

3rd International Off-Grid Lighting
Conference & Trade Fair
November 13-15, 2012
Dakar, Senegal

Lighting Africa is organizing the third biennial International Off-grid Lighting Conference and Trade Fair in partnership with Senegal's Rural Electrification Agency (ASER).

The event is an important information exchange and networking forum where Business-to-Business linkages happen between global manufacturers, investors and local distributors.

Key issues to be covered this year include:

- Role of modern off-grid lighting in bridging the rural energy gap
- Opportunities for off-grid lighting within the Sustainable Energy for All 2030 target
- Development Impacts and market status and in reaching people at the base of the pyramid with modern lighting products
- Perspectives on consumer trends
- Financing across the lighting supply chain
- Engaging the public sector in providing clean lighting for the un-electrified
- Product and technology advances
- Environmental and social concerns and responsibilities in the off-grid sector
- Status and communication of global quality assurance framework
- Charting the way forward for the Lighting Africa program as it assumes regional and global proportions.

To register for the conference or trade fair, and/or to become an event sponsor visit www.lightingafrica.org/2012conference.



Winners of the Outstanding Products Awards during the 2010 conference and trade fair © Lighting Africa

LIGHTING AFRICA
Catalyzing Markets for Modern Lighting

AN INNOVATION OF
IFC
International
Finance
Corporation
World Bank Group
THE WORLD BANK

DONOR UPDATE
JULY 2011—JUNE 2012

IMPACT

Four million people in Africa now have clean lighting

Off-grid market doubles as consumer awareness and product demand grow

About four million people without electricity in Africa have in the last three years acquired modern, pollution-free lighting products for their homes and businesses, latest results from the Lighting Africa program show.

These people no longer have to contend with poor lighting, fire and health risks associated with hazardous yet expensive fuels such as kerosene. And their children are studying in more conducive conditions, anecdotal evidence from across the continent shows.

“We started off this program with what seemed like a herculean task of finding modern, clean lighting products for about 600 million people without electricity. We had set ourselves a target to reach 2.5 million people this year; but the demand for better, cleaner lighting in Africa has been so large, and our client companies have been so innovative and successful that this target has been surpassed by far,” says Patrick Avato, IFC's Global Products Specialist, Clean Energy.

Lighting Africa is a market development program jointly implemented by the World Bank and IFC, with support from other donors as well.

The program catalyzes and accelerates development of sustainable markets for affordable, modern off-grid lighting solutions for low-income households and micro-enterprises across the continent by implementing a quality assurance framework, providing companies with market insights and business development support, as well as consumer education.

Results for the year ended June 2012 show that sales of modern lighting products, most of them solar-powered, **grew by 115%** over sales recorded in the previous year.

“Our great achievements in such a short span of time would not have happened without the support of a broad range of partners, notably governments, with whose officials we have sat for hours on end deliberating and exploring ways of increasing energy access to rural communities without electricity,” says Dana Rysankova, World Bank's Senior Energy Specialist.

In addition to market development, the Lighting Africa program also advises governments on how to integrate modern off-grid lighting into their energy access expansion programs.

The Lighting Africa program has to date signed up 14 manufacturers and distributors of off-grid lighting products to participate in this rapidly growing market.

These companies and others seeking to enter the market have submitted more than 100 products for quality testing. Of these, **40 products have passed** Lighting Africa's Minimum Quality Standards, and are available on the African market.

In the last three years, manufacturers and distributors of modern quality-assured, solar and dynamo-powered lanterns sold about **780,000 lanterns** in 15 countries across Africa.

This has been greatly facilitated by consumer outreach and awareness activities that have to date **reached 22 million people** across the continent.

Lighting Africa has also facilitated product sales by offering partner companies a range of business support services and discounted consumer education platforms.

The results also highlight that by switching to clean lighting products, Africa **reduced its greenhouse gas emissions by 78,000 tons** in the last three years, the equivalent of removing 15,000 vehicles from the roads.

Lighting Africa is working to eliminate existing market barriers as well as to improve access to finance for potential and existing manufacturers and distributors in a bid to reach a total of 250 million people in Africa with clean off-grid lighting products by 2030.

IMPACT



A selection of quality-assured solar lanterns that are slowly and surely displacing kerosene in lighting up homes and businesses across Africa © Lighting Africa

Clean lighting initiatives applauded at the Rio+20 Summit for contribution towards the Sustainable Energy for All goal

Lighting Africa and the Global Lighting and Energy Partnership (Global LEAP) were recognized and applauded at the Rio +20 Summit held in June for their contributions and commitments towards the UN target of Sustainable Energy for All by 2030.

