



Uganda Off-Grid Energy Market Accelerator

ANNUAL IMPACT REPORT 2018



IN PARTNERSHIP WITH:

SCALING
OFF-GRID
ENERGY:
A GRAND CHALLENGE
FOR DEVELOPMENT



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EXECUTIVE SUMMARY

The Uganda Off-Grid Energy Market Accelerator (UOMA), implemented by Open Capital Advisors in partnership with the Shell Foundation, USAID, Power Africa and DFID, completed a second successful year establishing itself as a credible entity and central stakeholder in the scaling of off-grid energy access in Uganda. Through this pioneering concept, we are coordinating industry actors, releasing new research & insights, and driving several high-impact interventions to reduce key market barriers to scale.

UOMA serves a distinct function in the Ugandan market by 1) being independent & neutral, 2) having a local team with responsive capacity focused on results, and 3) providing access to cross-sector stakeholders. This unique function and scope ensures that UOMA complements and even accelerates other Ugandan off-grid energy programs and initiatives.

While UOMA achieved many of its targets in the 2017 pilot year, we acknowledge that more is still needed to address off-grid energy market gaps. For this reason, UOMA planned a three-year extension (through end-2020). Additionally, this market acceleration model is now being pioneered by the Shell Foundation and its other partners in additional African nations including Rwanda, Ethiopia, and Nigeria.

In 2018, UOMA continued to achieve substantial progress and learnings in reducing market barriers through direct initiatives by providing deep, targeted expertise to stakeholders. More detailed updates and lessons across each of these initiatives are provided in this report. Additionally, UOMA achieved a significant governance-related milestone by successfully commissioning and convening an Advisory Board to provide governance to our work. We continue to receive guidance and direction from this cross-stakeholder group comprising of senior members of relevant public and private sector agencies and development partners.

To hold ourselves accountable for our ambitious goals and to enable us to track our progress, we have established clear key performance indicators (KPIs) and committed to reporting against our progress regularly. For each of UOMA's initiatives, specific near-term, mid-term and long-term KPIs have been identified for 2018 and future years to ensure the market reaches a critical 'tipping point' in acceleration, whereby an entity like UOMA will no longer be needed for the growth of off-grid energy access in Uganda. This report serves as our first annual progress update against these KPIs. While UOMA achieved many of the targets set, we saw that market data to compare KPIs is hard to obtain. However, as we continue to help create data systems through our work, we are seeing some success in this area as well, which will improve our ability to track KPIs over time.

In 2019, we look forward to expanding our work, engaging with more stakeholders, and advancing our impact to accelerate the growth of off-grid energy in Uganda, and enable universal access.

UOMA'S GOAL IS TO ADVANCE OFF-GRID ENERGY ACCESS IN UGANDA



IMPACT HIGHLIGHTS



Core Initiatives



1500+
TA hours to local banks and operators



20+
technical experts deployed to support **7** innovative pilots



20k+
connections achieved through pilot support



300k+
potential connections at scale from pilots



100+
interactions (beyond core initiatives)



above target
26%
Net Promoter Score*



60% believe UOMA positively facilitates sector deals*



87% feel UOMA helps to improve market transparency*

“This is very helpful. I have never seen all of this information in one place.”

- Ministry of Energy



5000+
Market Map & insights viewings

“I have immediately shared this with my R&D team, so they can begin researching the areas you highlighted.”

- CEO of SHS operator

“I didn’t know all of these donor plans were running at the same time. It is very helpful to have this laid out.”

- Energy access specialist

*Note: scores derived from UOMA’s annual stakeholder survey results

A photograph showing a building under construction. The building has dark brown shingles and white trim around the windows and doors. A red cable is visible running along the side of the building. In the foreground, a solar panel is mounted on a wooden pallet. Two men are standing on the dirt ground in front of the building. The sky is blue with some light clouds.

“UOMA plays a unique, active, and important role in coordinating the off-grid sector in Uganda.”

Local private sector association



INTRODUCTION

UOMA (the Uganda Off-Grid Energy Market Accelerator), founded in 2017, is a dedicated and neutral intermediary, focused on accelerating the growth of off-grid energy in Uganda to enable universal energy access. It is an initiative created and jointly supported by USAID, Power Africa, DFID, and the Shell Foundation under the Scaling Off-Grid Energy (SOGE) Grand Challenge for Development.

Market overview

Today, over 30 million Ugandans live without access to modern energy. Bringing power to these households has become a central focus of the Ugandan government’s development agenda, with frequent discussion on reaching ‘universal energy access’ in the coming decades. With population growth projected at roughly 3% per year, the Ugandan energy market is expected to connect 5 million new households by 2030 – a significant addition.¹²

The Government of Uganda is extending and intensifying the national grid, but projections indicate that this cannot keep pace with the country’s connectivity growth needs, nor efficiently serve the rural population who are more geographically dispersed and poorer than their urban counterparts. Off-grid energy presents a viable alternative to close this energy gap and serve the rural and poor populations in Uganda. With rapidly improving technology and innovations in financing, the attractiveness of off-grid energy continues to rise.

As a result, Uganda has seen a proliferation of off-grid energy companies enter the market – today there are over 200 such businesses and Uganda is the third largest market for solar products globally with cumulative sales estimated at over 1.5 million units.³ However, scaling this market comes with its own unique challenges and the country lacks a centralized and coordinated strategy focusing on off-grid.

