

# LIGHTING AFRICA

N E W S L E T T E R

## IN FOCUS

### NEW! Eco Design and Market Intelligence Notes

Lighting Africa has begun publication of two new series of Notes, an Eco Design Note and a Market Intelligence Note.

The Eco Design series will address health and environment dimensions of off-grid lighting product design.

Topics include design decisions that can reduce environmental hazards associated with battery disposal, eye health and safety of LED lights, benefits of lead-free solder, and product life cycle greenhouse gas emissions, with comparison to kerosene lighting products.

The Market Intelligence series will present results from field studies and research relevant to off-grid market development and product deployment.

The first Note presents findings of a 2011 field study documenting the availability of rechargeable batteries in towns in Kenya, Tanzania, Ghana, Senegal and Mali.

The study found limited local availability of replacement batteries for off-grid lighting products in all five countries, and will guide product design based on batteries available in targeted markets. It highlights existing market opportunities to supply product-targeted batteries.

"In the life of an off-grid lighting product the battery is often one of the earliest components to fail. Fortunately, the failure of the battery does not necessarily need to lead to the end of the product's life," the Market Intelligence Note states.

The Eco Design Note compares hazards associated with different batteries and encourages design of products using the least hazardous batteries.

If you have suggestions on future topics, email [research@lightingafrica.org](mailto:research@lightingafrica.org).

## LIGHTING AFRICA NEWS

### Four million people now enjoy clean, better lighting

About 4 million people without electricity in Africa have in the last three years bought clean lighting products for their homes and businesses reducing their dependence on kerosene, latest results from the Lighting Africa program show. Manufacturers and distributors of clean, modern lighting products have the past three years made an entry into the African market and sold 780,000 lanterns in more than 15 countries.



Taking the clean lighting message to consumers in rural Kenya using road shows © Andres Bifani/Lighting Africa/2012.

"We started off this program with what seemed like a herculean task of finding clean lighting products for about 600 million people without electricity. We had set ourselves a target to reach 2.5 m 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's results to June 2012 show that sales of modern lighting products, most of them solar, grew by 115% over sales recorded in the previous year. More than 100 modern lighting products have also been submitted to Lighting Africa for quality testing, 40 of them having passed Lighting Africa's Minimum Quality Standards, and are available in various African markets.

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

By eliminating existing market barriers and addressing access to finance prospective entrants to the market, Lighting Africa targets to reach a total of 250m people with clean and affordable lighting products by 2030.

### Building retailers' product knowledge in Liberia

Lighting Africa conducted a training for retailers of solar lighting products in Liberia last month as the country prepared to receive its first consignment of quality lamps.

The workshop, with representatives from the Rural and Renewal Energy Agency, equipped participants with basic technical knowledge on modern solar lamps.

"Upon completion of the training, the participants are able to address most technical issues that arise, forestalling consumer complaints," said Christopher Carlsen of Lighting Africa's Quality Assurance Team. "The retailer would, in turn, train their staff on how to properly handle the products and troubleshoot arising problems."

Participants now also know how to properly store and maintain stock, and troubleshoot typical problems encountered when conducting after-sales service.

The retailer training is part of Lighting Africa's support to Liberia's efforts to spur markets and use of renewable energy in rural areas.

**Kiprotich wins Gold for Uganda, and attracts solar lighting to his village**

Barefoot Power Uganda has launched its 'Light Up a Village' program in Cheptilyal, Kapchorwa District in Uganda.

Cheptilyal is home to Stephen Kiprotich, who won Uganda's first gold medal in 40 years at the 2012 Olympic marathon.

And Barefoot Power presented his parents with a PowaPack 5W home lighting system. They hope this will motivate more youth to work hard to realize their dreams.

The Barefoot Power 'Light Up a Village' will light up the Cheptilyal trading centre, a primary school, a health centre and 100 homes.

"The 'Light Up a Village' program is a simple and cost-effective way to provide clean light to off-grid rural communities", says Barefoot Uganda's Sales and Marketing Manager, Anne Kaiyiwa Kagwa.

"Communities have always supported each other in times of hardship, so during times of joy, they should be able to enjoy the fruits of raising one great son of the soil," she adds.



Kiprotich (left) with his parents as they receive the solar-powered PowerPack 5W home lighting system from Barefoot Uganda staff © Barefoot Power

More than 80 percent of Ugandans have no electricity relying on candles, kerosene, grass, and wood for lighting. These alternatives are expensive and dangerous exposing families to fire hazards, and respiratory diseases.

The supply of clean alternative sources of energy is however unreliable and expensive.

Barefoot is availing its Firefly study lamp and PowaPack home lighting system, both of which charge phones. The company also light up public utilities such as clinics and schools with Barefoot Village Kits.

Barefoot Power has reached more than 2m people around the globe with their solar Firefly, PowaPack and Village Kit lighting and phone charging solutions.

