

LIGHTING AFRICA

N E W S L E T T E R

LIGHTING AFRICA NEWS

Solar Lights' Availability Increases

The market for off-grid solar lighting products continues to exhibit good growth in rural Kenya, a new study shows.

In the tea-growing town of Kericho, sales of torches, task lights and room lights increased from about 37,000 units in 2009 to over 175,000 units in 2012.

"We estimate that solar-powered lights now have a market share of approximately 30% in Kericho and 26% in Talek compared to 2009, when we only found two solar lights available for purchase in these areas," says Peter Alstone, one of the study authors.

The study also recorded a marked increase in quality-assured solar lighting products in the Kericho, Talek and Kapkugerwet markets.

"Quality-assured solar products are now prominently available on the market. In Talek and Kericho we observed 27 solar lanterns that had undergone and passed the Lighting Global quality testing in nine different shops. This represents a substantial improvement in availability of quality solar lights from the previous survey in 2009; at that time there were no quality-assured solar lights in these two towns," the authors say.

Despite increased availability of quality-assured solar lights, the study found a large number of solar lighting products that were of low, or uncertain quality on the market.

"We found an additional 16 solar lights that had either not been tested at all, or that had not passed the Lighting Global quality tests. Without continued monitoring and consumer education, low quality solar products finding their way into the market may cause loss of faith among customers in this emerging clean lighting market," the study warns.

This study is a published market intelligence resource on our website.

IN FOCUS

MFIs, SACCOs Key to Reaching Women with Clean Lighting

Microfinance institutions provide a strong, strategic entry point for reaching women as end-users of solar lighting products, as well as for recruiting them as solar entrepreneurs, a new Lighting Africa survey has found.

The survey, undertaken in Kenya's four key markets of solar lights - Nyanza, Central, Nairobi and the Coast provinces, found that women access credit primarily through microfinance institutions (MFIs), and savings and credit cooperative societies (SACCOs).

The study found that all but one of 16 MFIs and SACCOs surveyed already had loan products for women, who comprise 51% to 100% of their clientele and/or membership.

The survey documented a "strong appetite" among both the MFIs and SACCOs to step up and expand their work with women through Lighting Africa's Women Initiative in order to catalyze further uptake of solar lights by women, and to usher more women into the fast growing solar lighting market in Kenya.

The survey documented the emergence of women groups such as the Women Enterprise Development Institute, which mobilizes member savings and advance pooled resources as loans for entrepreneurial activities such as selling solar lanterns.

It established that a good number of these financial organizations were already working with suppliers of portable solar lights, but found that most worked with only one supplier, thereby limiting consumer choice.

Key constraints cited for limited engagement in the solar lighting sector included an inconsistent product supply. This inflates cost of credit by compelling prospective consumers to start repaying loans even before receiving their solar lanterns.

"This ends up making the loan more expensive as they have to start servicing it upon signing which results in loss of confidence on the solar lighting products as well as an increased possibility of loan delinquency and default."

MFIs and SACCOs also lamented an inability to distinguish quality lanterns from those of unknown and untested quality. Poor product service and maintenance outlets in rural areas also undermine financing of the portable lights sub-sector.

They recommended deliberate effort by programs like Lighting Africa to connect them to credible suppliers and distributors of quality solar lighting products with whom they could forge partnerships that would strengthen the solar lights' supply chain.

They also saw value in product training for their staff to increase their own awareness and capacity to understand modern solar lighting products so that they could structure better credit products for their clientele, especially women.



A tea vendor in Dakar lights up her business spot with a solar lantern
© Bruno Demeocq/Lighting Africa

Solar Light: My Chance to Pass Exams

Daisy Cheruiyot is a 16-year old student who lost both her parents and several relatives in the 2007 post-election violence in Kenya.

She fled for her life like many of her neighbors in Cheplelachebei East in the infamous Burnt Forest area of Nandi Hills. Upon return 'home' seven months later her home had been razed to the ground.

Until recently, her elder sister helped care for their aged grandmother, but she has since gotten married and moved on. Now Daisy has the daunting task of caring for her frail grandmother.

But despite this hardship, the silver lining in her world is school. Being able to go to school is Daisy's lifeline; she would like to be a teacher.