¹ Ekouevi K. et al., 2017 “Overview: State of Electricity Access report”, International Bank for Reconstruction and Development / The World Bank Washington, D.C. USA

² Lighting Global, Dalberg Advisors and Global Off-Grid Lighting Association (GOGLA), 2018, “Off-Grid Solar Market Trends Report 2018”, International Finance Corporation, Washington, D.C. USA

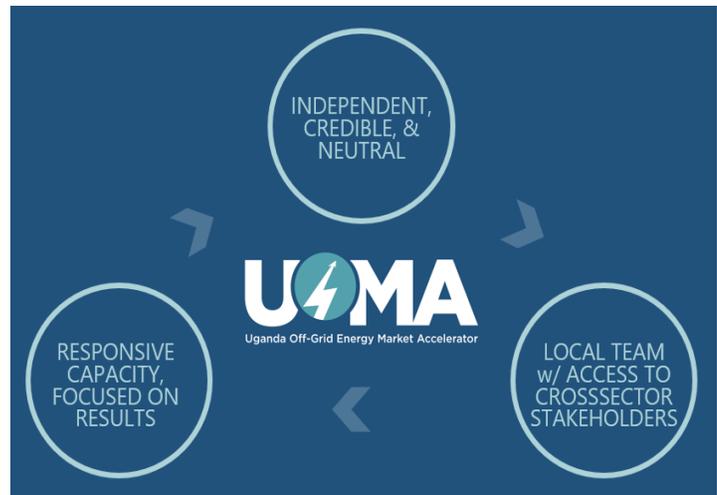
³ Uganda Bureau of Statistics, 2017, “Uganda National Household Survey 16/17”, Uganda Bureau of Statistics, Kampala Uganda

UOMA differentiators

UOMA is an independent, neutral organization focusing on accelerating the growth of off-grid energy in Uganda. UOMA serves a unique function in the market across several facets:

Independent, credible, & neutral:

Driven by our transparent approach, we provide proven and expert support to a range of stakeholders ranging from local off-grid companies, to corporate banks and development partners.



Responsive capacity, focused on results: We have access to a diverse pool of experienced local and international professionals and senior experts in off-grid energy, who bring a mix of project management and technical expertise, and are brought in for involvement on select workstreams as necessary, driving towards rapid results.

Local team with access to cross-sector stakeholders: Through our comprehensive industry insights, a local team based in Kampala and our Advisory Board, we have quickly built relationships and achieved immense buy-in from the government, private sector and development partners, enabling us to connect stakeholders and present a diversity of perspectives. More details on our team and governance structure are provided in the Appendix.

Today, UOMA has established itself as a credible entity and central stakeholder in the scaling of off-grid energy in Uganda, uniting the public and private sectors, and attracting international support.

We accelerate the off-grid energy market in Uganda through:

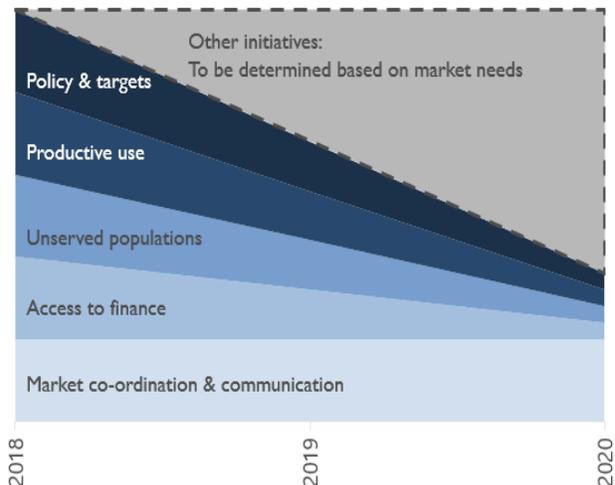
- **Research & Insights:** providing data, analysis, and insights to businesses, investors, development partners, and policy-makers
- **Coordination:** coordinating industry actors and resources to increase efficiency
- **Direct Interventions:** driving several high-impact priority initiatives to reduce key market barriers

Initiatives

In our first year (2017), we established credibility and developed cross-sector relationships by researching and releasing a comprehensive Market Map on the industry. This enabled us to achieve immense traction and buy-in from the government, private sector and development partners. Using this market map, we identified barriers to scaling the off-grid market and launched work on several high-priority initiatives based on these gaps.

UOMA must be adaptive to the changing needs of the market – focusing on overcoming new barriers as they arise and coordinating with new stakeholders as they emerge. The goal is for UOMA to maintain a relatively consistent level of capacity over the next three years, but to focus resources on areas of greatest need and impact. The objective is that as UOMA empowers other organizations on certain workstreams, capacity shifts to new areas. In 2018, our work focused on the following initiatives:

Illustrative level of effort for UOMA



Access to finance: Increase access to local currency debt finance for private sector actors in off-grid energy, bridging a critical working capital shortfall and currency mismatch, and enabling operators to increase affordability of units.

Unserved populations: Reduce barriers to better target unserved populations in Uganda, improving access for some of the hardest-to-reach and most in need communities.

Productive use technology: Support industry to test & validate productive-use technologies that can achieve economic benefits for off-grid Ugandans while growing energy demand.

Government policy and targets: Support the public sector to create effective policies and an enabling environment to increase off-grid energy uptake in Uganda.

Communication and coordination: Enable more effective communication and coordination in the off-grid energy sector in Uganda, resulting in better resource allocation and accelerated progress in achieving universal access.

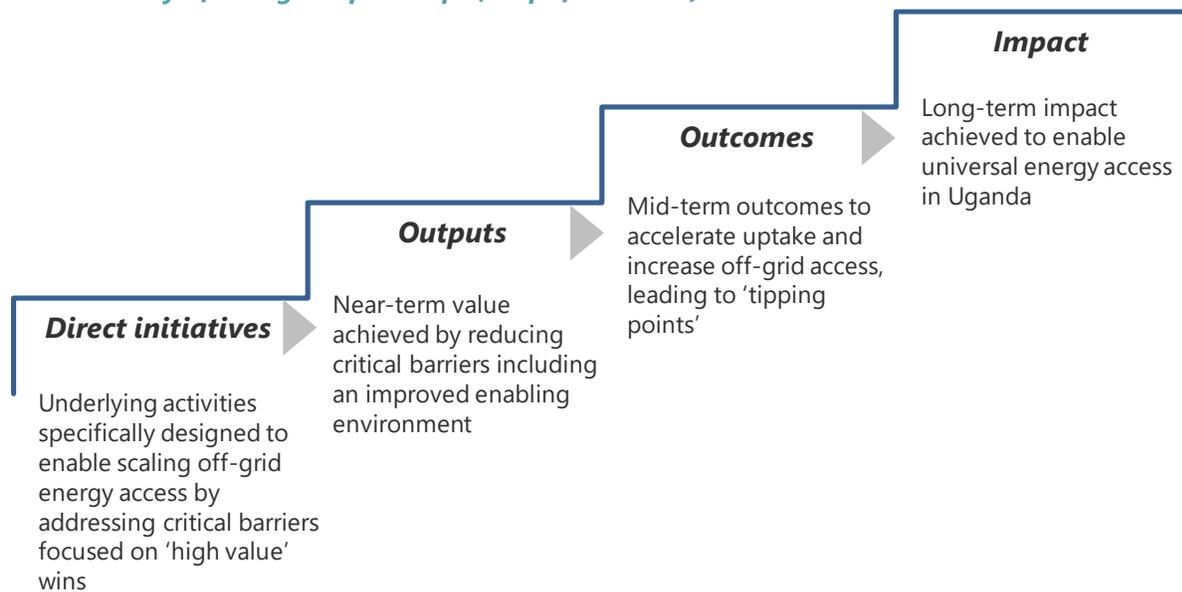
2018 was a momentous year as we solidified existing work and achieved substantial progress and learnings in reducing market barriers by providing deep, targeted expertise to stakeholders. More detailed updates and lessons across each of these initiatives are provided in the sections below.



