

## **REQUEST FOR PROPOSALS**

### **INTERNATIONAL FINANCE CORPORATION (IFC) SUSTAINABLE BUSINESS ADVISORY**

#### **LIGHTING GLOBAL COOPERATION AGREEMENT WITH TESTING LABORATORY**

**MARCH 10, 2014**

#### **I. Introduction**

Currently, 1.3 billion people worldwide are without electricity. The International Energy Agency (IEA) predicts that by 2030 (absent major policy changes), projected investments in grid electricity expansion will leave 1 billion people without modern energy services for basic human needs and economic development. The problem is most acute in Sub-Saharan Africa where more than 500 million people presently lack modern energy, with rural electricity access rates as low as 2 percent.

Among the poor, lighting services account for a significant level of expenditure, typically accounting for between 10 - 30 percent of total household spending on energy. Although consuming a significant share of scarce income, fuel-based lighting provides little in return. New advancements in lighting technology, such as light-emitting diodes (LEDs), promise clean, durable, lower-cost, and higher-quality lighting. The challenge is to leverage these technologies to develop products and business models specifically targeted at the over one billion “energy poor” people in Africa and Asia. Work has already begun to engage the African, Asian, and broader international lighting industry in this new market area, while serving consumers, bolstering local commerce, creating jobs, enhancing incomes, cleaning the air, and improving health, safety, and quality of life.

*Lighting Global* is an IFC program aimed at supporting the development of commercial markets for off-grid lighting and energy systems, in conjunction with private sector partners and the existing *Lighting Africa* and *Lighting Asia* programs. Lighting Global engages in global activities that support the regional efforts of the Lighting Africa and Lighting Asia programs. Key activities within Lighting Global include development and implementation of a quality assurance and consumer protection program, engagement with global industry partners such as international off-grid lighting product manufacturers and the Global Off-Grid Lighting Association (GOGLA), and co-organization of the premier international off-grid lighting conference and trade show.

*Lighting Africa* is a joint World Bank/IFC program that was initiated in 2007 and formally launched as a pilot program in Kenya and Ghana in 2009. It is in the process of expanding to additional countries such as Nigeria, Ethiopia, Tanzania, and others. The program is designed to support increased access to clean, affordable modern off-grid lighting and energy services for the hundreds of millions of people in Sub-Saharan Africa who currently rely on fuel based lighting.

*Lighting Asia* is an IFC program that was launched in 2012. Like *Lighting Africa*, it is focused on enabling improved energy access through activities that support the development of commercial markets for modern off-grid lighting and energy products. *Lighting Asia*'s activities began in India, and efforts are underway to expand activities to countries such as Bangladesh, Pakistan, Afghanistan, and Papua New Guinea.

*Lighting Global* actively supports both the *Lighting Africa* and *Lighting Asia* programs, and its activities are closely coordinated with these regional programs.

### **Lighting Global Off-grid Lighting Product Testing**

Laboratory testing of off-grid lighting products is a cornerstone of *Lighting Global*'s Quality Assurance strategy. In 2008-2009, the Fraunhofer Institute for Solar Energy Systems (FISE) was contracted by *Lighting Africa* to develop the *Lighting Global* Quality Test Method (LG-QTM); the method has since been updated and modified and is now in version 3.1. LG-QTM is designed to provide useful and accurate information about the expected performance, longevity, and user-friendliness of off-grid lighting products in a developing country context. This document is available upon request at: [producttesting@lightingafrica.org](mailto:producttesting@lightingafrica.org).

*Lighting Global* has been working closely with the International Electrotechnical Commission (IEC) on developing an internationally harmonized test procedure for off-grid lighting products. A draft technical specification document that includes the test methods described in LG-QTM 3.1 was submitted to the IEC through Joint Working Group 1 (JWG1) of Technical Committee 82 (TC82) and was approved according to a vote of IEC TC82 national committee representatives in September 2012. This document was published by the IEC in April 2013 as IEC/TS 62257-9-5, Edition 2.0.

*Lighting Global* has tested over 50 products in the past 1.5 years with products coming from the following geographic regions: 57% China (including Hong Kong), 6% in other SE Asian countries, 19% India, 11% in African countries, and 8% in Europe or the US. *Lighting Global* anticipates a similar testing need moving forward and is thus looking for testing lab partners to help address this need.

