

## LIGHTING AFRICA Q & A

### What is Lighting Africa?

**Response:**

Lighting Africa is a World Bank and International Finance Corporation (IFC) initiative aimed at providing up to 250 million people in Sub-Saharan Africa with access to non-fossil fuel based, low cost, safe, and reliable lighting products with associated basic energy services by the year 2030.

- Jointly managed by the World Bank and the International Finance Corporation (IFC), Lighting Africa addresses the lighting needs of rural, urban, and peri urban customers without electricity access—predominantly low income households and businesses.
- Lighting Africa offers an alternative to current lighting options for this market, which is dominated by costly, inefficient, poor quality, and often hazardous fuel based products, such as kerosene lamps and candles.
- Lighting Africa seeks the rapid scale-up and delivery of affordable, non-fossil fuel lighting, and especially opportunities for dramatic cost reductions. It builds upon the institutional capacities already existing in Africa and globally, with a bottom-up focus on consumer needs.
- Lighting Africa is technology neutral and open to a range of modern energy options for delivering low cost, high quality lighting services.

Lighting Africa is designed to contribute to the Millennium Development Goals (MDGs) by reducing poverty and enhancing quality of life. It is a cornerstone of the World Bank's Clean Energy and Development Investment Framework and the Africa Energy Access Scale-up Plan.

### What is the relationship between Lighting Africa and Lighting the Bottom of the Pyramid?

**Response:**

Lighting Africa was born out of the Lighting the Bottom of the Pyramid Project (LBOP), an IFC initiative that was created to facilitate the international lighting industry and the local business communities in developing a robust off-grid lighting product market in Kenya and Ghana.

- Lighting Africa fully integrates the work of LBOP and builds upon the experiences gathered in Kenya and Ghana for scale-up to other African countries.
- The pilot phase now includes Tanzania and Zambia in addition to Kenya and Ghana, but the project design and implementation strategy are intended for replication across Africa and beyond.
- The WBG will facilitate market development and capacity building activities until the off-grid lighting markets are mature enough to provide off-grid populations of Africa with easy access to sustainable, affordable, and reliable lighting products.
- By combining the comparative strengths of both IFC and the World Bank, Lighting Africa is able to address a range of issues in the private and public sectors that need to be tackled to improve the lighting situation for millions of off-grid users in Africa.

## What is the rationale behind Lighting Africa?

### Response:

Currently, 1.7 billion people worldwide are without electricity, of which half a billion live in Sub-Saharan Africa. Among the poor, lighting often costs the most, typically accounting for 10-15% of total household income. Light from kerosene lanterns, batteries, candles etc. is of low quality and cause of serious indoor pollution.

- Lighting Africa seeks to develop alternative lighting options for the poor in rural and urban areas.
- The Project seeks to leverage the World Bank Group and other development partner resources to create enabling conditions for a large number of lighting companies to enter and service this lighting market.
- The project seeks to identify and mitigate the barriers that prevent the private sector to engage in this market such as technology, policy, finance, information etc.
- The innovation, competitiveness, marketing acumen and investments of the private sector will play a big part in this.

It is the aim of Lighting Africa (LA) is to reduce these market barriers through close collaboration between the international lighting industry, local businesses and entrepreneurs, governments and other partners to accelerate the development of the modern off-grid lighting market in Africa.

## Why do the World Bank and International Finance Corporation get involved in the lighting market? Isn't the private sector better equipped to do this and if not, what barriers are hindering market entry?

### Response:

Spending on fuel-based lighting is estimated to be worth US\$ 38 Billion per year. While in theory this could offer a large incentive for private companies to get involved, in practice the off-grid lighting market has remained largely untapped. In this respect, several market barriers have been identified:

- Lack of information on the size of the market, customer needs and preferences, distribution networks etc.
- Real and perceived risks of entering African markets
- High upfront costs of new product development and market entry
- High transactions costs: due to weaknesses in infrastructure as well as legal and regulatory frameworks
- Policy barriers including subsidies for kerosene lanterns
- Institutional barriers in identifying capable partners for all aspects of project and program design, development, and implementation.

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## Why do the World Bank and International Finance Corporation specifically address lighting?

### Response:

People who live in lighting poverty are not without access to light, they are without access to the *kinds* of light that promulgate human development. Currently, the majority of Africa relies on traditional lighting sources such as biomass, candles, and kerosene to satisfy their lighting needs. Of these, as many as 500 million people use fuel-based products such as kerosene wick lamps to meet their basic

lighting needs. Yet, while these products consume a large share of their scarce incomes, users receive little in return. Moreover, the quality of light is very low – rendering many activities impossible or inefficient after dark. At the same time, it causes heavy indoor air pollution and fire hazards.

### How will Lighting Africa help the poor?

**Response:**

Evidence demonstrates numerous linkages between human development and access to energy services.