THEORY OF CHANGE

Co-developed and approved by UOMA's Advisory Board, who bring relevant international and local expertise, UOMA's theory of change model is designed to address specific market barriers critical to accelerating Uganda's off-grid access rate. As seen below, this step approach is how UOMA seeks to effectively measure progress in the near to mid-term and create accelerated market impact in the longer term.

UOMA theory of change step concept (simplified visual)



For each of UOMA's initiatives, specific programmatic milestones have been identified for 2018 and future years to ensure the market reaches a critical 'tipping point' in acceleration, whereby an entity like UOMA will no longer be needed for the growth of off-grid in Uganda.

UOMA has set key performance indicators (KPIs) to measure performance against overall objectives, on a near-term (outputs), mid-term (outcomes) and long-term (impact) basis. This is described in tables found in the Appendix. These metrics were reviewed and approved at the first Advisory Board meeting, held in May 2018.

Reporting

UOMA can only succeed if it wins and maintains credibility from a wide range of stakeholders involved in the Ugandan market and, as a result, can partner closely to support multiple initiatives effectively. For this reason, it is critical for us to not only achieve results, but to track our impact and communicate results frequently. In this regard, UOMA commits to report against progress and KPI metrics on an annual basis and to publish this document publicly.



PROGRESS ACROSS INITIATIVES

Initiative 1: Access to finance

In 2018, we saw moderate progress and learned many lessons in our work to unlock local debt for the off-grid energy market in Uganda.



Building off traction in 2017 where UOMA offered market opportunity and credit risk training to 14 Ugandan banks, our focus in 2018 was targeted at deepening relationships and providing tailored technical assistance to local banks.

Tailored technical assistance for banks

We held extensive consultations with banks in Uganda and identified 4 that were prime candidates for tailored technical assistance. The banks have \$10m+ in committed funding and facilities towards energy lending, the vast majority of which is sitting unutilized today.

We recognize that each bank is unique and that their interest and enthusiasm in the off-grid market is tiered and based on their understanding of the sector and experience lending in the market (see figure below). As a result, we tailored our support for each bank, focusing on their biggest barriers to off-grid lending.

Banks can roughly be characterized into two groups: those with limited knowledge of the off-grid space, and those with more experience. Some banks in the former category may have some consumer financing for off-grid products but no products for businesses, whilst others may have no off-grid products whatsoever. These banks were all interested in the sector, and for this segment in 2018 UOMA focused on:

- 1) providing training to the management, credit and product teams and
- 2) reviewing alignment of off-grid lending to the bank's current portfolio and long-term strategy in order to identify synergies with off-grid energy.

For such banks, we acknowledge that the process will be slow, and that the banks are unlikely to begin lending substantially to the sector in the next 1 to 2 years, however, we believe this early capacity building lays an important foundation to unlock local debt capital in later years.

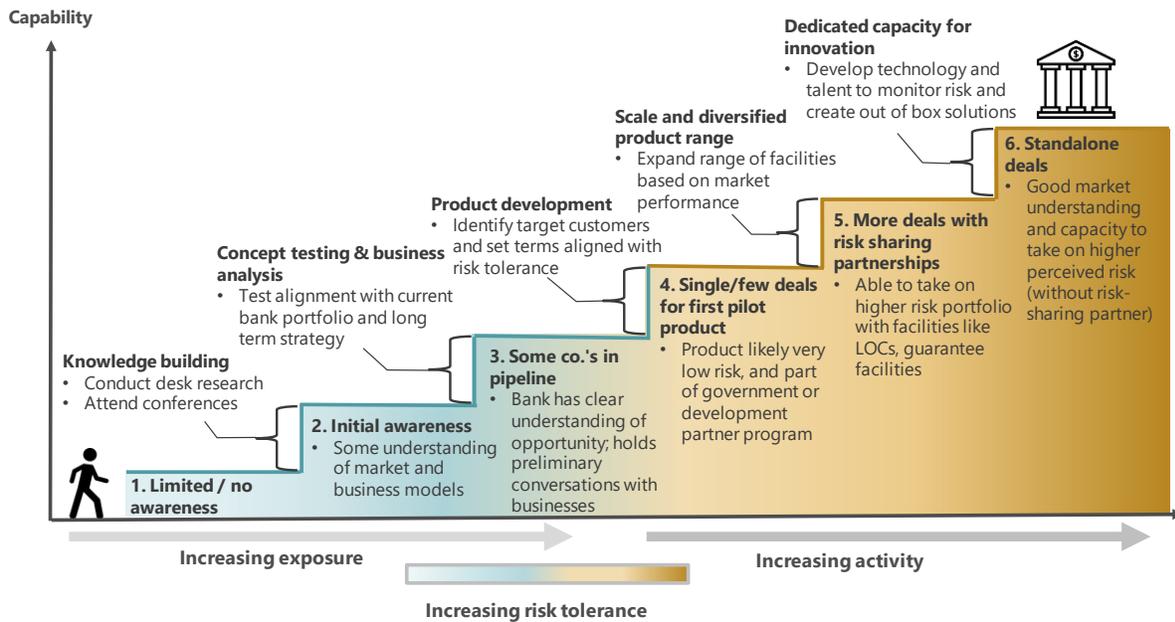
Other banks have more experience in off-grid energy. Some have facilities for both consumers and businesses, but traction has been slow to date. Many have risk-mitigating facilities from DFIs or development partners, though few deals have involved these facilities, and some banks had no utilization of them whatsoever. For these banks, our support has focused on:

- 1) refining their strategy and identifying the best place(s) for them to compete in the energy value-chain,

- 2) improving their technical capacity to better understand the risks and mitigants in off-grid lending in order to streamline and improve their due diligence process, and
- 3) identifying potential pipeline opportunities to test the new due diligence process.

