TEMARIN WORKSHOP REPORT

WORKSHOP ON STRENGTHENING SUPPORT FOR DOMESTIC FIRMS IN THE SOLAR PV INDUSTRY IN KENYA

Project Title	Technology, Markets and Investment for Low Carbon and Climate Resilient Development (TEMARIN)
Workshop topic	Strengthening support for domestic firms in the solar PV industry in Kenya
Date	24 June 2020, 10-12.30 EAT
Participants	Representatives from Ministry of Industry and Ministry of Energy Representatives from EPRA and KEREA Representatives from 11 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

Kenya has witnessed a considerable surge in solar PV dissemination and uptake, positioning the country as a frontrunner and a regional leader in this market. However, domestic solar PV businesses face several challenges limiting their ability to grow and upscale their business such as lack of access to funding, human resource constraints, inconsistent policies and regulations, and an inadequate business ecosystem.

In this context, the UNEP DTU Partnership, in collaboration with Strathmore Energy Research Centre (SERC), conducted a detailed study to highlight competitiveness among Kenyan MSMEs and bring to attention the challenges faced by Kenyan solar companies. In February 2020, the project team conducted in-depth interviews with 14 Kenyan solar MSMEs, which are operating across off-grid, mini-grid, productive use, Commercial & Industrial, and utility-scale market segments as well as a key stakeholders including the Ministry of Industry, Trade and Enterprise Development (MoI), Ministry of Energy (MoE), The Energy and Petroleum Regulatory Authority (EPRA), the World Bank Group (WBG), Kenya Private Sector Alliance (KEPSA), Kenya Renewable Energy Association (KEREA), Power Africa, Private Financing Authority Network (PFAN), and Equity Bank. The study took an individual company trajectory approach identifying how company owners started and grew their businesses, how they became competitive over time, strategies for upscaling as well as the challenges faced along the way and how they were overcome. The study identified a number of challenges and bottlenecks, which are hindering domestic firms from upscaling and grow their businesses.

The 14 Kenyan solar MSMEs were invited to take part in the current workshop together with the representatives from Ministry of Industry, Trade and Enterprise Development (MoI), Ministry of Energy (MoE), EPRA and KEREA to discuss study findings and challenges identified as well as to formulate potential solutions to remove bottlenecks and lower specific barriers for Kenyan solar PV SMEs.

Objective of workshop

The objectives of the workshop were to:

1) Validate findings from interviews with domestic firm representatives, government actors and sector experts;

2) Dive into and expand upon concrete issues and challenges that are specific to domestic firms operating in the solar PV market in Kenya;

3) Collectively identify actionable recommendations to strengthen the support system for domestic firms.

Format

Due to the Covid-19 restrictions, the workshop was held virtually through zoom.

The workshop began with a round of introductions with the representatives from ministries, government bodies and associations giving an overview of their particular initiatives and mandates in regards to supporting domestic solar PV firms as well as by representatives from solar PV firms introducing themselves. Before the interactive part of the workshop, the project team gave a short presentation of findings from the Kenyan solar PV firm study including domestic Micro, Small and Medium Enterprises (MSMEs) characteristics, market evolution and strategies pursued. The interactive part of the workshop was designed as a structured discussion of challenges faced by domestic firms organised into three themes: finance; skills and competencies; and policy and regulations. Identified challenges within each theme were presented to provide a baseline for discussions, which were guided by a set of validation and explorative questions

Time	Agenda Item	Speakers
	Welcome Note	Mathilde Brix Pedersen; UNEP-DTU Partnership.
10am - 10:30am	Brief round of introductions	Boniface Nyongesa Wafula, Deputy Director, MoI Paul Mbuthi, Deputy Director of Renewable Energy, MoEP Nickson Bukachi, Senior Renewable Energy Specialist, EPRA Shaleen Wangui, Administrator, KEREA
10:30am - 10:45am	Presentation on key findings from the interviews with domestic solar MSMEs in Kenya	Lakshmi Bhamidipati, UNEP-DTU Partnership
10:45am - 11:00am	Presentation on the 3 themes (Finance, Skills, Policies & Regulations) and related challenges	Louise Strange, UNEP-DTU Partnership
11:00 am - 12 noon	Discussion Arrive at action points to take forward	Hope Njoroge, SERC & Lakshmi Bhamidipati

Introductions

Representatives from Ministry of Energy and Ministry of Industry emphasised the importance of strengthening support for domestic firms and expressed keen interest in getting feedback from the industry in terms of what their challenges are.