She stays in school to finish her homework and study until 9pm, by the dim light of kerosene lamps provided by the school.

She then walks some 8km back home. But this is usually a journey fraught with danger. Last October, Daisy was attacked by hyenas on her way back home from school.

She almost lost a finger; worse may have happened if neighbors had not come to her rescue on hearing her screams.

Upon learning of the plight of Daisy and her schoolmates, third and fourth graders at Cherry Hills Village Elementary School in Denver, Colorado fundraised to purchase clean, better quality lights for Daisy and her classmates.

They bought 25 units of the Nokero N200 solar light which were delivered by the company's East Africa Sales Manager, Craig Inda.

Receiving her light, Daisy wept in joy saying: "To you, you just gave us lights to study. To some of us, the Nokero lanterns represent safety and a chance to pass my exams and make something of my life."

Daisy is now able to get home early and study in the comfort and security of her home. Her solar light now gives her three hours of night lighting.

When she has late evening chores outside her home, she uses the portable to reduce the risk of animal attacks.

As a show of appreciation for the donation of lights, Daisy, who is currently in her second year of high school, is working at scoring straight 'A's in her national secondary school exams in two years time.

"Until the donation was made, Daisy and her classmates relied entirely on kerosene lanterns for light to study.

Most of her books have burn marks from the kerosene lanterns she used. The fumes from the lanterns also covered the classroom roof with soot," says Craig Inda.

Azuri Secures £1 Million Scale-up Capital from Barclays

Azuri, developer of the Indigo pay-as-you-go solar power system for off-grid markets, secured a £1 million loan from Barclays in February.

Azuri will use these resources to accelerate deployment of its solar-powered Indigo home lighting and mobile charging system in rural Africa.

Azuri CEO Simon Bransfield-Garth said: "Barclays' vision will provide the working capital finance for Azuri to deliver an additional 30,000 solar home systems in Africa this year. This landmark deal represents a major step towards opening up the commercial finance sector for distributed rural power."

IFC's Lighting Africa program Manager Itotia Njagi said: "Azuri has surmounted a major hurdle - access to credit - that has been constraining full, effective participation of manufacturers and distributors in the untapped African market for affordable and quality off-grid lighting products."

As part of its business support and market development activities, Lighting Africa is exploring and negotiating trade finance facilities to enable importers and distributors stock up better in order to effectively service the needs of customers in Africa.

Sean Duffy, Barclays' Managing Director, Technology, Media and Telecoms Industry said: "Azuri is a highly innovative business, and is leading the way in distributing pay-as-you-go solar power for off-grid markets."

Azuri's Indigo technology and business model combines mobile phone and solar lamps to deliver affordable pay-as-you-go solar lights that displaces kerosene lanterns and phone charging services, cutting users' expenditure by as much as 50%.

Azuri says the Indigo lights extend users' productive day by about 3.2 hours and that children can study for an additional 2.0 to 2.5 hours per night.

Since the first Indigo deployments in Kenya in September 2011, the business has been recognized globally for its innovativeness, winning major awards including the World Economic Forum Technology Pioneer 2013.

Tanzanians Reap Multiple Benefits from Clean, Safe Solar Lights

Victoria Materu and her two children live in the Kilimanjaro region of North Tanzania.

And if there is one thing she has come to value, it is the safety and security a solar lantern has brought to their lives.

Before buying her solar lantern in May 2012, she relied on a kerosene lamp, and was constantly fearing for the safety of her children whenever she had to run evening errands.

But today she is completely at ease: "Even when I am not around the house in the evening, I do not have worries about the risk of kerosene spilling and burning the house because solar is easy to use and the children can put it on and off without me being around."

Victoria learned about solar lanterns from her children following a visit by SunnyMoney, a distributor of solar lights, to their Malilo Primary School.

When she relied on kerosene, her household had three hours of evening light, but with her d.light S10 lantern, they now enjoy about five hours of lighting each evening.

"The solar light helps [the children] to study longer because they are assured that the light lasts longer, and it is very strong and powerful," Victoria says.

Victoria reports considerable savings; she used to spend over 15% of her income buying kerosene to light her home every week. She now buys less kerosene which, even after paying \$6 for the solar light, saves her more than \$35 a year, says SunnyMoney.

"I use the savings for buying food and paying school expenses," she reported.