These banks are ready to engage more deeply in the off-grid energy sector. They already have some products and capabilities developed in-house but are currently looking for more opportunities to deploy their capital. Some issues cited are a lack of suitable deal pipeline and a lack of off-grid energy technical know-how within the banks. Furthermore, there is a mismatch between the guarantee facilities and the potential deals within the sector. For example, requirements for a lendee’s market traction may be too high for players in the market to obtain the level of financing available, or conversely the proposed tickets sizes of loans may not be large enough for companies that do meet the requirements on traction.

Tiered off-grid energy capability and activity for banks



In our experience, banks that have been willing to engage in technical assistance, are interested to learn more and, in most cases, excited to consider deals. However, all banks also have lengthy processes to get buy-in, which we have helped them navigate but, which cannot be rushed.

That said, we have begun to see some traction in the sector. In 2018, one local bank with which we had extensive conversations and training sessions lent a combined total of approximately 600 M UGX (154,000 USD) to at least 2 indigenously owned and operated off-grid energy companies in Uganda. Therefore, in regard to number of debt deals, we were not far from our target. However, when considering the total value of these deals, we were far from reaching our goal of \$1M.

The increased technical assistance and other support to banks is increasing the interest in off-grid energy, but we are not yet seeing that interest result in increased deals. Though this is in part a function of a lack of technical capacity on the part of banks, there is also the aforementioned mismatch between the financing available within the sector, and the companies looking to receive financing. To reach UOMA’s targets for local debt, both supply and demand will require bolstering.

Support for non-bank lenders

In addition to our work with banks, we also provided support and guidance to non-bank lenders. In 2018, we interacted with 10+ funders with \$50m+ in committed or proposed funding for off-grid energy, some of it denominated in local debt financing. For these funders, our support has included:

- 1) highlighting existing gaps in the market with regards to access to finance
- 2) brainstorming or refining fund strategy
- 3) identifying potential pipeline or partners in market

These lenders have shared very positive feedback, noting that UOMA made a difference in providing current, actionable information on the local market that allowed them to advance transactions and build internal buy-in from their risk and investment committees. We have found that building these relationships and providing ad hoc calls, sharing materials (such as our Market Map), and providing linkages to other lenders, companies, and banks provides extensive value to these lenders.

Closing the local finance gap

We are excited by the progress made thus far on this initiative though significant strides must still be made to reach our ultimate goals. The sector saw increased interest on the part of lenders, and some resulting traction in deals. UOMA has committed to further support the sector following the positive feedback received from banks and third-party actors in the space. We will continue to provide tailored TA and share lessons learned from engaging with banks. Continued TA is vital for the long-term funding goals of this sector, though impact in the short-term will be limited unless we see more attractive deals, greater support from non-bank lenders, and facilities that are more adequately allocated for the current state of off-grid energy in Uganda. To address the issue of suitable pipeline for lenders, we plan to support the ‘demand’ side of the access to finance equation in 2019 by supporting more operators to get ‘investment ready’ so they too can access this local debt. UOMA has already prepared a pipeline database of potential borrowers and will be uniquely convening an off-grid energy matchmaking event between financiers and operators in early 2019 to further boost potential sector lending opportunities.

Initiative 2: Unserved populations

In 2018, we continued to conduct and share pioneering research and test scalable, innovative hypotheses to reach unserved populations by providing direct support to pilots.

Our work in unserved populations spanned two facets – 1) conducting research and deriving insights about what innovations are required to reach the unserved populations in Uganda and 2) directly supporting cutting-edge pilots with off-grid operators to test new solutions.

Research and insights

In 2017 we focused on researching and consolidating available information on the unserved populations from government agencies and private sector operator data and statistics. Our research called out several themes around affordability, distribution and awareness.

In 2018, we continued to develop research and insights to better understand and segment target populations, and therefore better design potential strategies to serve.

Particularly, this year’s insights were focused on four key research areas:

- | | | |
|--------------------------------|----------|--|
| Research & insights | 1 | <i>Unserved Populations Framework</i> – Looking at affordability, awareness, and access as key barriers, designed and published a framework to improve sector understanding |
| | 2 | <i>Models to increase consumer awareness</i> – Authored report on how to effectively engage local communities to drive awareness of SHS products |
| | 3 | <i>Insights from Northern Uganda</i> – Conducting market research to better define demographics and challenges of unserved communities in Northern Uganda |
| | 4 | <i>Digital financial services</i> – Performing landscape analysis of uptake in digital financial services and identifying new business models to increase energy access |

We shared these materials with thousands of readers locally and internationally, via our newsletter, website, presentations and partners.

“**UOMA’s research and insights are so rich in content and reader-friendly, I’m always looking forward to the next release to better inform our off-grid strategies.**”

-- Development partner

Pilots with operators

In addition to our research work, we are supporting pilots with operators to test hypotheses and innovations on reaching new populations. In 2018, the focus of our pilots under this initiative has been in targeting new populations via operators.



Raising **consumer awareness** through grassroots campaigns



Conducting **distribution and pricing** research to better serve Eastern Ugandan households



Increasing distributed energy connections by **leveraging SACCOS**



“UOMA’s hands-on support for our pilot has been effective and much-needed...together with their technical expertise, local networks and site visits we’ve been able to progress much faster than expected.”

