

Beyond the Grid Fund for Africa (BGFA) - Mozambique

OUTCOME REPORT: PRIVATE SECTOR STAKEHOLDER CONSULTATION
WORKSHOP

MAPUTO, 2 OCTOBER 2019

AUTHOR: REEEP
PRODUCED WITH SUPPORT FROM GREENLIGHT AFRICA
DATE: 13 NOVEMBER 2019

CONTENTS

1 Introduction	3
2 Opening statements	5
3 Market analysis summary	5
4 Solar Home System discussion group	6
4.1 Key discussion points and conclusions	6
4.2 Recommendations for BGFA.....	7
5 Mini-grid discussion group	8
5.1 Key discussion points and conclusions	8
5.2 Recommendations for BGFA.....	9
6 Bioenergy discussion group	9
6.1 Key discussion points and conclusions	9
6.2 Recommendations for BGFA.....	10
7 Conclusions and next steps	10
Annex 1: Workshop agenda	11
Annex 2: Stakeholder list	12
Annex 3 - Discussion group questions	14
Mini-grid group	14
SHS group(s).....	14
Bioenergy/cookstoves/clean fuels group.....	15
Annex 4 - Presentation of the Beyond the Grid Fund Africa BGFA	16
Annex 5 – Mozambique – Off-grid Energy Market Analysis Overview (GreenLight Lda)	16

1 INTRODUCTION

The Beyond the Grid Fund for Africa (BGFA) is an initiative of the Swedish Government in support of Sustainable Development Goal 7 (SDG7) – “Ensure access to affordable, reliable, sustainable and modern energy for all” – and is part of the Power Africa initiative, supported by a number of donor governments including Sweden.

Nearly two out of three people in sub-Saharan Africa live without access to electricity, and are unlikely to be connected to the central utility grid in the foreseeable future. Decentralised renewable energy (DRE), delivered by market actors directly to consumers, has been proven in nascent and emerging markets across Asia, Africa and Latin America to be more efficient and effective in quickly expanding energy access to underserved rural and peri-urban areas than traditional approaches such as centralised power grid expansion.

REEEP is currently implementing the **Beyond the Grid Fund for Zambia** (BGFZ; <https://www.bgfz.org/>) launched in 2016. Initial results of the Beyond the Grid Fund for Zambia have shown that innovative results-based financing can be a powerful instrument in guiding, supporting and incentivising early private sector movers to accelerate market development and scale business ventures in frontier off-grid energy markets. By providing smart incentives for firms to provide high volumes of energy services over a defined period of time, such instruments can empower companies to rapidly mobilise private investment and scale operations for the mass market in markets generally perceived as too high risk.

Incentives and Procurement

The cornerstone of BGFZ is a public procurement approach to market-based electrification, in which private sector bidders offering the best “value for money” – capable firms with a credible business plan, high quality services and customer care, reaching as many customers as possible with the lowest demands on public finance – are awarded results-based contracts to deliver specified outcomes. These contracts have, in the Zambian experience, proven to be catalytic in creating new markets and attracting equity investment and impact debt (including crowdfunding), in addition to other forms of financing.

BGFZ provides for both early working capital – via start-up grants against milestones – as well as predictable results-based revenue streams toward the sustainable growth of a company – via scale-up results-based financing. In doing so, it bridges a key gap between early-stage innovation capital, such as that provided by challenge funds, and concessional-to-commercial capital provided by impact investors, development banks, DFIs and others.

Platform for Market Change

This approach in Zambia has also included significant technical assistance to support necessary internal reform and capacity building. Based on the actual transactions taking place under the awarded contracts, market risks are identified and addressed together with government, development partners, financial and private stakeholders.

Market Intelligence and Analytics

Finally, the programme collects and analyses critical data and information on deployment from contracted service providers, delivering a high degree of security in verification of results, and contributing to efforts to help market stakeholders improve investment and other development-related decision making.

Implementation of the First Round of BGFZ (Zambia I) began in July 2017; the four contracted companies currently surpass their set goals (when results are aggregated) and as of November 2019 have deployed over 150,000 Energy Service Subscriptions (ESS)¹ in total; reaching around 780,000 Zambians in rural and peri-urban areas.