Nearly half of the people with solar lanterns in her village say they used savings accrued from reduced kerosene spend for food, while 25% said their savings went to school fees.



SunnyMoney's Felix Manutwa explains how solar lanterns work during a school outreach visit in Northern Tanzania © SunnyMoney

Two More Products Enter the Off-Grid Lighting Market

Two new solar lanterns were put through and passed the rigorous Lighting Global quality testing in the past two months. The first is a new task light from Greenlight Planet, the SunKing Solo (*right*), with a feature that guides the consumer on how to place the solar panel for optimal charging. This lantern replaces the original Sun King, and is the third product to pass the quality tests.



The other is a second product from NTL-Lemnis to pass the LG-QTM, the PharoX Solar Rooflight. This product has a unique design with an integrated solar module. It is installed on/through the roof of a home or business with the solar module exposed to the sun outdoors and the LED bulb lighting the house.



The ‘Little Sun’ Shines in Zimbabwe

The developers of the Little Sun lamp have partnered with the NGO Plan International, to pilot the use of their solar-powered LED lamps through sustainable, community-led initiatives in Zimbabwe.

The highly portable lamp provides people without electricity with clean, affordable lighting allowing them to work, socialise, study, cook, and extend their activities into the night replacing kerosene lamps.

“The light is clean, bright and actually healthy for children who used to develop eye and chest problems as a result of soot from the kerosene lamps they used to use before Little Sun came,” says Natsai Mlambo, a teacher at Muumbe Primary School in Chipinge, a town in the eastern part of Zimbabwe, near the Mozambique border.

The developers of Little Sun have given alumni of Plan International’s educational support initiatives, who call themselves Alight Zimbabwe Trust, exclusive distributorship of the lamp in the country.

The Trust has some 8,000 members and affiliates, and 10 chapters across the country. Among them, 80 have been identified as local Little Sun distributors in rural areas.

The Trust has in recent months sold more than 4,000 lamps, and built Little Sun shops in Chitungwiza, a town 30 kilometres south of Harare, and in Epworth, a suburb in Harare.

Edwin Sithole, the coordinator of Alight Zimbabwe Trust, says the lamps are not only improving household lighting, but have also opened up new employment opportunities and improved sanitation.

“(Little Sun lamps are) viewed as a solution to end darkness in the most hard-to-reach, remote areas. The children were not passing their public exams because they could not read after sunset due to a lack of proper, affordable light,” Sithole says.



Doing homework to Little Sun light hanging from the chair © Edwin Sithole/Alight Zimbabwe Trust

Fosera Establishes Product Assembly Line in Maputo, Mozambique



Fosera staff hard at work at a new assembly plant; putting together the solar home lighting systems for sale in Mozambique. © Benjamin Seckinger/Fosera

German producer of affordable modular solar home lighting systems, Fosera GmbH has started a commercial assembly line for its solar lights in Maputo, Mozambique. The design, implementation and start up of the assembly line were undertaken in partnership with the University of Maputo and University of Ulm/Neu-Ulm.

Production of the Fosera Pico Solar Home Lighting System started in October.

“With this assembly line we have so far empowered more than 4.000 families with modern, clean light, but also created seven jobs, and a little bit of sustainable economy in Mozambique,” says Catherine Adelmann, the company’s General Manager.

As part of the start-up, the solar manufacturer has trained some 15 people equipping them with the technical and managerial skills needed to successfully run a Pico Solar Home System assembly line.

“The local assembly line in Maputo enables us at Fosera to better serve the Mozambican market with our solar products,” says Adelmann.

The company has also contracted three distributors and five entrepreneurs to supply and service its products on sale in different parts of the country.

Fosera was founded in 2010 in Germany and has branches in Thailand and India with production lines.

The company has set its eyes on international expansion through establishment of additional local assembly lines in its key markets in the future, thereby increasing the positive impact on local societies and economies by means of technology transfer, know how training, job creation and carbon dioxide emission reduction.

Their Pico Solar Home System is designed for rural and suburban villages without access to electricity.

The system, which has passed the rigorous Lighting Global quality testing, provides energy for reliable, clean and inexpensive lighting, cell phone charging enhancing communication, and entertainment.