Photo credit: UOMA

We acknowledge that affordability continues to be an immense problem for large portions of the population, and that at some juncture, direct consumer subsidies will almost certainly be necessary to reach the base of the pyramid. However, our research illustrates that there are additional innovations possible to reach new populations through commercial means. Through our pilots, we have seen operators who are very open to testing new strategies and ways to serve hard-to-reach populations. This has directly led to new connections achieved, which is a primary goal, as well as strategies to target many more connections in the coming months and years. We have supported this spirit of innovation but have also been careful to ensure pilots align with the business’ overarching goals, to ensure businesses remain committed to implement any recommendations made. Whilst the goal is to reach universal access, we must remain cognizant of the need for the strategies to be commercially viable and enable operators grow their businesses.

Through the pilots we have been able to validate our research hypothesis that innovations can lead to additional commercial connections. To-date, our

work with pilots have resulted in an additional 20,347 new connections with households and micro-enterprises. Additionally, the strategies in the pilots have identified a further 305,000 new connections at scale.

20,000+
new connections from pilots

300,000+
new connections projected from pilots

Initiative 3: Productive use technology

In 2018, we continued to support pilots for technologies and business models identified in earlier UOMA research

In 2017, UOMA released a report on productive use technology, outlining the most promising technologies and use cases for Uganda. The research was ground breaking for the market and has since been used as a reference document for many programs and financiers looking to explore the sector.

In 2018, we shifted our focus to supporting several operators to conduct innovative pilots focused on testing the commercial viability of productive-use technologies in rural applications. Our work with productive use pilots resulted in strategies to reach 100,000+ connections at scale. Specifically, our pilots focused on four value chains and topics:

	Irrigation	Assessing market for solar pumps and commercial viability for solar irrigation
	Dairy cold chain	Piloting business model for solar refrigeration products
	Maize and rice	Conducting survey work with farmer groups in Eastern Uganda to support market entry for solar-powered milling machinery
	Fishing	Testing mini-grid business model with ice-maker serving as anchor client on Bukasa Island



For 2019, we have an active pipeline of additional businesses looking to receive support from UOMA on how to roll out a productive-use appliance as part of their product offering. Further, several investors and financiers have requested support in form of data, brainstorming and participation workshops. This reinforces that there is continued need for research and insights in the space to spur innovation.

Summary of pilots supported in 2018



Initiative 4: Government policy

Through our extensive engagement with government in 2017, it became increasingly apparent that there were opportunities to support policy change and that UOMA was uniquely positioned to play a neutral and analytical role in this matter. In 2018, our goal was to directly support the public sector to create effective policies and an effective enabling environment to increase off-grid energy uptake in Uganda. To do this, UOMA both provided input on ongoing government processes and conducted our own analysis.

Input to government documents and activities

The Energy Policy is currently being revised, with the target to have it approved and implemented in 2019. This document will play a central role for the coming decade in Uganda. While the previous Energy Policy largely ignored off-grid energy, the government has highlighted a desire to more meaningfully include off-grid energy in the new policy, and are eliciting stakeholder input, including UOMA to provide technical expertise. Simultaneously, the Rural Electrification Agency (REA) has also commissioned the development of the Off-Grid Strategy to serve as an addendum to the Rural Electrification Strategy and Plan (RESP). This strategy will be presented to the Government cabinet, highlighting the significant role that off-grid energy will play in the short to medium term to ensure that Uganda meets its electrification goals.

At the request of the President's office, the Rocky Mountain Institute put together a paper examining options to increase demand for energy in Uganda. UOMA were consulted for this work.

In addition, the UOMA team provided input to the Uganda Solar Energy Association's (USEA) position on a paper on the status of taxation in Uganda that was subsequently presented to URA and resulted in USEA being able to offer member organizations exemption letters to avoid taxation on their batteries. UOMA is also part of the Energy Africa Compact Policy working group -- the group is finalizing the certification process for solar technicians, which will be recognized by the Ugandan Government.

Research and insights

Working in partnership with DFID, we recently released a fiscal policy analysis to inform solar home system tax and subsidy recommendations for the Government of Uganda. The objective of this analysis is to provide recommendations for the Government on how fiscal policy can be utilized to meet the targets and plans highlighted in the Off-Grid Strategy. This study analyzes the current policies, evaluates global practices, conducts a cost-benefit analysis, and makes recommendations to inform the decision-making process of policy makers in Uganda with regards to tax and subsidy options that could accelerate the uptake of solar home systems and contribute to the targets set out in the Off-Grid Strategy by the Rural Electrification Agency.

The goal is to convene stakeholders in early 2019 to further discuss the results of our findings and discuss the path forward on implementation.

Initiative 5: Communication and coordination

At the beginning of 2017 we released our Market Map on the off-grid energy space in Uganda. This quickly became regarded as the preeminent source of information on the market and has been widely utilized by local and international stakeholders. The off-grid space in Uganda is quickly changing, and in order for stakeholders to remain current and relevant, there is need to consistently disseminate information and coordinate efforts in the market.

While we had initially considered ‘communication and coordination’ a small bi-product of our work, we quickly realized that it was far more valued, important and time-consuming than we had imagined. As a result, in 2018 we formally deemed this to be a separate initiative, requiring equal time and effort as compared to our other four initiatives.

In early 2018, we released an updated version of the Market Map highlighting the latest insights in the market and current programming across the different stakeholders. The Market Map reached thousands of views from across the globe and continues to receive consistent positive feedback on its value to the market.

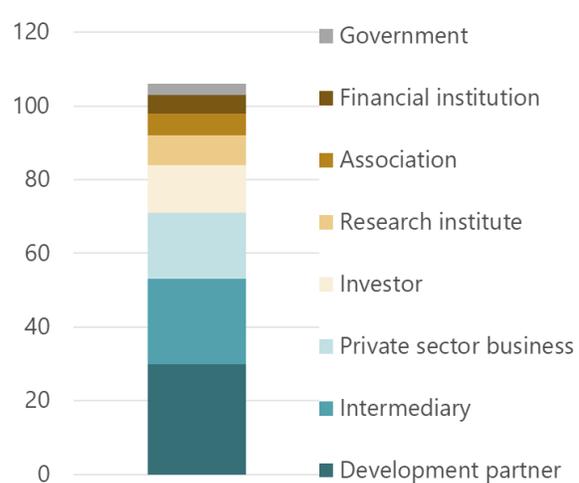
A second activity in the first part of the year was to formally launch the “UOMA” brand to accurately communicate its neutrality and increase visibility, positioning it for long term support to the market. This has involved developing a brand guide, building a website, and creating standalone documentation to describe the work more accurately.

