and equity requirements

The current requirements for collateral and equity expected of companies to obtain a loan are in most cases impossible to fulfil. Banks are asking anywhere between 40%-80% equity for standalone projects, while equity requirements for companies with acceptable cash flows can go down to 20%.

Energy projects are in general capital intensive. In solar PV projects, equipment is the main part of the cost of the project. It is therefore unrealistic to expect SMEs and entrepreneurs to put in up to 80% equity for the project themselves. This becomes a catch-22 situation for both banks and solar companies to deliver on both smaller and larger ticket sized projects. These requirements exclude smaller companies as they often operate on a project-to-project basis before they have built up a business with a considerable cash flow.

Conservative view of solar sector

The current lack of lending to local solar companies is not just caused by inadequate knowledge of the sector, but also is due to the absence of identifying larger, long-term opportunities. In general, 90% of banks' portfolios go into low risk debt, where banks can monitor companies' cash flows. Banks would rather provide an overdraft to a company that is already known to the bank and which has stable and predictable cash flows than to give a loan to a solar company where the business model and risk factors are not entirely clear to the bank.

If banks want to move into renewable energy investments, they will have to accept more project based financing, which ultimately involves a higher risk. Here, DFIs will play a crucial role to help banks reducing this risk. The question is how banks can get away from the legal charges to work with companies that have business models that are both viable and bankable.

State of the sector

Redefine the relationship between the companies and the banks

The traditional role of banks towards new potential lenders in the RE space has so far mainly involved assessments of lending applications and to provide project approvals or rejections.

Local banks (and companies) can benefit from redefining their own role by pursuing a partnership approach where banks take on an active role of supporting companies to become eligible for a loan. This would include help identifying what is missing for the company to become eligible for a loan and from there further collaborate with the company to put those things in place. This would not only strengthen the companies opportunities to pursue more projects and build a sustainable business, but it would also be an opportunity for banks to build up their own future customer base in a strategic way.

However, in order for banks to redefine their role and to take on a more active part in supporting domestic solar companies in becoming eligible for loans, banks need more in-house capacity to lift this task. Such technical assistance to assess and work with private applicants is currently only found in partnerships between DFIs. For instance, like under the SUNREF programme. No Kenyan banks have internal technical assistance for the solar PV sector.

To build up and incorporate such TA components, which will strengthen the relationships with companies, banks may look to development finance institutions for support. However, the bank sector itself can also take active part in redefining its own role and establish additional in-house training for staff to increase their understanding of solar projects as well as solar business models. This could also include better internal knowledge exchange between corporate and retail departments within banks.

There is an increase in non-bank lenders in the market, which may push banks to pursue own in-house technical experts in order to gain access to this market.

Finally, companies can also benefit from actively working to build long-term relationships with lenders. A proven strategy for companies in the solar sector is to start with small transactions and from there build up the relationship with the lender.

Finding alternatives to rigid securitisation requirements (collateral and equity)

Establish a commodity model for lending for certain project types

There is a need to simplify the understanding of solar projects as well as to distinguish between the different solar PV segments when talking lending models. Within several market segments, the business model for solar PV projects is rather simple. This includes SHS, productive use products such as solar water pumps, solar heaters etc., and to some extent in the C&I space. In those simpler project structures, the solar PV equipment can be regarded as a commodity (like a car).

This includes SHS, productive use products such as solar water pumps, solar heaters etc., and to some extent in the C&I space. In those simpler project structures, the solar PV equipment can be regarded as a commodity (like a car). However, in addition to being a commodity, solar equipment is also a non-moveable asset (unlike a car), which is furthermore providing a monetarised service (power) and hence has a value on top of the hardware value. The needed amount to finance a business that installs or sells solar water pumps for example, is in the range of 10.000 to 20.000 USD and in other segments such as C&I up to 100.000 USD (similar range as that of a car). In general, commodity lending happens without putting up security and often with a small down payment (20%, 5% or even none in some cases). The argument goes that the development of a specific commodity model would benefit banks and companies alike. By differentiating between simple project and larger, more complex projects, and providing commodity model retail loans targeted at simpler projects (relying on solar PV equipment, panels, batteries, solar water pumps etc.), banks would be able to reduce its transactional cost.

Alternative lending criteria:

Some domestic solar companies have been fortunate to work with international lenders who went beyond collateral by looking at alternative criteria such as:

1. Receivables and contracts
2. Use construction equipment or solar equipment itself as security.
3. The strength of the team
4. The history and portfolio of the company

The way a company presents itself to the banks will influence the way in which banks perceive risk in the business. In order for companies to be able to use more expectation-based evaluation criteria such as history and team strengths, there is a need for companies to increase quality of the information, which they present to banks. High quality information can help decrease banks' risk perception in terms of whether the bank believes the company is likely to perform, will be paid by its customers, and thus is likely to pay back the bank.

In this regard, there is a need for support for companies to lift the quality of information for bank presentations. That is, not in terms of how they do business, but rather in terms of highlighting the particular strengths of the company.

Guarantees

There is a trend going towards guarantees. Most banks highlight guarantees as an important instrument for them increase the lending in the RE space. However, guarantees are also conditioned by large ticket sizes, which put up an entry barrier for smaller companies or companies with business models revolving around small ticket sizes. **Portfolio guarantees** are mentioned as an instrument that can potentially be useful in regards to smaller sized transactions. Such an instrument can also help re-define the risk perception of small-sized projects as banks' risk are spread across several projects.

