

Inter Press Service News Agency

ENERGY-AFRICA: From Kerosene to the LED, O-HUB and O-BOX

By Stephen Leahy

**ACCRA, May 8 (IPS) - In many of Africa's towns and villages, smoky kerosene lamps are all that keeps the darkness at bay after sunset. However, kerosene is a dangerous and increasingly expensive source of light for Africans who do not have access to electricity -- about three-quarters of those living on the continent, according to the World Bank.**

Lighting industry entrepreneurs are hoping alternative devices such as solar-powered LED lights will replace the kerosene lamps.

"Africans spend more than 18 billion dollars a year purchasing kerosene," said Russell Sturm, who heads up the sustainable energy team at the International Finance Corporation (IFC), a member of the World Bank Group.

"And that estimate was done when oil was 35 dollars a barrel, so there is an enormous market for lighting," he told IPS, adding that the prices of LED devices and solar panels had dropped dramatically over the past three years, and were now competitive with kerosene costs. The price of oil passed the 120 dollar per barrel mark for the first time earlier this week.

It was against this background that the World Bank Group launched the 'Lighting Africa' campaign last September. The initiative aims to provide lighting products and other energy services that are not dependent on fossil fuels -- and which are safe, reliable and low cost -- to some 250 million people in sub-Saharan Africa by 2030. Presently, Africans are estimated to spend about 40 billion dollars annually on lighting products powered by fossil fuels.

Under the auspices of the campaign, 'Lighting Africa 2008' -- dubbed the "first global business conference" for off-grid lighting on the continent -- took place this week in the Ghanaian capital of Accra. The May 5-8 gathering was aimed at attracting investment to the African lighting sector, and drew representatives from governments, industry and non-governmental organisations (NGOs).

Few solar-powered LED devices have been designed for Africa, and companies need to conduct market research to find out how such lights could be used. "We do know that they must be rugged, simple and affordable," said Sturm.

LEDs (light emitting diodes) are illuminated by the movement of electrons in material that is able to conduct electricity, rather than by heated filaments. The devices are more energy efficient and last longer than conventional incandescent bulbs, although the upfront costs of installing them can still be higher.

Pilot market research in certain countries to gain a better understanding of what is needed has been sponsored by the IFC, which supports the private sector in developing nations. A vast number of businesses "are off the grid in Kenya," Melissa Baker of Research International, a global market research firm, told delegates.

Many of those businesses indicate they would stay open three or four hours longer if they had better lighting, she added.

Families report that they are forced to use buckets in homes as toilets at night because they do not have a portable light to go to the more sanitary pit latrines.

Lighting industry giant Osram GmbH of Munich, Germany, has also done market research, and envisages supplying solar energy to Africans at rates that are competitive thanks to economies of scale.

The company wants to build what it calls "O-HUBs": centres where rural residents can buy solar energy in small, affordable quantities. "People will come to the O-HUB and pay to have their mobile phone charged for example," said Rodd Eddy Senior, the company's director for off-grid global sustainability.

Osram would also lease certain products, including LED lights and the "O-BOX" -- a large battery with electronic components that will power lights, radios and other devices. "We manufacture everything and want to be responsible for maintenance and recycling of products at the end of their life cycle," noted Eddy.

In addition, O-HUBs will sell purified drinking water; "We think that will be a good way to bring people in," said Eddy. Originally, Osram had planned to supply the water free of charge, but was advised against doing so by NGOs, amongst others.

The company doesn't plan to operate the O-HUBs; instead, it would like to lease them to local authorities, NGOs or entrepreneurs.

The first pilot O-HUB opened last April in the village of Mibta, Kenya, where night fishing on Lake Victoria is the main source of food and income. "Fisherfolk used kerosene lanterns and there is hardly anyone who doesn't have kerosene burns," said Eddy, noting that while Mibta had power lines, few people could afford the connection fee of approximately 460 dollars.

Three more O-HUBs are planned for Kenya. Osram plans to take the concept to India, where there are also vast numbers of people without electricity.

Improved energy sources are key to helping countries achieve the eight Millennium Development Goals agreed on by global leaders in 2000, and which seek in part to halve the number of people living on less than a dollar a day.

"Proper lighting is key to improving livelihoods of the poor," said Christine Peterson, executive director of the Freeplay Foundation, an NGO based in South Africa and the United States that is best known for distributing hundreds of thousands of wind-up radios in East and Southern Africa.

The foundation was set up a decade ago by the Freeplay Energy Group, a London-based firm that designs, manufactures and markets a range of portable products -- including torches and mobile phone chargers -- that make use of solar and other clean energy sources. (END/2008)