From BGFZ to BGFA

Based on the promising results of the approach in Zambia, the Swedish Government is seeking to expand the approach to three additional countries with energy access challenges – Liberia, Burkina Faso and Mozambique – and deploy a second financing round in Zambia. As basis for rapid program expansion, REEEP has joined forces with the Nordic Environment Finance Corporation (NEFCO), an established international financial institution with significant expertise in managing trust funds on behalf of public donors. NEFCO will manage the envisaged multi-country BGFA, and REEEP will implement.

The first phase in this multi-country expansion is a six-month **Market Scoping** period, during which the BGFA team will explore the opportunities for applying the Beyond the Grid approach in the anticipated markets, synthesize a matrix of ongoing energy access programmes and initiatives, assess key challenges and risks, and develop high-level scenarios for market-based actions utilising the Beyond the Grid approach. The market scoping in Mozambique includes interviews with key stakeholders in the energy sector such as government actors, donors, energy access programs and financial institutions; as well as a private sector stakeholder consultation workshop.

The BGFA **stakeholder consultation workshop** for the private sector took place on the morning of 2 October 2019 at the Radisson Blu hotel in Maputo. 50 participants took part, representing companies from a large range of sectors including solar homes systems, mini-grids, clean cooking fuels, improved cookstoves, electronics distributors, consumer goods distributors, agri-inputs suppliers and others. The businesses included both companies already active in Mozambique and companies considering entering the market. NGOs and representatives of other energy access programmes also took part. The workshop agenda is available in Annex 1, a list of participating companies and institutions is available in Annex 2.

The workshop was divided into two segments, of which the first included a welcome note from the Swedish embassy, followed by an overview of the BGFA program by the REEEP representative. It was concluded with a presentation from Greenlight on the renewable energy market in Mozambique. The second segment was a participative exercise for which the participants were divided in four discussion groups – two groups focusing on Solar Home Systems; one group focusing on Bio-Energy and another group focusing on Mini-grids. The themes and questions discussed were as follows:

- Company Profiles and Business Activity
 - Reason for participating in the workshop
- Promising Business Models
 - Customer segments
 - Promising products and/or services
- Incentive models
- Productive use of energy
- Gender considerations

For full list of questions addressed in the discussion groups, please see Annex 3.

2 OPENING STATEMENTS

The event was opened by Henrik Rydberg, Second Secretary for Energy and Environment, who stressed the importance of off-grid energy for meeting the sustainable development goals and improving both economic development and quality of life.

Andreas Zahner (REEEP) presented the experience of the Beyond the Grid Fund in Zambia and outlined the thinking and process for expanding the Beyond the Grid Fund to other countries, including Mozambique.

Questions and comments from the floor in the opening plenary related to ensuring effective donor coordination; overcoming regulatory challenges (and working to improve the regulatory environment, in parallel to the financing); and supporting different sizes of businesses.



Figure 1: Mozambique Private Sector Stakeholder Consultation Workshop

3 MARKET ANALYSIS SUMMARY

Jonathan Gaventa (GreenLight) presented a market overview for off-grid energy in Mozambique, including the main opportunities and challenges. He explained that there is a large potential customer base for off-grid energy services that is currently under-served: over 4 million rural households in Mozambique lack electricity, and over 95% of rural households rely on firewood for cooking.

All three sectors reviewed – off-grid solar, mini-grids and improved cookstoves / clean cooking fuels – have the potential for significant market growth, and there is increasing market activity particularly in solar. In each of these sectors, business models will need to be tailored to the needs of rural consumers and consider limited disposable incomes. 72% of rural Mozambicans live below the international poverty line of \$1.90 per day. However, modern off-grid energy can replace current spending on batteries, kerosene, candles, charcoal and firewood.

Businesses in the off-grid energy sector face barriers including poor distribution infrastructure, regulatory complexity (particularly for mini-grids), and high import costs due to taxes and

tariffs. Targeted financing for market creation and scale-up does not remove these obstacles, but may help businesses to build capacity and to be better able to overcome them.