## **II. Objective**

The overall objective of this RFP is to assist one or more laboratories in developing the capabilities and expertise necessary to directly provide IEC/TS 62257-9-5 testing services to the manufacturing community.

## **III. Cooperation Agreement**

The IFC plans to achieve the objective stated above by developing a cooperation agreement with one or more laboratory. This cooperation agreement would differ from a standard "fee-for-service" contract in ways that are important for respondents to this RFP to understand. In a fee-for-service contract, the IFC would typically pay a fixed fee to a contractor in exchange for a pre-defined service (e.g. testing 10 off-grid products according to IEC/TS 62257-9-5). Under a cooperation agreement, the IFC and the partnering institution establish an agreement documenting their intent to partner to address a common objective and detailing the ways they will each pledge to do to address the objective.

The IFC plans to utilize the cooperation agreement rather than a fee-for-service contract in order to help to establish a long-term commercial market for testing off-grid lighting products. Specifically, the IFC wishes to reduce the risks and barriers that might otherwise prevent laboratories establishing building capacity to test off-grid lighting products that would ultimately result in the laboratories providing testing services directly to manufacturers of off-grid lighting products. In this way, a commercial testing market for off-grid lighting products can grow beyond scope defined by Lighting Global.

The terms of the cooperation agreement will depend on the needs and goals of the partnering laboratory or laboratories and will be directly negotiated between the IFC and the winning bidder(s).

Under a cooperation agreement, IFC may agree to:

- Provide direct financial support to a laboratory to purchase equipment necessary to test products to IEC/TS 62257-9-5.
- Provide in-kind support to a laboratory by assisting in training and technical support to test to IEC/TS 62257-9-5.
- Provide direct financial support to laboratory to assist them in becoming accredited to test to IEC/TS 62257-9-5.
- Support the laboratory in establishing a viable business in the off-grid lighting market by recognizing/accepting their IEC/TS 62257-9-5 test results and directing Lighting Global affiliate manufacturers to the laboratory for testing services.

Under a cooperation agreement, a laboratory may agree to:

- Acquire the equipment needed to test to IEC/TS 62257-9-5.
- Provide staff the training needed to test to IEC/TS 62257-9-5.
- Apply to appropriate accreditations in order to test to IEC/TS 62257-9-5.
- Participate in periodic round-robin testing to IEC/TS 62257-9-5.
- Provide IEC/TS 62257-9-5 testing services directly to the off-grid lighting manufacturers at a reasonable fee.

#### **IV. Project Timeline**

- Deadline for receipt of proposals: Wednesday, April 9, 2014 at 11:59 PM Eastern Standard Time
- Anticipated notification to selected bidder: April 23, 2014
- Anticipated time to develop and sign Cooperation Agreement: April/May , 2014
- Anticipated time to begin implementation of Cooperation Agreement: June, 2014

#### **V. Proposal**

Proposals will be evaluated based on the technical merits and financial resource requirements of the bidders. Evaluations will be based on bidder responses to the items listed below. Proposals that do not contain all of the materials listed below may be automatically rejected. Bidders should submit a proposal that provides detailed information as indicated below. The main body of the proposal does not need to follow a standard format, but it should include the necessary information. However, several elements of the proposal do need to follow specified template. The first such element is a statement that details any financial resources that are requested by the laboratory. The financial portion of the proposal should follow the format indicated in the provided "Financial Proposal"

template. Bidders should also submit the four supplemental attachments listed below using the provided templates.