The new 'Light Up a Village' program will help the company meet its target of reaching 10 million people with clean energy by 2015.

**Seeding solar lanterns among Kenya's maize farmers**

Mrs Tecla Cheruyiot is a member of the 35-strong Korosiot Women's Group in Kipkenyo, Eldoret, Kenya.

She is an innovator in her village who was introduced to solar-powered lanterns barely two months ago, and heartily took up the idea.

She bought her family a d.light S250 lantern using a loan advanced by her Women's Group, which she repaid in two months.

"I would buy paraffin worth KES20 everyday for my koroboi (open-wick lamp) and pressure lamps but it was often only enough to see us through our evening meal; my children could not study most evenings," she told Lighting Africa during a visit.

This amount of paraffin would be shared between three or four lamps – one each for two of her children sitting national primary and secondary school exams, one for the father, and fuel-allowing, the last for her evening chores.

When the paraffin ran out, they would use light either from their cell phones, a conventional flashlight, or simply light from the fireplace.

Mrs Cheruyiot, a maize farmer, explains that electricity can only be found 4Km away at a local school. With this 'proximity' to electricity, her village has been contemplating getting connected to the grid.

But the costs have proven an astronomical KES1.4m (USD16,667) for first acquiring a transformer for the locality, with more costs anticipated for the actual connections.

"My family and I are now doing so well!" she says. "My children can now study for as long as they wish, and the light is still burning."

"This solar light makes me so happy because we can do all the work we should in the evening without having to stop," she says. "By November our village will be alight as if it has electricity."

**Solar Light - "It's My Education!"**

A solar lamp was held high during the town hall demonstration. When asked what it was, one child shouted from the crowd: "It's my education!"

That was at the launch of The Solar Lamp Project by the Health Education Africa Resource Team (HEART) in the Taita Hills.

The project is pioneering SUNLITE's solar LED light that comes with one or two lamps and mobile phone charging kits. SUNLITE is an associate company of the Lighting Africa program.

"The implementation of the project will not only promote education but will also significantly reduce health risks presented by use of kerosene lamps. The solar lamps shall be employed to generate income for the 240 households set to benefit from the project," said Vickie Winkler, the Founder and Executive Director of HEART.

HEART will teach the community how to use of the solar lamps for six months, and monitor the impacts the solar lamps are having.

"We expect the solar lamps to not only impact the child's education, but also to improve family livelihoods," said Ms Winkler.



Mrs Cheruyiot with husband and children at home in Kimoso Village © Lighting Africa



A SUNLITE solar lamp is held up during the project launch © HEART

## SunnyMoney makes record sales in Tanzania through its 'Student Lights' campaign

SunnyMoney, the commercial arm of energy charity SolarAid, sold more than 50,000 solar lights in Tanzania only, in the first half of this year through its on-going 'Students Lights' campaign.

SunnyMoney, which distributes several brands of solar lanterns, expanded its sales drive to the Arusha and Kilimanjaro regions, after a highly successful year in 2011 on Mafia Island.

"Demand has far exceeded our ability to supply, and several times we have had to stop campaigning to wait for more lights to be imported. Even so sales have been running at 150% of budget resulting in over 50,000 solar study lights benefiting students in these two regions alone," says Malcolm Wigmore, SunnyMoney's Operations Director in Tanzania.

Through its 'Student Lights' campaign, the company demonstrates the use and benefits of solar lanterns to school children who can then buy the lights and enjoy clean, safe and affordable solar lighting.

Felista Mlay who lives in Rombo, Kilimanjaro and whose daughter purchased a d.light S1 solar lantern during one of the school campaigns, explains the impact the light has had on their lives.

"Since we bought the solar light I have no worries at all about my children and the security of our home. The light has reduced our costs especially for kerosene. I used to buy two litres of kerosene each week," she says. "Also my daughter was always complaining about eye irritation which was affecting her revision; breathing was also difficult due to smoke. But now I never hear any complaints."

In coming months, SunnyMoney will be rolling out more school-based solar lighting promotions in Iringa and Morogoro, with plans to also expand its operations in Kenya, Malawi and Zambia.

SunnyMoney's Managing Director, John Keane is confident of achieving sales in excess of 300,000 solar lights this year.



The Sunny Money team happy during a break from their sales drive © Solar Aid

## Solar behavior change campaign underway

Nokero International, an Associate of Lighting Africa, in partnership with award winning animation producer and director, Firdaus Kharas, have launched a multi-lingual mass communications campaign to spur people using traditional hazardous energy sources such as kerosene to switch to clean solar-powered products.



The Solar Campaign, managed by the Swiss communications company Chocolate Moose, will raise funds to produce and distribute some 15 public service announcements (PSAs) for radio and television featuring animated characters Sunny and Stubborn.

The PSAs will be availed free of charge in more than 50 countries and in 73 languages, and will also be adapted for mobile platforms e.g. cell phones.