4 SOLAR HOME SYSTEM DISCUSSION GROUP

4.1 KEY DISCUSSION POINTS AND CONCLUSIONS

Two discussion groups focused on Solar Home Systems (SHS). The main outcomes of the discussions in both groups are summarized in this chapter. Participants discussed market challenges, specifically related to customs duties and Value Added Tax (VAT), irregular income streams from rural customers creating challenges for SHS repayments, poor mobile phone coverage and limited uptake of mobile money. Participants also discussed market opportunities, specifically the cooperation with local credit circles (*xitiques*) to leverage customer repayment, and potentially access valuable data to inform SHS business expansion to high potential areas. Companies highlighted that different types of companies need different types of financing, and that specifically small and early stage companies could benefit from donor support and incentive schemes. The discussion groups identified financing needs specifically related to inventory building, consumer marketing and staff training.

A discussion on productive use identified the following as relevant entry points in rural and peri-urban Mozambique: water pumps and irrigations systems for agriculture; freezers and solutions for cooling; and hair clippers. As for distribution of equipment, participants indicated the need to forge local partnerships with existing rural dealers that sells fertilizers and equipment; given the high cost of sales infrastructure and the slim margins in rural markets. One of the participants noted that it would be useful for SHS companies to understand better the opportunities in serving productive use clients. There are many “*barracas*” (small shops), for instance, that would benefit from lighting and e.g. the opportunity to store meat in a fridge. Many of these shops are run by women, so serving that specific sector would also benefit the advancement of gender related development objectives of the Government and of funders.

Participants indicated that targeting women was important specifically in relation to the promotion of small appliances for small businesses (like the *barracas*) and commercial places in rural and peri-urban areas; (i.e. businesses that women can easily develop). Another important gender aspect mentioned in the discussions was that women can be very good agents; however mobility aspects need to be considered as women typically need to work within their community and cannot not travel easily. It was noted that off-grid energy programmes could offer extra RBF incentives for providing energy access to women.

The key challenges faced by businesses offering solar-powered energy access solutions that were discussed include:

- **Payment collection issues.** Payment collection would be more efficient via pay-as-you-go (PAYG) mechanisms, but these depend on mobile network coverage, which is poor or absent in many rural areas. In addition, plans for network coverage expansion are not made public by telecom operators. Another constraint is the enormous amount of time required for SHS companies to get contracts signed with operators. Participants indicated that it takes an average of 4 months to sign a contract, and a further 6 to 8 months to integrate the systems.

PAYG technologies improve affordability of SHS, but it was also noted that businesses need to factor in the risk that even when they offer 1- to 2-year payment plans, their rural customers are likely to need longer than planned to pay back the full cost of their systems. Rural customers were said to often de-prioritize spending for lighting simply because they are not used to having lighting at all. Experience from other markets however seems to

indicate a 3-month time period for customers to get accustomed to having lights to the extent that it becomes a higher priority for household spending.

- **Credit profile of SHS customers.** In general, it is very difficult to assess customer default risk in rural and peri-urban areas. Mobile money companies generate credit profiles of rural customers that use mobile money; however, it is very difficult for SHS companies to access these.
- **Cost of SHS distribution.** The cost of SHS sales in rural areas is extremely high, because of logistical and other difficulties involved in serving these areas.
- **Fiscal issues.** Participants indicated that revenue recognition is a very bureaucratic process that is not clearly defined; e.g. the 1.5% limit of bad debt provision is very small (in other markets it is between 10 and 15%). There is also a lack of incentives for SHS companies such as exemptions from VAT and import duties, and these taxes add significant weight to the costs of goods sold (COGS).
- **Risk of market distortions.** The many grant-providing off-grid energy programmes coming into Mozambique are perceived to be posing a risk of “market distortion”. Unless they are well-coordinated, these grants could provide the wrong incentives to companies and just flood the market and lead to an unsustainable business environment.
- **Lack of start-up / incubation funding windows.** Small companies often do not have the capacity to be eligible and apply for the grant funding of off-grid energy programmes and incentive schemes. These small, early-stage companies need start-up funding and working capital.