- For example, a positive correlation has been found between increased access to energy and rises in annual household income-level such that modest increases in electricity or lighting services are associated with much larger improvements in human development.
- Because per capita income levels are unequivocally linked to access to energy services such as lighting, expanding access to modern lighting is directly related to the eradication of endemic poverty.
- Moreover, two of the greatest perceived residential benefits of illumination- lighting for education and extension of producing time- are correlated with increased gender equality and opportunities for women and children.

Apart from households, evidence suggests that access to modern, clean and affordable lighting is one of the key development challenges for millions of entrepreneurs and businesses who have difficulty operating after dark.

### Why is it important for the continent? What are the expected outcomes of the program?

**Response:**

Put simply, it is important because Africa cannot wait for electrification rates to rise to the level of other world regions to provide lighting. This is an immediate solution, now made possible due to modern, low cost lighting technologies.

Modern lighting services through the Lighting Africa program are expected to yield the following outcomes:

- Extend the working day for small and medium enterprises (SMEs), thus expanding production, enriching income opportunities, improving working conditions, and increasing customers.
- Enhance safety and security via outdoor lighting for personal, business, and community activities.
- Create conditions to attract teachers, retain students, expand time for student reading and studying, and improve grades and school retention rates.
- Provide opportunities for adult literacy and higher education programs.
- Reduce greenhouse gas emissions

Improve health services delivery and thus reduce productivity loss due to illnesses.

### What are the key activities of Lighting Africa?

**Response:**

Lighting Africa is a multi-pronged initiative addressing both demand and supply-side constraints to improve access to better lighting. Activities include:

- **Supporting Market Research** to better understand consumer demand behavior and preferences, and local supply, marketing, and distribution channels.
- **Strengthening Ties between the Global Lighting Industry and Local Service Providers** to design, develop, and deliver low cost lighting products. Examples include a Development Marketplace competition, facilitation of business-to-business linkages, and strengthening of small and medium enterprises (SMEs).
- **Financing Facilitation** to increase access to affordable financing for suppliers and end-users, reduce investor risks, mobilize local financial institutions (and micro-finance), offer World Bank Group financing, and apply Clean Development Mechanism (CDM) methodologies to bring down consumer costs.
- **Developing Standards, Certification, and Labeling** to improve product quality and increase consumer awareness and confidence in new-to-market lighting products and services.
- **Aggregating Market Demand** through policy support, bulk market purchasing, risk sharing, and linkages to cross sector programs.

**Stimulating Knowledge Sharing and Capacity Building** to include a business-to-business web portal, training and train-the trainers programs, public-private partnerships, institutional strengthening, and development of new business models and toolkits.

### Is Lighting Africa investing in the development of new technologies? Isn't that risky?

**Response:**

Lighting Africa is not investing in the development of new technologies. Thus, Lighting Africa will not select, prescribe or bet on any specific technical solutions. Instead, Lighting Africa acts as facilitator or enabler of private sector development in new and existing products that have the potential to meet the lighting needs of the off-grid populace in Africa. The World Bank Group can help mitigate barriers, bridge market gaps, and facilitate cost-effective lighting choices for the poor. By providing access to market intelligence and expertise, mobilizing governments to address policy concerns, supporting financing and risk mitigation instruments, and serving as an honest broker between public, private, and civil organizations, the World Bank Group can support industry efforts to transform markets and increase benefits for those living in poverty.

### What is the budget for the Lighting Africa project and who is supporting it?

**Response:**

Lighting Africa has a budget of about \$12 million which serves as seed funding from a variety of donors to launch and pilot the program.

- Donors include the World Bank; International Finance Corporation; the Energy Sector Management Assistance Program (ESMAP); the Global Environment Facility (GEF); the Public-Private Infrastructure Advisory Facility (PPIAF), Department for International Development (DFID); the European Commission; bilateral donors including the United Kingdom, the Netherlands, Norway, Luxembourg,; Good Energies, Inc.; and the Renewable Energy and Energy Efficiency Partnership (REEEP).

## What business models will be used to promote lighting products and services to low income consumers?

### Response:

Currently, the non-fossil lighting market in Sub-Saharan Africa, as many markets for low income people in developing countries, is not very well known or explored.

- Under this program the World Bank will work with global lighting companies, local service providers and distributors, NGOs, the local financing industry (including micro finance organizations) to develop appropriate business models.

This will include identifying the "right" products to be delivered through the "right" value chains with "reliability" and at an "affordable and competitive price". Lighting Africa activities being undertaken to advance viable business models include: market research on-going in several countries; business-to-business linkages through the Lighting Africa B-2-B portal; and the Development Marketplace grant competition.

## Are there any good anecdotes you have seen from your research on the ground around Africa that you could recount to put a human face on the problem?

### Response:

- During our market research, we have met a single mother with two children in rural Kenya, living under a dollar a day that was spending as much as 30% of her income on fuel-based lighting - between 2 flashlights and a kerosene lamp. It was anecdotal and an extreme case, but indicative of the potential impact of a more modern and affordable lighting solution.
- Small business segments, such as fishermen, are found to spend as much as \$1,000/year on fuel-based lighting as they use lighting around the boat when fishing. Currently, they use kerosene as the main lighting sources, but some small African companies are starting to offer some alternative products using LED technology that are better and more affordable.
- In Dar-e-Salaam, Tanzania, night shoe sellers have improved lighting quality, increased sales, and reduced pollutants by replacing a handmade kerosene lamp with a 1-watt LED at almost the same cost.

