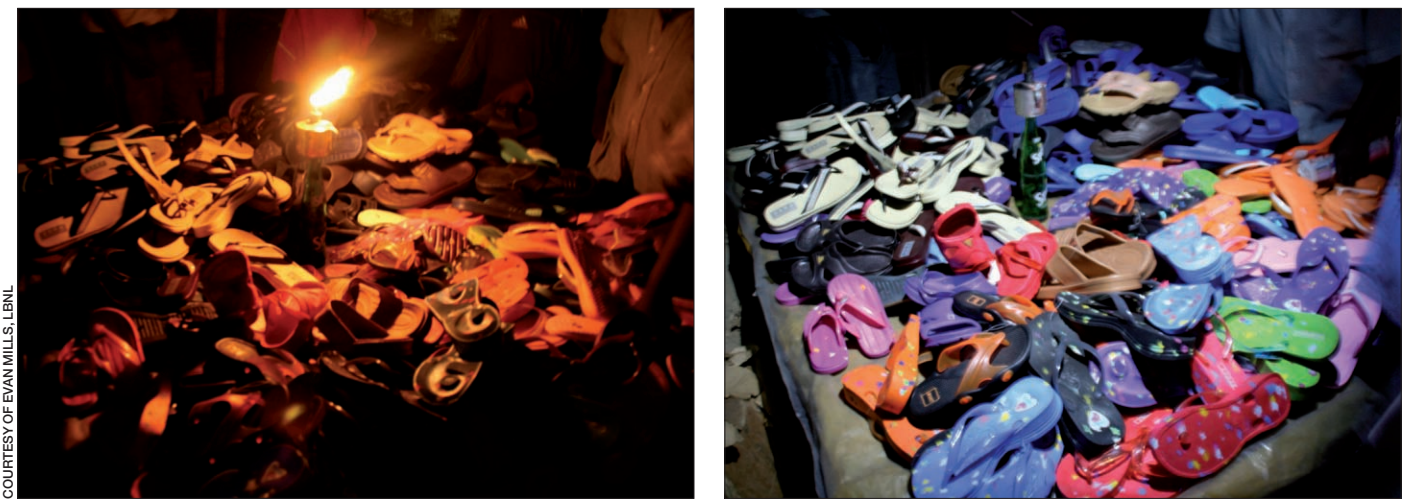
LEDs MAGAZINE

IFC project stimulates LED market for off-grid lighting

A project organized by the International Finance Corporation aims to help LED companies to sell lighting systems to homes and businesses that rely on fuel-based lighting.



COURTESY OF EVAN MILLS, LBNL

LED lighting can have a huge impact on microbusinesses, such as this sandal seller's stall in Tanzania, which would normally use a single kerosene lamp (left). The quality of light and the appearance of products are significantly improved using a single 1 W white LED (right), and the merchant would expect to make substantial cost savings by switching from kerosene to LEDs.

The International Finance Corporation (IFC), the private sector investment arm of the World Bank Group, has launched a project with around $7 million in funding to bring LED-based lighting to areas of the globe that lack electrical power. The project is funded primarily by the Global Environment Facility, and developed and implemented by the IFC. Potential participants are encouraged to visit the project website at www.ifc.org/led to register their interest. As of November 30, says IFC's Fabio Nehme, 145 organizations from 27 countries have expressed interest in taking part.

LED lighting, powered by photovoltaic systems or other power sources, could have huge benefits for the developing world. At the same time this project could stimulate a very large market for the emerging LED lighting industry.

At a recent seminar to announce the project to the LED industry, IFC's Russell Sturm said that the motivation to become involved might be either humanitarian or profit-driven. "Both these factors are important for the project to be a success," he said.

Replacing fuel-based lighting

IFC's Lighting the Bottom of the Pyramid project aims to assist companies to sell LED-based lighting systems to the 1.6 billion people around the world who are not connected with the electrical grid, not to mention a large number with intermittent access to electricity Lacking access to electrical lighting, many of these people and businesses instead rely on fuel-based lighting.

Lanterns that burn kerosene represent the dominant type of fuel-based lighting, but these are very inefficient, produce a very poor quality of light and are very expensive to run. The annual cost of buying kerosene can easily account for a month's wages in some countries. Where lighting is limited by cost, this can have serious implications. For example, child literacy is affected by restricted study hours, and small businesses are affected if they cannot afford to stay open after dark. To make matters worse, burning kerosene indoors can have health implications and pose a fire hazard.

Evan Mills of the US Department of Energy's Lawrence Berkeley National Laboratory and consultant to the IFC project has estimated that fuel-based lighting consumes $38 billion each year in fuel expenditure, on a global basis (and this was before the recent run-up in world oil prices), and this figure is rising. IFC's goal is to help project participants to penetrate this huge and established market. In comparison, electric lighting consumes $185 billion in electricity costs, according to Mills – a number that is falling, thanks to ongoing improvements in electric lighting.

Pilots in Kenya and Ghana

The project will focus initially on Kenya and Ghana, since these countries have 15.9 million customers who spend $1.4 billion a year on fuel-based lighting. Sturm says that this is the pilot for what IFC expects to be a global initiative.

Phase 1 of the project will bring together private sector consortiums