4.2 RECOMMENDATIONS FOR BGFA

The groups had discussions on recommendations, not only for the design of an RBF scheme but also for improving the enabling environment and other key considerations:

Enabling environment recommendations:

- Remove VAT / duties and create fiscal incentives;
- Facilitate access to cell phone network coverage maps to incentivize last mile delivery;
- Incentivize telecommunication companies (Telcos) to put up towers in high-potential areas without coverage and set up mobile payment agent networks;
- Engage with Telcos and arrange unilateral credit score sharing with SHS companies to help improve risk scoring of potential SHS customers;
- Public communication of quality standards and expected performance of SHS products would create awareness of quality differentiators and help build trust in PAYG companies. Import quality standards would be needed to ensure the quality of products in the market;
- A government awareness campaign would be needed to highlight quality SHS as sound solution for providing access to electricity in certain areas; not just as a “provisional” solution;
- Develop data platform for identifying high-potential areas (coming soon from the Southern African Energy Program - SAEP) – indicating unelectrified households, network coverage and Mobile Money data;

Results Based Financing (RBF) scheme recommendations:

- Align RBF incentives with customer repayments/active customers to ensure companies act responsibly and sustainably over time in the market;

- Promote *xitique* (savings group) mechanisms/ Savings and Credit Co-Operative Societies (SACCOS) to promote access and also as an alternative to PAYGO schemes for the sale of SHS in rural areas;
- Ensure minimum warranty terms and related service provisions;
- Require companies to establish SHS call centres to provide technical assistance in local languages, learn about and respond to customer needs;
- Prioritize sales models that are accessible to women agents (selling within communities);
- Distribution of clean cook stoves with SHS could improve life expectancy and reduce time poverty of women in rural areas;
- Design the incentive scheme around long-term sustainability and avoid perverse incentives for companies to “flood the market and then disappear”;
- Support companies with data analytics tools and services. PAYG businesses are collecting a lot of data but rarely have the capacity to analyse it in a way that supports their growth;
- Take more upfront risk in financing the SHS companies in general and also provide incentives not based on results and actual sales. Results-based finance works as an incentive if companies have finance available to support the operations and service infrastructure required to achieve the sales. Marketing, inventory, training and business support systems were mentioned as some of the aspects that are hard to finance as an early stage company;
- Consider the role of local distributors in the overall market scaling efforts; as these local players are vital for many of the existing SHS players and potential new candidates;
- Use eligibility criteria and application requirements that are rigorous but easy to understand;
- Consider that high co-funding requirements will exclude many local companies that are not able to leverage a lot of finance;
- Consider guarantee instruments to complement the incentive scheme provided by BGFA. Tailored credit lines could be particularly helpful if they were flexible enough and accessible for SHS companies.

5 MINI-GRID DISCUSSION GROUP

5.1 KEY DISCUSSION POINTS AND CONCLUSIONS

The breakout group on mini-grids discussed several case studies of successful and unsuccessful projects in Mozambique and Zambia, including mini-grids linked to irrigation or operated as captive power systems. The lack of a clear regulatory framework is a significant barrier to the deployment of mini-grids, but the draft Electricity Law currently under discussion offers the possibility of de-regulating the sector and attracting new private investment. The role of the Mozambican Energy Fund (FUNAE) and different tariff models were also discussed.

Two mini-grid developers introduced their business models:

- One was technically a mini-grid but commercially all power was consumed behind the meter (electricity not distributed to customers). This is legally allowed but not necessarily appropriate for enhancing energy access for the rural poor.
- The other employed what was essentially a commercial and industrial model. Again, this is technically feasible and legally permissible, but does not fall within the broader definition of mini-grid in the context of BGFA.

Mozambican mini-grids fall within the domain of FUNAE, which is currently a major player, co-owner and decision-making body regarding all decisions on mini-grids. The group did not perceive this to be an efficient public-private sector partnership arrangement. In addition, FUNAE controls this sector in conjunction with the Mozambican National Utility (EDM), but

there are case studies showing that EDM has extended the grid into areas where it encroached upon an existing approved mini-grid.

5.2 RECOMMENDATIONS FOR BGFA

Mini-grids are expected to play a significant role in meeting Mozambique's energy access targets, and there is growing potential for increased private sector involvement (from the current low base). Most existing mini-grids have been developed by FUNAE, the national off-grid electrification agency and funded exclusively with public money. There is increasing interest from FUNAE for public-private partnerships for developing green mini-grids. The Government is developing legislation to create a licensing regime for mini-grids, which could further facilitate private sector participation, but this is not expected to be in place until mid-2020 at the earliest. Barriers include difficulties in charging commercially-viable tariffs, and coordination of projects with grid expansion. There is overlapping donor activity in this area, but there is scope to further incentivise market development if the range of instruments (equity, debt, grants) were to be increased. Apparently only a small portion of finance for ambitious mini-grid programmes is provided by existing donors.