Cash flow / working capital lending

Some banks are looking into how they can support companies by lowering requirements to security. One example concerns more cash flow lending, where equity requirements are lower. However, cash flow lending will require a level of financial strength in the company, which is not realistic for many smaller and newer companies. Furthermore, this type of lending is usually considered a way to enable the borrower to bridge short-term financial gaps caused by delayed payments or tied capital and will therefore not meet the needs of companies for longer-term finance.

Companies to expand view of financial opportunities

While domestic firms are highly reliant on commercial banks and have little access to international lenders, as due diligence processes are stricter/more extensive, it is highlighted that there still might be ways for companies tap into the market of international non-bank lenders. Companies need to expand the view of financial opportunities beyond commercial banks and to explore the financial landscape to see what is available to them. This include regional and national development banks whose lending criteria look different and are less strict than commercial banks. For example, AfDB had a partnership with Uganda Development Bank where they were issued a 30 million USD corporate loan for on-lending to small-scale environment projects.

Direct mentorship between solar companies

Some domestic solar companies have more experience and success in obtaining finance than others. Despite the fact that companies are competitors in the same market, the sector as a whole could benefit from this experience of obtaining finance becoming more widely available. Companies who have been successful in achieving finance could share their experiences with the larger group of domestic companies. This could happen through i) direct one-to-one engagements (at least one participant offered their assistance in regards to making introductions to a 120 Mill USD roof top solar fund, providing feedback etc.), ii) through yearly peer-to-peer network events with focus on domestic companies and iii) through targeted case studies of good examples from specific companies and sharing of anonymised successful proposals/business case/etc. Or any other formats.

Next steps

- The project team compiles an overview of the actionable recommendations proposed by actors in the project and shares with stakeholders for review
- A report compiling insight on ways to strengthen support for domestic firms in the solar PV industry in Kenya including a road map of actionable recommendations is published by the end of 2020
- Recommendations will be further disseminated through policy briefs and through bilateral engagements with relevant stakeholders and donors.

ABOUT THE TEMAIN PROJECT

UNEP-DTU Partnership is undertaking the three-year, Danida funded project titled [TEMARIN](#), for which one key objective is to support domestic MSMEs in the solar PV sector in Kenya and Uganda. We recently published a report on the [captive solar PV market in Kenya](#), which was presented at a [webinar](#) in May 2020. This work, along with the work to support domestic firms contributes to the overall project objectives of 1. Generating market knowledge and explaining successful cases of market-led transfer and diffusion of climate technologies including small-scale irrigation, captive solar PV and ICT based agricultural extension services. 2. Co-creating actionable recommendations to strengthening support for domestic firms in gaining larger share of markets for solar PV. 3. Providing a platform for partnership facilitation to increase technology transfer and diffusion in select climate mitigation and adaptation technologies TEMARIN: Technology, Markets and Investment for Low Carbon and Climate Resilient Development.

ABOUT UNEP-DTU PARTNERSHIP

UNEP-DTU Partnership is UNEP DTU Partnership is a leading international research and advisory institution on energy, climate and sustainable development. Our work focuses on assisting developing countries transition towards more low carbon development paths, and supports integration of climate-resilience in national development through in-depth research, policy analysis, and capacity building activities. Read more about our work [here](#).

ABOUT SERC

Strathmore Energy Research Centre (SERC) is a research centre within Strathmore University. SERC's core mandate includes offering professional training, research and consultancy services in the energy sector with a focus on Renewable Energy Technologies (RETs) and Energy Efficiency. SERC has expert knowledge and hands on experience in training on solar photovoltaics (PV) technology; including but not limited to Solar PV, Solar Water Pumping, Solar Cooling and Energy Management courses. Read more about our work on [here](#)

Annex I: Participants

Project team: SERC: Hope Njoroge, Cecilia Mwania, **UNEP DTU Partnership:** Mathilde Brix Pedersen, Lakshmi Bhamidipati, Louise Strange, **Independent consultant:** Sammy Mwiti

Workshop participants

Distinguished guests

1	Funso Somorin,	AfDB, Regional Principal Officer
2	Muthoni Nduhia	AfDB, Climate Finance Specialist
3	Shelmith Theuri,	Power Africa , Contractor
4	Maimuna Kabatesi	Hivos, Advocacy Officer for Climate and Energy

Bank representatives

5	Daniel Munyambu	Absa Bank, Relationship Manager
6	Beatrice Kinuthia	Coop bank, Relationship Manager
7	Robinson Kamweru	KCB, Relationship Manager
8	Eric Naivasha	Equity Bank, Associate Director
9	Shahzad Karim	DTB Bank, Head of Corporate Banking

Company representatives

10	Koome Kirimi	SolarPoa, Saccred Ventures Isiolo
11	Patrick Kimathi	Skynotch Energy Afria
12	Mary Njue	Epicenter Africa
13	Romano Francis	Knights Energy
14	Felix Kamiri	Knights Energy
15	Japheth Kipkirui	Knights Energy
16	Loise Gicheru	Solafrique Ltd.
17	Tim Kipchumba,	Questworks
18	Purity M	Questworks
19	Mark Muinde	Harmonics Systems
20	Michael Njoroge	Multi-Link Group
21	Vincent Ombajo	Automax Engineering Solutions
22	Esther Wairimu	OFGEN