Lighting Africa, which has been instrumental in catalyzing the modern off-grid lighting market in Africa, was singled out for already having made it possible for about four million people without electricity to reduce their dependence on kerosene by embracing solar lighting.

Sustainable Energy for All (SE4All) is an initiative of the United Nations, launched in September 2011, to transform the world's energy systems so that everyone will by 2030 be using modern and sustainable energy for their various needs.

Global LEAP is a voluntary forum comprising governments and development partners committed to increasing access to modern energy by sharing knowledge and best practices for supporting self-sustaining markets for clean energy products and solutions.

“Commercial markets offer an opportunity to complement public sector-led efforts at electrification because they leverage private investments and frequently offer quick and scalable means for improving access to energy,” the forum says in a statement on the Clean Energy Ministerial website.

Members of the Global LEAP include the United States Department of Energy, Italy's Ministry of Land and Sea, International Finance Corporation, the UN Foundation, World Bank, the Energy and Resources Institute, Africa Development Bank, the Global Environment Facility, the United Nations Development Program and the Japan Ministry of Economy, Trade and Industry.

The World Bank Group will strengthen its programmatic efforts aligned with the forum's principles, including the Lighting Africa and Lighting India programs, as part of its commitments to the Global LEAP.

About 1.6 billion people in the world have no access to electricity, about 600 million of whom are in Africa.

Lighting Africa is working to spawn vibrant, competitive markets for affordable, high quality lighting products in Africa that will be available to and in use by 250 million people in Africa without electricity by 2030.

A number of Lighting Africa's partner companies that manufacture and distribute modern off-grid lighting products were also recognized in Rio for their innovative and ambitious efforts to improve access to clean lighting.

Associates who have made commitments to the Sustainable Energy for All goal include solar lighting manufacturers d.light designs, Nuru Energy, Nokero International, Philips, Schneider Electric, and distributor of solar lighting products, Solar Aid.



The d.light S250 lantern in use to light up young chicks to help them feed through the night and not trample on each other at a farm in Kenya © Lighting Africa

ON THE GROUND

'Word of Honor' credit enables communities to acquire modern solar lighting products in Tanzania



School Children in Tanzania's Mafia Island with their solar study lanterns
The NGO Appropriate Rural Technology Institute of Tanzania (ARTI-TZ) has figured out how to provide credit, using an existing loaning scheme, to help rural consumers buy solar lamps.

Using a system known as 'Mali Kauli' (Word of Honor, in Swahili), the NGO is providing village-level credit that is enabling families invest in solar lanterns using their word as security for loan repayment.

ARTI-Tz encourages beneficiaries to repay their loans using money that would have otherwise gone towards buying kerosene.

This credit system is used to help poor families buy bicycles, corrugated roofing iron sheets, cement, seeds and fertilizers.

"The 'Mali Kauli' system is already in place and is well known to consumers. Customers are keen to pay back what they owe in order to get more credit to buy yet more products," says Nachiket Potnis, the CEO of ARTI-TZ.

This distribution strategy was piloted in Bagamoyo, but has since been rolled out to other parts of the country. The NGO is now supplying more than 13 dealers and wholesalers with Barefoot Power solar lighting products.

ARTI-TZ is also working with savings and credit cooperative societies and other microfinance institutions to ensure lanterns suppliers and distributors can access finance to meet consumer demands.

ARTI-TZ was one of ten grant recipients of the Lighting Rural Tanzania, a grant competition organized by the Tanzania Rural Energy Agency, with support from the World Bank and Lighting Africa. It promotes innovative business models for the provision of off-grid lighting to the rural areas of Tanzania.

Based on the success of the Lighting Rural Tanzania in harnessing innovative ideas to improve access to clean light, a second round of the competition was launched earlier this year by the country's Rural Energy Agency.

Employer credit increases access to clean lighting products among flower workers

"When I put on the new solar lights, my child thought it was electricity and told me to turn on the TV! There is no difference from electricity; solar light is very bright," said Jacinta, a flower worker, on installing a solar-powered home lighting system.

Jacinta, 27, worked at Olerai Farm in Narok, Kenya. Using a loan from her employer, she purchased and installed her clean lighting system in 2011.

The Olerai Flower Farm advanced its employees easy-to-pay loans to purchase solar lamps by paying the first 50 percent upfront and then the remainder over a period of three months.