Without a proper regulatory framework governing private sector investment in the mini-grid space, it will continue to be difficult to achieve market growth. Changes to the new electricity law have been drafted, and these seem to hold promise. It is recommended for BGFA to follow closely the development of the regulatory framework for mini-grids during its planning process. It was indicated by group members that under the current framework conditions, BGFA would work closely with FUNAE.

6 BIOENERGY DISCUSSION GROUP

6.1 KEY DISCUSSION POINTS AND CONCLUSIONS

The Bioenergy discussion group comprised six participants representing producers of briquettes, producers of improved cookstoves (ICS) and a business providing climate financing services (Clean Development Mechanism and Gold Standard).

Participants pointed to promising business models for briquettes and ICS targeting urban and peri-urban communities, especially in the context of rising charcoal prices. It was mentioned that the South of Mozambique (mainly Maputo and Matola cities) were specifically interesting for businesses as the price of charcoal there is almost twice as high as in the rest of the country (largely due to depleted forest resources in the region).

According to the participants, alternative biomass cooking fuels such as pellets and briquettes need to be priced competitively in relation to conventional charcoal, and need to mimic the packaging and even appearance of charcoal (in the case of briquettes). This was mentioned as a mechanism to facilitate a gradual transition to these fuels. Another strategy that was mentioned focused on refilling stations for alternative biomass cooking fuels which would reduce the need for packaging. These refilling stations could also sell to resellers of cooking fuel that cater for customers buying small quantities at a time. With regards to marketing and publicity, it was suggested that community meetings, road shows and door-to-door visits are the most common means. When budget permits, television and radio advertising (awareness raising) reaches the greatest numbers and is most effective (as target customers are typically urban dwellers with access to these media means). Productive uses of alternative cooking fuels include use by restaurants, hotels, public institutions and even as bio-char (fertilizer). For ICS, the productive use targets mostly informal food vendors which currently use charcoal to prepare meals at informal markets across urban areas.

With regards to financing, payment in instalments, with mobile money and through *xitiques* (informal savings groups) are all ways of providing suitable consumer finance. Companies involved in ICS and clean fuels have different financial needs, including access to working capital and bank loans. Participants emphasised the importance of the sustainability of companies once subsidies have been withdrawn.

Challenges faced by companies in the bioenergy sector include fierce competition from the informal charcoal market; limited customer loyalty to the products; and limited sources for project financing. Bank loans in Mozambique come with high interest rates and are rarely made available to businesses that the banks are not familiar with.

6.2 RECOMMENDATIONS FOR BGFA

The participants agreed that few companies are active in the bio-energy sector in Mozambique, and support will be needed to grow the sector. Alternative cooking fuel companies prefer to receive financing in the shape of working capital to invest in machinery and distribution operations. ICS producers on the other hand stated a need for blended finance that would include commercial financing (debt/equity) and grant-based financing, either results-based or as working capital.

Auxiliary / Non-financial support that could benefit the companies includes regulatory reform, knowledge sharing, support with tax exemption on import of ICS, market studies and public awareness raising campaigns.

7 CONCLUSIONS AND NEXT STEPS

The inputs and recommendations gathered from participants during the workshop will feed into the design of the BGFA programme in Mozambique. Overall, several key lessons can be drawn from the workshop:

- There is significant private sector interest in the BGFA approach, as evidenced both by the number of participants and the high quality of the discussions;
- Companies stressed the importance of donor coordination in the off-grid sector, but also stressed that “Mozambique is a big place” with a large range of different financing needs;
- The challenge of consumers’ ability to pay and regulatory barriers are key concerns, nevertheless companies see significant growth potential in coming years;
- There are a number of smaller companies active in the off-grid energy space that are not currently in a position to compete for RBF funding but have different financing needs. Donors and government should consider how these companies may be supported to scale up;
- The long-term sustainability of the market was a key concern for many companies, as was the risk of market distortion. Financing schemes need to be designed to enable companies to continue to serve the market long after the initial subsidies have been withdrawn;
- BGFA could provide additional value by facilitating partnerships between international technology suppliers / developers and financiers on the one hand and local companies on the other hand.