Ministry of Industry representative highlighted that solar PV has become established as an important enabler to support and ease industrialisation. Increased uptake of solar PV will be important to lower electricity price for SMEs in the manufacturing and other sectors. Currently the SME policy is in review. One key aspect is to mainstream policies for entrepreneurship. In regards to solar PV SMEs/energy SMEs in particular, there are no specific policies in place.

Ministry of Energy representative highlighted that the government, through the national energy policy completed in 2018, is committed to support RETs including Solar PV. Pointed at two main challenges in order for Kenyan MSMEs to take advantage of the market for solar PV: 1) Unfavourable Tax regimes: The Finance Bill has re-introduced some of the VATs, which is a drawback to some of the gains realized in the energy sector so far. The Ministry of Energy is currently working with partners to see how these policies can be improved to support the MSMEs. 2) There is a need for capacity building in order for local firms to take full advantage of the opportunities. In the Kenya solar access project (KOSAP) first round it was found that the majority of MSMEs were not able to deliver bankable proposals. Therefore, MoE has partnered with SNV to develop a capacity building programme focusing on how to prepare business plans and proposals before tendering next round of the KOSAP.

EPRA representative highlighted the 2012 regulations which provide for licensing of all persons involved in the manufacture, importation, distribution, promotion, sale, design or installation of any Solar Photovoltaic (PV) systems as well as the curriculum development for training which has contributed to the growth of the number of accredited installers from 0 in 2012 to now over 1000. He also highlighted increased attention and focus on local content requirements. Following the enactment of the Energy Act (2019) foreign companies are required to hire a licenced installer (local individual) and train local engineers with the aim to support local capability building so that moving forward these engineers can establish and register their own business entities.

KEREA representative highlighted their role as a common voice of the private sector players in the field of renewable energy and on capacity, finance etc. and wants to bring everyone together, connecting members, facilitate networking etc. Highlighted that the reintroduction of VAT is a big blow to the sector. KEREA has established various working groups which include inter alia Solar Home System (SHS) working group, Solar Water Heating (SWH) working group, E-waste working group and Biogas working group that members can join to provide input to KEREAs work in these areas.

FINDINGS, KEY TAKEAWAYS FROM DISCUSSION AND IDEATION POINTS

This section provides an overview of presented findings as well as summaries of key discussion points and takeaways.

Skills and competencies summary

Lack of access to specialized skills and competences: Firms have difficulty in finding qualified engineers, or even the qualified ones sometimes are not able to design or size the system optimally (in case of commercial and industrial systems (C&I), carry out operations and maintenance (O&M) tasks, and/or have limited knowledge on the most up-to-date products (for ex: selecting the right charge controllers, batteries). In addition, specific company specializations makes it difficult for them to get the right talent (ex: installing solar water pumps, solar based purifiers, or for electric vehicles etc.). This points to a disconnect between what is taught in the traditional universities degrees/courses and the practical up-to-date experience that captures the needs of the changing dynamic market. The practical aspect needs to be compensated through a lot of in-house effort on training, which involves a lot of time and has a cost burden on firms, even more so when it involves rotational temporary staff. In addition, when this training effort has been put in, there is a problem of retention, as there are only few highly specialized professionals in the market, who are then in high demand across the industry. Another aspect is that most companies prefer to have limited full-time staff, and they rely on a large pool of freelance technicians employed on a temporary basis, as and when needed for specific projects, which has the benefit of low operational costs but also means sometimes not getting the right people at the right time or additional training for the temporary staff. And some companies also lack a long term vision/strategy therefore their inherent nature brings about inability to retain staff.

Lack of adequate in-house business skills: Firms face challenges with a range of broader set of business skills within the company, referring to writing proposals, making complex financial calculations, and not knowing what content is required and what works best, not knowing the finance jargon (terms, concepts) to communicate with the financiers. Challenges also cover soft skills including client management, which refers to understanding specific requirements and client needs and understanding what they want, offering personalized services etc. A few companies also indicated challenges with market knowledge in terms of understanding the demand patterns, and the up-to-date products in the market. There is often a heavy load on the owner/founder to engage in all decision-making, strategy-making, to stay up-to-date and tuned and to think about how to run the business to ensure the best competences etc. Most of this work and these decisions falls on to the owner/founder who is then overstretched, which limits the company.