The lamps sold like hot cakes. Eager to each own a lamp, farm employees saved up their earnings and paid up deposits for lamps ahead of expected deliveries. Some asked for a full loan in order to buy the products.

The surrounding community would like a shop where they too can purchase solar lamps. Having converted to solar lighting, Jacinta is now the envy of her friends. "One of my relatives saw the lamps at my house and went and bought a pack straight away," she said.

Before acquiring the lamp, she spent between KSh800 and KSh1,000 (about \$9.35 - \$11.7) per month. "Now the new lamps are saving me a lot of money."

Kerosene can be scarce and expensive. KSh20 is barely enough to buy 20ml of fuel from small distributors. As a result, farm workers were spending almost their entire daily wages on kerosene.

This monthly saving helps Jacinta cope with escalating food and living costs. There are other benefits too.

"Kerosene smoke caused eye irritation and the light was not enough. When I was not home, I always had to ask someone to go and sit with my kids because the paraffin lamps were not safe. Now the children can just switch the lights on and start studying safely."

Jacinta is happy that she can also charge her phone using her solar lighting system. "Could we get a solar product that can run a TV and DVD player too?"

LIGHTING AFRICA

Catalyzing Markets for Modern Lighting

AN INNOVATION OF



NEW PRODUCTS

More than 100 modern off-grid lighting products have undergone quality assurance testing in the past three years, 40 of which have passed the Lighting Africa Minimum Quality Standards.

In the past year alone, 14 products fulfilled the recommended quality and pricing structure for base of the pyramid consumers in Africa including:

Betta Lights lanterns



The Lemnis Solar Kit



Global Telelinks' ceiling light and lantern



Nokero's N200 Light bulb

Schneider Electric's lighting systems



Lighting Lives in Liberia

Liberia's Rural and Renewable Energy Agency launched a program modeled on Lighting Africa to kick start the commercialization off-grid solar lighting products in the country in February 2012.

The program, Lighting Lives in Liberia, will increase access to better lighting for millions of Liberians who use the polluting kerosene lamps and dry cell battery powered lights.

The program is using Lighting Africa's market development model, as well as modern lighting products that have undergone and passed the Lighting Africa quality assurance.

The program's launch served as a B2B matchmaking event that brought together eight international suppliers of off-grid solar lighting products and six local retail partners.

Media reports indicate that the country was due to receive its first batch of quality assured solar lanterns in August 2012.

'Lighting Lives in Liberia' kicked off with a lantern exchange program aimed at progressively replacing 100,000 kerosene lamps and dry cell battery powered lights by the end of 2015.

This activity will run to December 31, 2012, with funding from an Africa Renewable Energy Access grant administered by the World Bank.

This will be followed by a scale-up phase expected to run for about four years that will be funded by the Global Environment Facility, and also administered by the World Bank.

RESOURCES

Growing body of Technical Notes published to guide the development of high quality products

Issue 0: LED Lighting Basics

Issue 1: Thermal Management for LEDs

Issue 2: LED Lumen Depreciation and Lifetime

Issue 3: Specifying LEDs: How to Read an LED Datasheet

Issue 4: Lighting Efficiency and Product Design Optimization

Issue 5: Interpreting Standardized Specification Sheets

Issue 6: Optical Control techniques for Off-Grid Products

Issue 7: LED Electronic Control Circuits for Off-Grid Products

Issue 8: Lumen Maintenance Testing of Off-Grid Products

Issue 9: Shipping and Storage of Sealed Lead-Acid Batteries

Issue 10: Lithium-ion Battery

Expanding women's role in Africa's modern off-grid lighting market

Lighting Africa published its first report analyzing the role that women play both as consumers and entrepreneurs in the off-grid lighting market.

The report identifies women-specific opportunities in the expanding market for modern off-grid lighting.

Modern off-grid lighting products could be an immediate opportunity for Africa's businesswomen who often run small retail businesses - exactly the type that stand to benefit most from improved lighting and extended productive time.

In the household, the report finds that women influence decisions on when to buy a new lighting device and which one to get 40% of the time.

And needless to mention, women and children are inordinately affected by the toxic smoke from fuel-based lamps.

The report compiles the findings of extensive Lighting Africa consumer studies that were undertaken in Ethiopia, Ghana, Kenya, Tanzania, and Zambia.

Lighting Africa partnered with the International Finance Corporation's Women in Business program to author and produce this report.