ANNEX 1: WORKSHOP AGENDA



**BEYOND THE GRID FUND FOR AFRICA (BGFA)
- MOZAMBIQUE**

**Private Sector Stakeholder Consultation Workshop
Wednesday 2 October 2019, 08:30 – 13:00
Zambeze Conference Room, Radisson Blu Hotel,
141 Av. Marginal, Maputo, 1100, Mozambique**

Agenda

8.30 – 9.00	Arrival and registration
9.00 – 9.10	Welcome Embassy of Sweden
9.10 – 9.20	Introductions and Overview of the Workshop Programme Greenlight - Iara Melo
9.20 – 9.50	Introducing the Beyond the Grid Fund for Africa REEEP – Andreas Zahner <ul style="list-style-type: none"> - The BGFA concept - Lessons learned from private sector market creation in Zambia - Expanding the Beyond the Grid Fund to other countries - Timeline for Mozambique - Q&A
9.50 – 10.10	Mozambique Market Analysis Overview Greenlight – Jonathan Gaventa <ul style="list-style-type: none"> - State of play for off-grid energy - Overview of solar home systems, mini-grids, ICS/clean fuels
10.10 – 10.30	Coffee Break
10.30 – 12.00	Breakout Discussions in Groups <ul style="list-style-type: none"> - Exploring the state of the market on solar homes systems, mini-grids and improved cookstoves / clean fuels - Opportunities and barriers to growth - Specific financing needs
12.00 – 12.45	Report Back from Breakout Groups <ul style="list-style-type: none"> - Key challenges and opportunities - Recommendations for BGFA programme
12.45 – 13.00	Conclusions and Next Steps REEEP – Andreas Zahner
13.00	End of Workshop

ANNEX 2: STAKEHOLDER LIST

(Only the names of the institutions of the 50 participants are indicated)

	ORGANISATION
1	Epsilon Investimentos Sa
2	SolarWorks Mozambique
3	Ecoplanet Mozambique Ida
4	Magna
5	Interprete
6	United Purpose
7	Kwame Supplies
8	Manica freight services
9	Speed+
10	Dynamiss Trading
11	Carbonsink
12	Swedish Embassy
13	KFW
14	Swedish Embassy
15	Chabango Comércio Geral
16	USAID Southern Africa Energy Program
17	ENI-Mozambique
18	Digitech, Ida
19	Solboxeenergia
20	Fenix
21	Greenlight
22	Imbe css
23	Fenix Intl
24	Proconsultores, Ida
25	Ignite solar
26	Ignite solar
27	Genius Investment Group SA
28	Logos Industries
29	Protea consulting
30	SNV
31	TPLA/MWE
32	Pedra a pedra
33	Mozcarbon
34	Carbonsink
35	AMVIRO

36	ADC, SA
37	Solar works Mozambique
38	EES
39	Virunga power
40	Swissolar
41	Simsolar
42	EES
43	Mozcarbon
44	Embassy of Sweden
45	Greenlight Planet
46	SAEP
47	SAEP
48	SNV
49	Dadhu consultec
50	Casa do Agricultor

ANNEX 3 - DISCUSSION GROUP QUESTIONS

MINI-GRID GROUP

To open the discussion: detailed round-table introductions - facilitator to ask each participant to briefly introduce (asking companies specifically to elaborate a little more on points one and two below)

- Company focus and scope of activities
- Distribution model
- Regions of operation
- Reasons for participation in the workshop

Discussion topics:

(Priority on topics 1 and 2 – with flexibility on the other topics depending on the group interest and dynamics)