Key takeaways

- Knowledge and skills needed in solar PV businesses are very product specific. Although personnel might be skilled, they might not possess the specific skills to work with specialised products/brands.
- It is difficult for firms to hire people with these specialized skills until there is a constant pipeline for the firms. At the same time, highly specialised professionals are in high demand and are therefore difficult to retain. This means that firms are struggling to get the right skills at the right time when implementing projects.
- Lack of adequate business skills in particular in terms of proposal writing, complex financial calculations and understanding the financial jargon is a severe barrier in terms of accessing financing facilities as well as commercial banks.
- EPRA has been hosting a conference where they brought in the industry players to provide technical training as a way to top up short courses. EPRA sees a need for a continuous forum to bring industry players and experts together to provide training, which could be hosted and driven by the industry itself.
- The Industry organisation for engineers have conferences where they disseminate knowledge, present research and interact in different ways. However, there is very little solar representation. Similar conferences for knowledge dissemination and networking could be taken up by the solar sector.
- UNESCO in collaboration with the Korean government has initiated a programme with a goal to have students acquire more hands-on experience (focus on solar PV). At the end of the project, KEREA intends to host a workshop where the students will get to interact with the solar companies as well as to host a skills competition.

Ideas/recommendations

- Multivendor training sessions/ Forum to bring industry players and experts together to provide training. e.g. quarterly workshops where vendors would come and deliver capacity building. Something KEREA could take up.
- Vender, suppliers or solar companies could participate in training of student prior to the students finish their degree.
- Establish a Centre of Excellence (e.g. a model like SARETEC in South Africa)
- Regular conference to advance and disseminate the knowledge for the greater good in the sector.
- National solar PV skills competition

Finance summary

Cash flow constrains: There is consensus that cash flow in companies is the most critical barrier for operations and for scale-up. Particularly the fact that the companies have to manage their finances until a project is completed, which could take 1 month to 3 months or more, and meanwhile have to pay to the suppliers and pay for operational costs through this period. The companies then sometimes end up losing a client in the process or face project delays. The cash flow problem becomes a challenge both in cases where the customers self-finance or when project debt or external finance is involved. As an example, one company mentioned that financiers are only willing to finance the projects only after the project is completed, which could take up to 200 days, however, cash flows are needed through this period. Most companies end up relying on a mix of personal savings, family networks for a private line of credit, commercial bank loans, and/or supplier credit.

High interest rates on loans and asset-based collateral requirements: Linked to this point is the high interest rates on loans and asset-based collateral requirements. This is true for both local commercial banks and international financiers as well as in all cases, whether it is a short-term, long-term loan or inventory loan etc. On interest rates, commercial banks charge anywhere between 10-15%, or even higher in some instances, and international financiers could charge between 7-10% plus currency conversion charges etc. On collateral, the lenders typically ask for land, house or car as collateral, which are not always even an option for many companies. A final interlinked point is that beyond interest rates and collateral, most of the time securing finance involves a lot of due diligence by the lender, which is time-consuming and involves a lot of processes. Most financiers use international standards and benchmarks for lending, which is not always well adapted to suit the Kenyan context. As an example, lending from international financiers often involves fully audited financials of the company, management accounts, environmental, social and governance due diligence, management interviews, and references from some of the company's clients. Also, local commercial banks undertake a lot of due diligence, which includes records of accomplishment of the given customer as well as the customers' financial details, among others.

Key takeaways

- There is a gap in understanding / lack of common understanding between the commercial banks and the solar PV private firms. According to solar PV firm representatives, commercial banks lack knowledge and understanding of the solar PV sector, its business models, company structures and general 'solar jargon'. Likewise, solar PV businesses lack skills in writing bankable proposals, often delivering low quality proposal documents, not knowing the finance jargon (terms, concepts) to communicate with the financiers.
- Most financiers use international standards and benchmarks for lending, which is not always well adapted to suit the Kenyan context and thus act as a barrier for domestic firms
- The market has grown a lot over the past years. There needs to be better transparency in terms of what has worked in the past. If companies could get access to proposals that have been successful, they could get a sense of what standards have been used and it could be a way to reach a common standard across the sector.
- There is currently very little innovation from the commercial banks and firms express a need for the commercial banks to develop specific financial instruments targeting energy development.
- Also, solar PV projects are traditionally perceived as high risk from commercial banks and there is a need for communicating about projects elsewhere that have worked to gain a baseline and gain trust from the banks. This could include collaboration around the Kenya Association of Manufacturers (KAM) efficiency programme. The Industry understands solar PV as an efficiency initiative. So solar companies could benefit from this understanding in the sector and among investors.

- Development partners/donors might also have a role to play in terms of testing out pilot projects / models which can then be used as an exemplary model and taken to banks. (Like GIZ has done in the Talek mini-grid project)
- There might be a need for finance intermediaries to bridge the gap between financier and companies. The suggestions given explored on how financiers can bundle together to meet the needs of the entrepreneurs and likewise how can firms aggregate at a project level or a firm level to reach a size that is suitable for financiers.