"If we can get millions of people to change to solar-powered energy, the result will be a seismic shift towards achieving a safer and healthier planet. In a humorous animated campaign we will highlight the negative impact of traditional energy sources on health, the environment and economic progress and point out the advantages of clean, renewable, free solar energy," said Nokero CEO Steve Katsaros during the campaign launch in July. To take part in the campaign, visit [www.solarcampaign.org](http://www.solarcampaign.org).

## More products pass quality assurance expanding consumer choice

Six more products passed Lighting Africa's Minimum Quality Standards as well as the Recommended Performance Targets in recent months providing consumers with more choice in the rapidly growing off-grid lighting market.

The new products are three 'next generation' solar lamps and lighting systems from Barefoot Power, two new solar lighting products from Global Telelinks, and one product from a new company – Shanghai Roy.

Shanghai Roy debuts with a Solar Lighting Kit comprising a solar lamp, panel and battery pack with mobile charging capability.

Global Telelinks' products are the portable Arundhati Home Light and a 3W ceiling lantern, the latter being capable of charging cellphones.

Barefoot Power's three products include a new Firefly Mobile LED desk lamp, with a lens that reduces glare and mobile phone charger.

The other two are solar home lighting systems that both charge mobile phones; PowaPack Junior 2.5W which powers two lamps, and the PowaPack 5W which powers four lamps, and can run a small four battery radio.

## OFF-GRID NEWS

### The solar lantern: Transformative technology for the future

The Economist predicts, in a September issue, that the portable solar lantern is the world's next transformative technology.

"Just as the spread of mobile phones in poor countries has transformed lives and boosted economic activity, solar lighting is poised to improve incomes, educational attainment and health across the developing world," the weekly magazine observes.

The Economist buys into the environmental logic of a lamp that traps the sun's energy during the day to discharge it as light at night, cutting out the need for the polluting and increasingly pricey kerosene.

The magazine also likes that the promotion and adoption of solar-powered lighting products is "sustainable because it is being driven by market forces, not charity."

These predictions are affirmed by IFC which established the 'energy-for-the-poor' sector as a largely untapped US\$37 billion market, in a report released in June.

Lighting Africa, the joint IFC-World Bank Program, has driven the development of the modern off-grid lighting market in Africa.

## Its all systems go! Don't miss this year's off-grid lighting conference and trade fair

Arrangements for the International Off-Grid Lighting Conference and Trade Fair are at advanced stages with topical sessions planned, and about 700 participants expected.

The conference is the premier event for off-grid lighting, and serves as an important forum for networking and making business-to-business links, and shaping future development of the off-grid lighting market.

Highlights will include the release of the findings of the 2<sup>nd</sup> Africa Market Study.

The findings will provide insights on how the market for off-grid lighting products has evolved in the past three years when dedicated efforts, such as the Lighting Africa program, were initiated to catalyze and develop a sustainable market.

The study will provide invaluable insights on market opportunities and challenges, innovative and evolving business models, consumer trends,

technological and product advances, and arising sustainability issues.

The first issue of the African market survey provided baseline information on the envisioned off-grid market, informing and shaping interventions that have steered the phenomenal growth recorded in the modern off-grid lighting market to date.

Other pertinent issues to be featured at the conference include 'Financing across the supply chain', 'Reaching the last mile: Issues & approaches', policy updates and a global quality assurance framework.

Speakers include energy ministers, key industry players such as the Global Off-Grid Lighting Association, manufacturers and distributors of lighting products, and development partners.

Winners of the 2nd Global Products Awards, whose products have passed the quality, affordability and consumer tests, will be announced.

## Outstanding Product Award winners to be announced in Dakar

The 'Lighting Global Outstanding Product Awards' winners will be announced in November at the third Off-grid Conference and Trade Fair.

The Awards recognize off-grid lighting products that have passed rigorous quality testing and meet consumer expectations in usage and affordability.

The 'Lighting Global Outstanding Product Awards' are designed to support the development of the emerging off-grid lighting market, as well as to help consumers identify and recognize the very best affordable lighting systems currently available.

Manufacturers submitted products for the awards in December 2011. These products have since been evaluated by a panel of expert judges.

The initial pool of entries was narrowed down to 16 products based on a first round of judging that looked at each product's technical performance and its affordability.

The last 16 products were put through further technical evaluation in the lab and taken to the field for evaluation by end-users in towns and villages in three countries—Senegal, Kenya and India in forum discussions.

The products will compete in three price-based categories; Budget (US\$ 30 and under), Mid-range (US\$30-72) and Premium (US\$72-135).



A Barefoot Power representative with their medals' haul at the last conference

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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 in the Lighting Africa network.

Lighting Africa, a joint IFC and World Bank program, 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 have brought cleaner, safer, and better lighting to 3.8 million people. Lighting Africa is working to increase energy access and provide better lighting to 250 million people by 2030. For more information, visit [www.lightingafrica.org](http://www.lightingafrica.org)

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.

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