Coordinating stakeholders is another essential component of the work we are doing as UOMA. Outside of our other initiatives (highlighted above), the UOMA team has completed over 100 interactions with stakeholders in the market. As shown in the graphs below, these interactions have been majorly focused on providing technical assistance or data sharing to stakeholders, particularly to development partners and intermediaries in the market.

Interactions by activity, 2018



Interactions by stakeholder, 2018



Broader lessons learnt

We believe that an important part of improving UOMA is evaluating our success and consolidating our learnings. To that end, an essential component of each of our reports must be reporting on lessons learnt.

Considering these lessons, we will seek to adjust our strategies, priorities, and targets going forward, to ensure these are relevant and set up to improve UOMA's service delivery to the market. In addition, we hope this will serve as a helpful reference point for other similar activities in Uganda, and across the continent.

We've seen strong demand for transparent market information and credible, capacity-building services to be made available to all stakeholders. However, to maximize effectiveness & impact, UOMA must focus on specific bottlenecks rather than general facilitation – we seek to support willing partners, with scalable and innovative ideas to advance access in Uganda.

Through UOMA's first 24 months, there have been some clear lessons learned on what has worked, where there have been challenges, and increasingly, how similar off-grid market acceleration work could be successfully extended to other African markets.

Consider local context and systems

Each market is unique, and the necessary organizational structure for success will differ. In Uganda, UOMA is designed to be a neutral organization, rather than particularly aligned to a stakeholder group. UOMA collaborates closely with government and receives input from government agencies through the Advisory Board. Similarly, UOMA provides direct support and has industry associations on the Advisory Board. This balance is critical to build the buy-in necessary in Uganda. In other markets however, it may be better to have market acceleration housed within a government agency or industry association.

Vital to build credibility

Early on, any market acceleration initiative must focus on building credibility in the market. This credibility is essential to receive buy-in from all stakeholders necessary to implement initiatives. UOMA established credibility through several avenues. First, the team invested considerable resources upfront constructing the Market Map landscape document. While doing so required hundreds of interviews and months of compiling, it established UOMA as a definitive and central stakeholder in Uganda's off-grid eco-system. The report also brought attention to UOMA's ambitions and work and expanded its network. Second, a team comprised of technical experts with complementary skills and existing reputations was brought together to form UOMA's project management unit. Some key participants bring decades of experience in public sector work and energy regulation, while Open Capital Advisors has deep regional experience in off-grid energy. Finally, UOMA worked to develop clear success metrics as well as a distinct brand and image so that the organization could be readily identified as a neutral, independent body.

Balancing patience with ‘quick wins’

UOMA has worked hard to balance near- and longer-term objectives. As discussed, releasing the Market Map was vital for early traction in the sector and it has remained important to continue proving value to the market with dissemination of pertinent research and findings. At the same time, universal energy access is a long-term goal, and to succeed, UOMA must take a longer-term view on what is required in the market to reach there. As a result, the key impact metrics for UOMA have been carefully selected with guidance from the Advisory Board to monitor and maintain this balance, with the objective of achieving a “tipping point” in the sector such that an entity like UOMA is no longer required.

Taking an ecosystem-wide approach

Off-grid energy does not exist in a vacuum and any intervention must consider a broader perspective. For example, even though UOMA has an explicit off-grid agenda, understanding and accounting for on-grid planning is a necessary prerequisite for success. Similarly, within the government, off-grid requires cooperation with the Bureau of Standards (e.g. quality standard setting), the Revenue Authority (e.g. import regulations), the Ministry of Finance (e.g. budget setting), and others. Within the private sector, off-grid scaling requires a robustness in telecommunications (e.g. mobile money transactions), banking (e.g. asset financing), logistics (e.g. distribution) and other sectors. While such breadth requires substantial time, it has been a key lesson for UOMA that such buy-in across sectors is necessary for long-term success.

Progress against KPIs

For each of UOMA’s initiatives, specific programmatic milestones have been identified for 2018 and future years to ensure the market reaches a critical ‘tipping point’ in acceleration, whereby an entity like UOMA will no longer be needed for the growth of off-grid in Uganda.

To this end, UOMA and its Advisory Board have set key performance indicators (KPIs) to measure performance against overall objectives, on a near-term (outputs), mid-term (outcomes) and long-term (impact) basis, as described in the tables below. As noted above, these metrics were reviewed and approved at the first Advisory Board meeting held in May 2018.

The data used to report against each of these metrics is derived from a variety of sources, including:

- Stakeholder survey sent out by UOMA
- Results from our technical assistance and pilot support to operators and financial institutions
- Available data on market growth

Notably, while our primary data gathered from surveys and pilots is accurate, broad market data availability is still scarce, and is typically not released for several months after year-end. As a result, the long-term impact metrics highlighted below may have to be revised in future publications as more accurate data is released.