Ideas/recommendations

- More discussions between Kenyan commercial banks and Kenyan solar PV firms needs to take place to increase awareness among banks about the models and needs of firms, as well as among firms about the offerings, limitations and leeway of the commercial banks in order to come to a middle ground on terms, conditions, possibilities and requirements.
- Commercial banks should develop specific financial products targeting energy development.
- Technical assistance for firms in order to develop bankable project proposals.
- Specific examples of what has worked in the past could serve as a basis to bridge the gap in understanding. This could be in the form of i) a platform/database of examples of successful tenders and proposals (for firms to improve their understanding of what the banks/investors want) and ii) an overview/study of successful projects that have managed to pay back loans, which could act as a resource for banks in terms of understanding various models and specific project details iii) donor lead pilot projects with the aim of testing and proving exemplary bankable models.

Policy and regulations summary

Focus on high taxes/VAT and charges: There are high taxes and charges throughout the supply chain - imports, freight, customs clearances and local permits, which affects the margins of the companies. Despite tax exemptions, VAT still continues to be imposed on several solar products. Currently, VAT has been reintroduced as part of the new financial bill. Local businesses will be affected by the imposition of a 14% VAT on solar products, however the impact will be felt differently by different companies. Many companies have mentioned that procurement has a relatively bigger role to play in the margins, installation and O&M is quite squeezed already. And with procurement and imports, comes the problem of taxes, charges, clearance issues, and delays. Further, smaller consignments also mean lower bargaining power and additional time.

An idea to set up a regional warehouse for solar equipment as inventory/stock was floated in the workshop group. Having a regional workshop could have several potential benefits: i) higher bargaining power - lower equipment price, ii) lower equipment price also means lower VAT, iii) buffer stock or a fall-back stock in case of increased demand or in case of import delays and vi) eases regional trade, to some extent.

Focus on inconsistent application of regulations and grey areas in the regulations: The inconsistency of regulations can be seen across all market segments, whether in terms of how VAT applies to solar and allied products (such as in case of SHS). In case of mini-grids, there are inconsistencies with tariffs and distribution licenses. For C&I systems, we see inconsistencies in regards to licensing and leasing or PPA related procedures, and lastly for utility-scale in regards to Feed in Tariff (FiT) , Power Purchase Agreement (PPA) negotiations. In addition to previous point, there is a lack of clarity in some regulations such as the mini-grid draft regulations, C&I PPA/leasing conditions and net-metering, which are still under development, and finally the FiT vs Auctions Draft Policy. This means: i) a lot of time and effort in securing additional and specific clarifications on the permits/licensing, and ii) project delays, additional charges leading to a higher cost burden. A related problem is the silo operations among the institutions, which also leads to different interpretations of the same regulation.

Key takeaways

- Procurement plays a relatively larger role in margins for firms compared to installations, O&M and other parts of the project which are squeezed in terms of margins. This makes the reintroduction of VAT particular problematic for solar firms.
- Inconsistencies and/or grey areas in regulations lead to higher cost and time burden for firms to reach compliance as well as project delays.
- Ministry of industrialization expressed support for open special economic zone/warehouse and to exploring further how this could be done. KEREA offered to pick up and explore this idea further with its members and come up with a proposal so that they can approach the Ministry.
- There is a trend that manufacturers are setting up companies locally which could lead to lowering costs. This would limit the scope and need for a regional collective organisation.
- The Ministry of Industry has initiated a 3 billion Covid-relief scheme which is a fund targeted SMEs to lower the cost of borrowing from commercial banks.
- There is currently no Solar PV specific categorisation of MSMEs within the Ministry of Industry.

Ideas/recommendation

- Include a solar/energy firm specific categorisation in the (M)SME categorisation to be able to target policies at this particular segment.
- The KENTRADE Portal (by KRA-EPRA) could be strengthened in terms of communicating regulatory isues and inconsistencies.
- Explore further the need and support for a regional setup to lower importation barriers and cost (regional warehouse)

Next steps

- The project team compiles an overview of the actionable recommendations proposed by actors in the project and validated by participants in the workshop.
- Through a second round of stakeholder engagements, actors' roles, priority of actions and timelines is specified and compiled into a road map.
- A follow-up session on the topic of 'Domestic financing for local solar businesses' is held early October 2020 with participation of local commercial banks representatives, domestic solar PV firm representatives and donor representatives.
- A report compiling insight generated on how to strengthen support for domestic firms in the solar PV industry in Kenya is published by the end of 2020

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

***TEMARIN**: Technology, Markets and Investment for Low Carbon and Climate Resilient Development.