The Proposal should include the following items:

- 1) Narrative (approximately 7-10 pages): A narrative description of the bidder's technical qualifications and relevant experience, which make them qualified to perform testing according to IEC/TS 62257-9-5. Specifically, this narrative must include the following six sections:
  - a. Experience: This section should describe specific reference to the testing organization's experience in the four following areas: i) photometric measurements (including experience with measurements of LED lighting systems), ii) battery and energy storage system performance testing, iii) DC charging system measurements (including performance measurements for solar PV, dynamo, and AC power supply based charging systems), and iv) evaluation of product durability and workmanship (including evaluations of electronic circuit boards and wiring, durability testing, and estimate of IP class). Bidders are encouraged to supplement the narrative discussion of experience with supporting materials that include CVs or resumes should also be included for all key personnel, including subcontractors where applicable. If subcontractors will carry out portions of the testing, their contact information, qualifications, experience, and technical capabilities should be described.
  - b. Equipment: This section should discuss bidders key equipment and instruments. Bidders must also detail laboratory equipment in as by completing Attachment A (as discussed below). If the bidding laboratory needs support from IFC to purchase new equipment, the cost of procuring this equipment should be included in the Financial Proposal (see below).
  - c. Laboratory location: This section should indicate the location of the primary laboratory involved in the proposed testing work. If all of the testing will not take place in a single location, this section should include text that identifies the names and locations of any additional laboratories that may be involved and the tests that will be conducted at each location.
  - d. Work Flow: This section should describe how the bidder proposes to test off-grid products and should be accompanied by completing Attachment B (as discussed below). Specifically, bidders should detail if they expect to follow the workflow suggested in Attachment B and if not, detail in which ways they plan to vary the work flow and for what reasons. (Note: variations in the work flow are allowed and even encouraged if bidders can appropriately explain the advantages of alternative work flow they are suggesting). Bidders must write in the name of the staff person in charge (test leader) of each testing area on the chart and the bidder should include a resume or CV for of the named test leaders. For bidders that will be conducting testing in multiple locations (e.g. lighting in location A and PV in location B), bidders must write in the locations at which each test is proposed to be conducted at.
  - e. Business and Implementation Plan: The section should describe the bidder's business and implementation plan with respect to providing testing services for off grid lighting products. Specifically, the bidders are asked to comment on at least the following:

- i. their willingness to contract directly with off-grid manufacturers
  - ii. the minimum annual revenue they would need to generate from off-grid lighting testing in order to make this a worthwhile area to expand into
  - iii. their ideal outcomes (i.e. “best case scenario”) for how much their revenue they would generate from off-grid lighting testing over the next 5 years
  - iv. their initial plans with respect to pricing for providing testing services directly to product manufacturers according to methods described in IEC/TS 62257-9-5 testing services
  - v. their needs with respect to staff capacity building and technical training and plans that they have to address these needs (bidders may request technical assistance from Lighting Global to meet these needs; if this assistance is required, it should be described)
  - vi. their plans with respect to obtaining ISO 17025 or other relevant accreditation to test to IEC/TS 62257-9-5.
- f. Financial Requirements: This section should describe the financial resources that the bidder expects to receive from the IFC in order to implement the business and implementation plan outlined above. The bidder may wish to receive, among other things, financial support to purchase equipment, acquire necessary accreditations, and/or cover the cost of staff development. Note: the information in this section will be used as a starting point to generate a Cooperation Agreement between the IFC and the winning bidder(s), but – if selected – the bidders(s) are not guaranteed to receive all or any of the items they request. The specific details of the Cooperation Agreement will be negotiated and finalized directly with the winning bidder(s) after the winning bidder(s) are selected. The financial requirements section should be submitted using the provided World Bank Group Financial Proposal template.

Bidders must also submit the following attachments:

- a) Attachment A: Equipment List: Bidders must fill out Attachment A detailing the equipment that they proposed to use to test to IEC/TS 62257-9-5.
- b) Attachment B: Work Flow Diagram: Bidders must fill out Attachment B detailing the work flow that they proposed to use to test to IEC/TS 62257-9-5.
- c) Attachment C: Accreditations: Bidders must fill out Attachment C detailing their accreditations that are relevant to IEC/TS 62257-9-5.
- d) Attachment D: Bidders must fill out Attachment D detailing their standard testing rates for the identified tests.

## **VI. Confidentiality Statement**

All data and information received from IFC for the purpose of this assignment are to be treated confidentially and are only to be used in connection with the execution of these Terms of Reference. All intellectual property rights arising from the execution of these Terms of Reference are assigned to IFC. The contents of written materials obtained and used in this assignment may not be disclosed to any third parties without the expressed advance written authorization of the IFC.

Proposals and all correspondence should be sent to Nkatha Michira using the following email address: CMichira@ifc.org.