Progress against target short-term outputs

	2018 target	2018 results
Net Promoter Score	> 25%	26%
# of public policies introduced / changed as a result of direct influence	1	Published analysis report analyzing fiscal policy options
# of stakeholders who recognize role of Accelerator in facilitating deal making	4	5

Key:

Achieved target

Short of target

	2018 target	2018 results
\$ Leveraged towards programmatic activity	\$200,000	\$738,352 ⁴
Comms to market	10	12 (sum of newsletters, insights, conferences, presentations)
# of interactions outside of core workstreams	100	106

Key: Achieved target Short of target

⁴ Select pilots supported received grants from UNCDF

Progress against mid-term target outcomes

	2018 target	2018 results
Increased access to local debt finance	3 term sheets from UG banks + first public bank deal over \$1M	<p>Short of target – 2 term sheets and 2 deals</p> <ul style="list-style-type: none"> • Progress towards increasing the volume of local currency debt is slow, despite high volumes of committed funding • Progress made and positive feedback received (particularly from public sector) in work to unlock local debt, with 4 local banks receiving tailored TA • One bank lent to 2 indigenously owned and operated off-grid energy companies in Uganda • UOMA has committed to further support the ‘demand’ side of the A2F equation next year – supporting more operators to get ‘investment ready’ so they too can access this local debt • Lenders have shared positive feedback, noting that UOMA made a difference in providing current, actionable information on the local market that allowed them to advance transactions and build internal buy-in from their investment committees. We have found that building these relationships, sharing materials, and providing linkages provides extensive benefit to these lenders – and critical long-term value
Greater access for lowest income communities	Pilots succeed at defining strategies for private sector to reach an additional 300K households in Uganda with 20K households reached	<p>Target achieved – 20,347 new connections achieved and 305,000 connections at scale</p> <ul style="list-style-type: none"> • Supporting pilots with operators to test hypotheses and innovations on reaching new populations • To-date, our work with pilots have resulted in an additional 20,347 new connections with households • Additionally, the strategies in the pilots have identified a further 305,000 new connections at scale • To supplement our pilots, we are conducting and publishing several research insights to both develop hypotheses to be tested out in pilots, as well as synthesize and share findings from our research

Key:

Achieved target

Short of target

	2018 results	2018 results
Increased adoption of productive use technology	Pilots define which productive use solutions and business models will be most scalable in UG; plans to reach additional 100K households (HH) & SMEs with productive use tech	<p>Target achieved – 120,000 potential connections</p> <ul style="list-style-type: none"> • Following on from our Uganda productive use demand map report released late 2017, we are supporting pilots with operators to test hypotheses and innovations on sustainable and scalable business models with commercial use appliances • The strategies in the pilots have identified potential market sizes across different Ugandan geographies, and value chains of 120,000 new connections at scale (farmer groups, fishing villages, other rural communities)
Improved government policy and targets	Implementation of 2018 Energy Policy, including clear targets for off-grid energy	<p>Short of target as policy is not yet implemented</p> <ul style="list-style-type: none"> • Significant progress has been made this year by government agencies to acknowledge the role of off-grid energy in achieving universal access • Good working relationship developed with MEMD and REA; UOMA adjusting approach and activities to best fit market needs (see more details in 2019 workplan)

Key:

Achieved target

Short of target

Progress against long-term target impact

	2018 Target	2018 results
% growth SHS sales	20% increase	Estimates indicate 200K+ sales in 2018 or 30% growth ⁵
People served by mini-grids (breakdown by energy tier where possible)	10% increase	Expect Uganda to fall short of this target, though very limited data is available. Overall, there was minimal mini-grid activity in Uganda in 2018. We expect the growth rate to increase in 2019 as more tenders are launched and pilots kick off.
Investment into private sector off-grid operators -- local debt finance	\$1M	<ul style="list-style-type: none"> • Target exceeded due to funding from non-bank lenders • Estimate ~\$400K of known local debt finance issued through Ugandan banks • To stimulate activity from banks in 2019, UOMA is continuing to offer tailored bank TA and has a finance matchmaking event planned for early 2019 • Positive feedback, interest and engagement received from local banks and operators, expect additional bank deals to progress in 2019
Investment into private sector off-grid operators -- total equity finance	\$5M	<ul style="list-style-type: none"> • Far exceeded target, based on investments completed in 2018. Detailed information cannot be publicly disclosed, as some was shared with UOMA on a confidential basis
Investment into private sector off-grid operators -- total grant finance	\$5M	<ul style="list-style-type: none"> • Several grants released in 2018 (e.g. UNCDF, Shell Foundation, AfDB) exceed target
Investment into non-private off-grid energy sector (all instruments)	\$50M	<ul style="list-style-type: none"> • Sum of investments from Government budget, World Bank and industry association above target for 2018

Key:

Achieved target

Short of target

⁵ Estimates based on GOGLA 2018 market data as well as sales assumptions for local, non-GOGLA member, operators



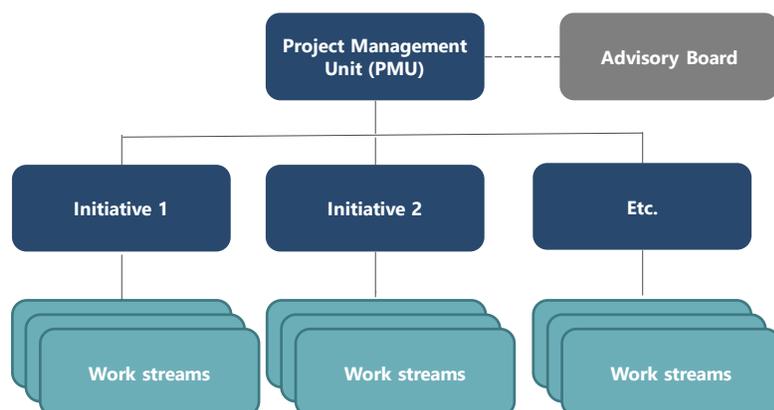
Photo credit: UOMA

APPENDIX

Structure

To effectively deliver on UOMA’s mandate, it is vital to have experts on the team who bring a mix of project management and oversight, as well as locally-based technical expertise focused on conducting research, managing pilots, leading support for banks, and providing policy guidance among other relevant areas.

Organization and governance structure



The Project Management Unit (PMU) – Oversight

The locally-based PMU oversees the execution of UOMA’s work and is responsible for meeting and reporting on progress against targets. The PMU comprises:

- i. Dr. Frank Sebbowa, an industry expert with extensive public service experience having served as head of the Electricity Regulatory Authority and Uganda Investment Authority
- ii. A team from Open Capital Advisors, with deep knowledge of off-grid energy and considerable experience supporting the private sector in East Africa

This expertise enables the team to lead work conceptualizing initiatives and effectively managing all the relevant stakeholder relationships.

The Technical Team – Execution

The technical team is composed of a variety of professionals with experience including off-grid energy finance, distribution, business models, bank finance, economics, public relations, marketing and others. This provides a wide range of skills that can be relied on to effectively implement UOMA’s initiatives.