1. Market challenges and opportunities
 - What are the specific market barriers and challenges for mini-grid companies in Mozambique?
 - What are the opportunities and related enabling conditions?
2. Incentive Models (in the context of financing needs)
 - What could be incentive models to help mini-grids get to scale?
 - What is the right incentive level and how should it be targeted and deployed?
 - How could a BGF window complement other financing programmes in Mozambique?
 - What other types of financing required for rapid deployment of mini-grids? e.g. concessional debt/equity, from where could this come from?
3. Productive use:
 - How should we define “productive” (in BGFZ in Zambia productive use was defined as “increased income as a result of energy service”)
 - What productive use clients constitute a specific opportunity for the companies?
 - What productive use is relevant for mini-grids in Mozambique?
 - What is the level of energy demand?
 - What ancillary support (other than funding) would be necessary / useful in promoting productive use?
4. Energy Efficiency:
 - How can energy efficiency developments be taken into account?
 - How can improved levels of energy efficiency be specifically incentivized by BGFA?
 - How can value of efficient consumption be captured by mini-grid operators without jeopardizing revenues?
5. Gender
 - What opportunities do you see to target women as consumers?
 - What opportunities do you see to increase women’s employment and economic activity in this sector?
 - What strategies and what financing is needed to realise these opportunities?

SHS GROUP(S)

To open the discussion: detailed round-table introductions - facilitator to ask each participant to briefly introduce asking companies specifically to elaborate a little more on points one and two below):

- Company focus and scope of activities
- Distribution model
- Regions of operation
- Reasons for participation in the workshop

Discussion topics:

(Priority on topics 1 and 2 – with flexibility on the other topics depending on the group interest and dynamics)

1. Opportunities for scale
 - What are the specific opportunities and barriers for (market entry and) growth in Mozambique?
 - How can incentives be structured in a way that helps SHS companies to get to scale?
 - How could a BGF window complement other financing programmes in Mozambique?
2. Incentive models to penetrate remote / rural areas?
 - What is the opportunity for SHS companies to enter remote / rural areas and/or customers with low ability to pay?
 - What could be incentive models to penetrate deep rural areas? What is the right incentive level and how should it be targeted and deployed?
3. Productive use
 - What productive use is relevant for SHS companies in Mozambique? What productive use clients constitute a specific opportunity for the companies?
4. Energy Efficiency
 - How can energy efficiency developments be taken into account?
 - How can improved levels of energy efficiency be specifically incentivized by BGFA?
5. Deepening the value chain – how to engage/involve local players?
 - What is the opportunity for SHS companies to work with local service providers? How can BGF incentivize this specifically?
6. Gender
 - What opportunities do you see to target women as consumers?
 - What opportunities do you see to increase women’s employment and economic activity in this sector?
 - What strategies and what financing is needed to realise these opportunities?

BIOENERGY/COOKSTOVES/CLEAN FUELS GROUP

To open the discussion: detailed round-table introductions - facilitator to ask each participant to briefly introduce asking companies specifically to elaborate a little more on points one and two below):

- Company focus and scope of activities
- Distribution model
- Regions of operation
- Reasons for participation in the workshop

Discussion topics:

(Priority on topics 1 and 2 – with flexibility on the other topics depending on the group interest and dynamics)

1. Promising business models for EE cook stoves and HH/SME level biogas;
 - What customer segments constitute a specific opportunity for companies (urban, rural, peri-urban / men and women)?
 - What are promising product and service offerings? How to package product offering(s) as a service?
 - How do they meet the needs of women and men?
 - What is the potential for scale? What are the barriers for scale?
2. Incentive models
 - How can incentives be structured to help companies to get to scale?
 - What is the preferred incentive mechanism, how can it be targeted and deployed; link to carbon finance?
 - How can incentives be structured to help companies to get to scale? How can BGF window complement other financing programmes in Mozambique?
 - What ancillary support (other than funding) would be necessary / useful?
3. Productive use
 - What are potential productive applications (e.g. farm-level biogas generation)?
4. Gender
 - What opportunities do you see to target women as consumers?
 - What opportunities do you see to increase women's employment and economic activity in this sector?
 - What strategies and what financing is needed to realise these opportunities

ANNEX 4 - PRESENTATION OF THE BEYOND THE GRID FUND AFRICA BGFA

Accessible on the Beyond the Grid Fund Arica website:

<https://beyondthegridfund.africa/2019/09/30/stakeholder-workshop-maputo/>

ANNEX 5 – MOZAMBIQUE – OFF-GRID ENERGY MARKET ANALYSIS OVERVIEW (GREENLIGHT LDA)

Accessible on the Beyond the Grid Fund Arica website:

<https://beyondthegridfund.africa/2019/09/30/stakeholder-workshop-maputo/>