## When can we expect to see the first concrete results; are there particular countries you will be targeting first?

### Response:

The project will first target Kenya, Ghana, Zambia and Tanzania. Another six countries will be targeted over the next 2-3 years.

There is some initial anecdotal evidence of companies and investors considering these markets, and we expect to see initial results on the ground in 2-3 years. Two such anticipated results are:

- Selection of up to 20 Lighting Africa Development Marketplace Competition finalists, each of which will receive grants for the design and delivery of low cost, high quality, non-fossil based lighting products for low income consumers.
- Development of standards, certification, and labeling to improve product quality and increase consumer awareness and confidence in new-to-market lighting products and services.

Lighting Africa will also be integrated into investment programs of the World Bank under development in a number of African countries such as Burkina Faso, Ethiopia, Ghana, Kenya, Senegal, Tanzania, Uganda, and Zambia.

### **What response have you received to Lighting Africa?**

**Response:**

To date, nearly 1200 lighting-related organizations from more than 52 countries have expressed interest in participating in the project or have actually registered with the program.

- Over 700 organizations are private lighting companies, participating in all parts of the supply chain and include global players, such as Philips and Osram, and entrepreneurs from 14 African countries.

The remaining organizations include a broad range of stakeholders, including investors, research centers, NGOs, and universities working with lighting or development.

### **What is the Development Marketplace? What Types of activities are eligible for support?**

**Response:**

The DM is a competitive grant program that will support private enterprises in developing and delivering a wide array of modern lighting products for poor households and businesses that are not available in the marketplace today.

- A broad base of activities will be supported by the DM. Examples include: improving technology/product innovation for low income consumers; demonstrating business models which strengthen manufacturing, marketing, and distribution supply chains; reducing product cost and increasing access to financing (supply and demand); reducing transaction costs; identifying approaches for disposal of CFLs. Please note your idea must have direct impacts; pure research proposals will not be funded by the DM.

### **What is Lighting Africa 2008 ?**

**Response:**

*Lighting Africa 2008* is the title given to the program's first conference. Its full name is ***Lighting Africa 2008: First Global Business Conference and Development Marketplace Competition for Off-Grid Lighting in Africa***. This conference will be held in Accra, Ghana, between May 5-8, 2008. This conference is the first of its kind.

The conference is designed for investors, financiers, private firms, end users, and development agencies to showcase and expand business opportunities targeting low income populations in Sub-Saharan Africa.

The conference's main objectives are to increase investor awareness of the significant market opportunities for improved lighting

products and services in sub Saharan Africa; to link global investors with local suppliers and service providers; to share business and financing model structures for lighting projects; and to showcase project opportunities.

The *Lighting Africa 2008* program includes:

- Lighting Africa Conference and Knowledge Exchange on the Business Opportunities in the African Market for Off-Grid Lighting Solutions
- Lighting Africa Development Marketplace (DM) Grant Competition Finale
- Lighting Africa Trade Fair, showcasing a broad range of modern off-grid lighting products (free of charge, but space is limited to a first come, first serve basis)
- Countless Business-to-Business Networking Opportunities

### What will be the focus of the discussions at Lighting Africa 2008?

**Response:**

Discussion will revolve around the following:

- Defining the Off-Grid Lighting Market in Africa: size, segments, and opportunities (preliminary findings from *Lighting Africa's* comprehensive 5-country market research study to be released)
- Penetrating the Off-Grid Lighting Market: a survey of successful African market entry strategies from alternative industry sectors (telecom, FMCG, etc)
- Identifying the African Consumer: needs, willingness to pay, product preferences, and more (preliminary findings from a 5-country comprehensive market research to be released)
- Successful Innovation and Entrepreneurship in the African context: the Development Marketplace experience
- Market Entry and Growth Financing: accessing finance in Africa for business development
- Partnering for Success: private sector collaboration for rapid market development

### What outcomes should be expected of Lighting Africa 2008?

**Response:**

- Identification and announcement of up to 20 winners of the Development Marketplace competition featuring innovation in lighting project design and execution.
- Sharing of experiences of the global lighting industry and local African entrepreneurs and service providers on lighting opportunities.
- Improved understanding of the risks/rewards of investing in lighting projects, programs, and business ventures.
- Enhanced awareness of financial institution requirements for investment.
- Increased awareness of the conditions for building a profitable lighting portfolio in Sub-Saharan Africa.
- Sharing of successful business models and financial structuring of deals in developing countries that could be replicated.
- Identification of co-investment and risk mitigation instruments from local/international sources.
- Increased exposure to specific lighting projects and business opportunities for commercial and public-sector end users.