ACP-EU Energy Grants up for grabs

The ACP-EU Energy Facility is calling for proposals designed to increase and improve access to modern, affordable, sustainable energy services for rural and peri-urban areas.

This call seeks proven projects and models that can be readily scaled up or replicated cost-effectively, increasing energy access to at least 30,000 people by the end of project. Priority will be given to projects to be implemented in Africa.

Initiatives leveraging private sector involvement, or innovatively extending access to energy and energy services, or supporting rural electrification strategies and access to energy for public services such as education and health stand a better chance. Deadline for application is June 3, 2013.

Business Plan Awards for West Africa

The West Africa Forum for Clean Energy Financing invites entrepreneurs from ECOWAS with promising clean energy projects to enter into a Business Plan Competition.

The Forum will identify and nurture entrepreneurs, start-up companies and existing companies by linking them with investors and financiers through the Business Plan Competition.

Participants will be mentored to help them polish their business plans, develop convincing investment pitches and formulate sustainable growth strategies that can attract financing.

The Forum, to be held in Accra in October, will allow up to 10 qualified projects to present their business plans. An expert panel of judges with investors, industry specialists and business executives keen on clean energy projects in West Africa will select the top three winning projects.

Global LEAP Announces Awards for Off-Grid Lighting Products

The Global Lighting and Energy Access Partnership (Global LEAP) has launched a new awards program for outstanding off-grid product.

Manufacturers, distributors and retailers of off-grid LED room lighting products can nominate their products

"The goal of the Global LEAP Awards is to identify the very best LED appliances for off-grid communities, as there is currently no way for customers to differentiate the quality products from the junk," said Caroline McGregor, of the Global LEAP initiative. For more information, visit <http://www.GlobalLEAPAwards.org>.

New Look at How to Define, Measure ‘Access to Energy’

Practical Action has launched the latest edition of its *Poor People’s Energy Outlook* which sets out a new way of measuring people’s access to energy in a way that ensures the poor’s needs are not overlooked. The new approach uses a multi-tier system for measuring access to energy in developing countries, proving an alternative to the widely used standard binary system currently in use.

The new approach introduces the concept of “total energy access” which measures the whole range of energy services that people get; energy for lighting, energy for charging mobile phones and powering radio, energy for education, and for health services.

“Development of a common definition of energy access is now imperative. Without a comprehensive definition, energy access will remain limited to a binary position and neglect the multi-faceted energy needs of poor people,” Practical Action says.

REACT Launches Funding Window for Mozambique

The Renewable Energy and Adaptation to Climate Technologies (REACT) has launched a funding window for sustainable business ideas from Mozambique, and is accepting applications up to 18th May 2013.

REACT is looking for very specific, new and innovative business ideas in low-cost clean energy, technologies for adaptation to climate change, and related financing services and solutions.

The funds, ranging from \$250,000 to \$1.5m, are targeted at private or for-profit organizations, and sole traders and partnerships.

Applicants are expected to provide matching funds of no less than 50% of the total cost of the business idea, which will be implemented in Mozambique.

For more information, visit <http://www.aecf africa.org>.



The **Lighting Africa Newsletter** is a briefing on the latest developments in the Lighting Africa program and the off-grid lighting market. It is provided to all organizations and individuals registered through the Lighting Africa website www.lightingafrica.org.
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Lighting Africa, a joint IFC and World Bank program, seeks to accelerate the development of commercial off-grid lighting markets in Sub-Saharan Africa as part of the World Bank Group's wider efforts to improve access to energy. Lighting Africa is mobilizing the private sector to build sustainable markets that provide affordable, modern off-grid lighting to communities across Africa that are not on the electricity grid. The program and its partners had by December 2012 brought cleaner, safer and better quality lighting to 6.9 million people, with a target of reaching 250 million people by 2030.

Lighting Africa is implemented in partnership with:
The Africa Renewable Energy and Access Grants Program • The Climate and Development Knowledge Network (CDKN) • The Global Partnership on Output-Based Aid (GPOBA) • The Energy Sector Management Assistance Program (ESMAP) • The Global Environment Facility (GEF) • Italy • Luxembourg • The Netherlands • Norway • The Public-Private Infrastructure Advisory Facility (PPIAF) • The Renewable Energy and Energy Efficiency Partnership (REEEP) • The United States.