The Advisory Board – Guidance

The Advisory Board has rotated representation from key stakeholders (Government, Development Partners, Private Sector). The Board is expected to meet approximately twice per year to provide guidance on long-term objectives and targets for UOMA.

Advisory Board

The Advisory Board was commissioned and convened on 18th May 2017 after a selection process that prioritized the relevance of the organizations, representation of the market, and the potential to complement UOMA’s programs. UOMA continues to receive regular engagement and guidance from Advisory Board members and has held two formal meetings since formation.

The organizations currently represented on the Board are:

Government of Uganda



Development Partners



USAID
FROM THE AMERICAN PEOPLE



UKaid
from the British people

Shell Foundation | 

Private Sector



Implementing Firms



Frank Energy Consultants Ltd
1st Class Investment & Energy Professional Advice



OPEN CAPITAL ADVISORS

It was agreed for the key roles of the Advisory Board members to include:

- i. **Consultation:** The Board will be an overall source of guidance on work and relationship building, exploring collaboration opportunities to enhance work and reach targets faster
- ii. **Target setting:** The Board will provide input and guidance on long-term objectives and targets for UOMA to ensure focus is placed on high priority areas
- iii. **Governance and accountability:** Based on targets set, the Board will hold UOMA accountable for reaching established targets which will be articulated in progress updates shared with the Board
- iv. **Ecosystem trend identification:** The Board will support UOMA in identifying emerging trends and ecosystem shifts to adapt work accordingly and recognize partnership potential.

Key Performance Indicator Table

For each of UOMA’s initiatives, specific programmatic milestones have been identified for 2018 and future years to ensure the market reaches a critical ‘tipping point’ in acceleration, whereby an entity like UOMA will no longer be needed for the growth of off-grid in Uganda.

UOMA has set key performance indicators (KPIs) to measure performance against overall objectives, on a near-term (outputs), mid-term (outcomes) and long-term (impact) basis, as described in the tables below. At the end of each year, our task will be to devise baseline data to report against progress for each of these metrics.

As noted above, these metrics were reviewed and approved at the first Advisory Board meeting held in May 2018.

Table 1: Target Outputs - Short Term

	2018 Target	
Target Outputs – Short Term		
Net Promoter Score (proxy for stakeholder endorsement, traction & engagement)	> 25%	<i>Completed by agreed number of orgs proportional to size of accelerator and with representation from all major stakeholder groups. Breakdown by Stakeholder Group.</i>
# of public policies impacted as a result of direct influence	1	<i>Disaggregated by: policy convenings, papers submitted, policies drafted, policies debated, policies adopted, policies implemented</i>
# of stakeholders who recognize role of Accelerator in facilitating deal making	4	
\$ Leveraged towards programmatic activity	\$200,000	
Communications to market	10	<i>Disaggregated by type of communication</i>
# of interactions, outside of core workstreams	100	<i>Disaggregated by stakeholder type and meeting type</i>

Table 2: Target Outcomes - Mid Term

		2018 Target				
Target Outcomes – Mid Term						
		20%	40%	60%	80%	Tipping Point
Increased access to local debt finance	20% completion of market "tipping point"	3 term sheets from UG banks + first public bank deal over \$1M	3 public banks deals over \$1M; first term sheets from non-bank financial institutions	>10 Ugandan lenders with term sheets produced or deals completed; new risk mitigating facilities in place for lenders supporting >\$100M	>\$50M deals completed by Ugandan banks & non-bank FIs; new risk mitigating facilities in place for lenders supporting >\$250M	>\$75M deals completed by local banks & non-bank FIs to the sector - line of sight on remaining \$100M est. need to reach universal access in Uganda*
Greater access for lowest income communities	20% completion of market "tipping point"	Pilots succeed at defining strategies for private sector to reach an additional 300K households in Uganda with 20K households reached	100K commercially unserved households reached with energy solutions by local actors	400K commercially unserved households reached with energy solutions by local actors	700K commercially unserved households reached with energy solutions by local actors	1M 'commercially unserved' households reached and strategies designed and clear implementation underway to reach remaining 4M hh, not forecast to be commercially reached by 2030
Increased adoption of productive use technology	20% completion of market "tipping point"	Pilots define which prod use solutions & biz models will be most scalable in UG; plans to reach additional 100K households (HH) & SMEs with prod use tech	Total adoption of productive use solutions for HH and businesses increases by 50K	Total adoption of productive use solutions for HH and businesses increases by 100K	Total adoption of productive use solutions for HH and businesses increases by 300K	>1M off-grid hh & SMEs using productive-use technologies to materially increase income and improve livelihoods; strategies in place to reach >1M more
Improved government policy and targets	20% completion of market "tipping point"	Implementation of 2018 Energy Policy, including clear targets for off-grid energy	Gov't agencies own design and implementation of sub-policies, including SHS QA standards minigrid tendering process and fiscal policies; active progress being made	Agencies finalize new sub-policies to improve enabling environment for off-grid, positive momentum towards full Government approvals	Energy policies effectively enforced, and energy agencies are working to build buy-in on off-grid from non-energy government agencies	UG Government has integrated off-grid into all aspects of National Electrification Planning with general confidence from private sector; Gov't is public advocate of off-grid energy; Gov't has developed sufficient technical expertise to implement off-grid policies & reach targets
Independent validation that tipping points happened faster as a result of UOMA interventions	Yes / no	<i>Note: Validation may occur in 2019 or 2020</i>				

Table 3: Target Impact — Long term

	2018 Target	
Target Impact – Long Term		
% growth SHS sales	20% increase	<i>Note: These figures are for total Uganda market, not just connections 'attributed' to UOMA</i>
People Served by Mini-grids (breakdown by energy tier where possible)	10% increase	<i>Note: These figures are for total Uganda market, not just connections 'attributed' to UOMA</i>
Investment into private sector off-grid operators -- local debt finance	\$1M	
Investment into private sector off-grid operators -- total equity finance	\$5M	
Investment into private sector off-grid operators -- total grant finance	\$5M	
Investment into non-private off-grid energy sector (all instruments)	\$50M	

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