

**TF071518**

**ANNEX B**  
**Amended and Restated on March 26, 2019**

**TO THE ADMINISTRATION AGREEMENT**  
**dated July 20, 2010**

**BETWEEN**

**THE GOVERNMENT OF ITALY AS REPRESENTED BY**  
**THE MINISTER FOR ENVIRONMENT LAND AND SEA**

**AND**

**INTERNATIONAL FINANCE CORPORATION**

**FOR**

**THE FINANCIAL SUPPORT OF**

**AN ADVISORY SERVICES OFF-GRID ENERGY PPP PROGRAM**  
**IN SUB-SAHARAN AFRICA**

**UNDER THE CLEAN ENERGY ACCESS PROGRAM**

## **Introduction**

In Sub-Saharan Africa (SSA), over 600 million people do not have access to electricity,<sup>1</sup> and extending the grid to serve dispersed rural populations is very costly and beyond the reach of public finance. Private off-grid energy solutions can play an important role in achieving universal energy access.

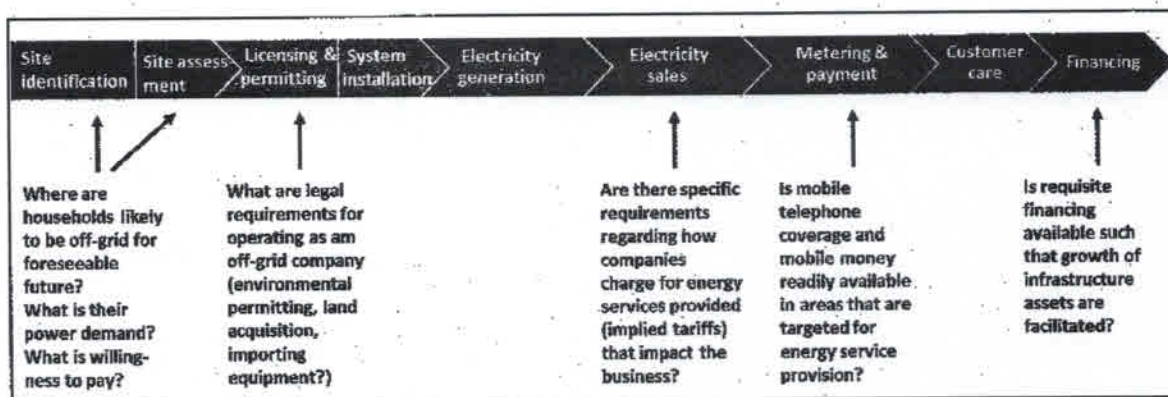
While there is significant interest from and on-going innovation by the private sector in this space, with enterprises referred to as distributed energy services companies (DESCOs) offering stand-alone solar home systems (SHS) or setting up mini-grids, a purely market-based approach faces a number of constraints in terms of scaling up. Issues that appear along the life-cycle (or value chain) of a typical off-grid project include the following:

- (i) Lack of geographical data on where off-grid populations are located;
- (ii) Limited data on demand for the quantity and quality of energy service that off-grid solutions are generally well-placed to deliver;
- (iii) Lack of clarity on where central grids are likely to be extended over the short- to medium term;
- (iv) Lack of clarity on the legal and regulatory requirements applicable to companies developing and operating off-grid solutions, ranging from licensing and environmental permitting, to import duties and electricity tariffs, to eventual grid interconnection;
- (v) Concerns about applicable tariff regimes, where off-grid solution business models tend to be very different from large, centralized systems based on conventional energy; and
- (vi) Limited 'facilitating infrastructure', such as mobile money to secure payment in remote areas and availability of affordable local currency financing.

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<sup>1</sup> International Energy Agency, 2014, Africa Energy Outlook

Figure 1: Illustration of type of risks that private companies face along the value chain



These and other uncertainties mean that project developers cannot assess whether off-grid solutions present an attractive proposition for expanding their businesses. Consequently, promising technologies and private sector business models that could potentially provide high-quality energy services are not currently being leveraged to meet latent customer demand in off-grid areas.

Well-structured and properly incentivized public-private partnerships (PPPs) could provide the clarity that private sector players need to engage at scale in the energy access market. Such an approach would allow the public sector to leverage private sector capital and expertise, by clearly defining the market to be served, contributing appropriate funding to cover viability gaps, and absorbing certain risks. PPPs developed under this approach could take various forms, depending on the public sector's willingness and ability to effectively allocate and share risks and leverage public funding.

In this context, IFC has structured a comprehensive off-grid energy PPP program, that will work with key stakeholders in the public and private sectors to address critical barriers hampering the reach of SHS and mini-grid DESCOS in Africa. IFC provides advisory both to individual firms, and at the sector and market level, where the focus is on accelerating market development and fuelling private sector growth. Our experience in challenging markets, long-term commitment and deep technical and market expertise provide unique insight and innovative solutions.

Given the complexity of the topic, significant time and sustained effort will be needed to have meaningful impact. IFC has therefore established a partnership with the Italian Ministry of Environment, Land and Sea (IMELS) to ensure that the program benefits from a sustainable source of funding, along with strategic and technical oversight and advice. This document outlines the program's objectives, components and activities, budget and timeline, program governance, potential focus countries, and potential impact.

### **Off-Grid PPP Program objectives**

The overall objective of the program is to increase access to modern, off-grid energy services in sub-Saharan Africa by using innovative PPP approaches to support the scale up of DESCOS. As such, the program aims to structure and support the implementation of various PPP models designed to attract private sector participation in the "off-grid market" using renewable energy sources.

These PPP models are to be structured to provide for risk-adjusted returns to attract serious private sector players, while ensuring that public sector financing contributions are economically efficient, and risk is allocated in an appropriate way between the parties. These models should also be replicable across markets in order to deliver maximum socio-economic impact for energy poor customers, governments and development partners. Depending on the country context, different PPP approaches and models may be relevant. These could range from private-sector engagements in a purely publicly-owned infrastructure asset, to models where the private sector engagement increases in both scope of responsibility and financial risk allocation, through to models where the private sector is solely responsible for implementing and managing the infrastructure.

IFC's approach emphasizes supporting the development of the market, rather than subsidizing most or all of the capital costs of the off-grid energy solution. The focus is on (i) helping to identify attractive markets, thus reducing development costs for private entities; (ii) removing or significantly reducing other risks (e.g. grid encroachment, unclear regulatory and legal frameworks, etc.), and thereby implied costs, that would otherwise be added to both the capital and operating structures of companies; and (iii) catalyzing affordable financing. Collectively, this approach is intended to sufficiently reduce the viability gap of new technologies and associated business models, and attract high quality developers to a country. The objective is that in future "scale up" stages (beyond the scope of this program), improved market maturity will mean that private companies are better positioned to assess commercially-viable energy access opportunities on their own.

### **Off-grid energy PPP Program Components & Activities**

The program will focus on the following components: A) Upstream work, B) Structuring competitive tenders, C) Transaction Advisory support, and D) Implementation support. While activities under each of these components will vary based on the country context, they could include the following:

#### **A) Upstream work**

- i. Generating critical data to attract high-calibre international and local off-grid energy solution providers. This would include conducting market assessments, which may draw on geographical information systems regarding population density, estimation of energy service demand, willingness to pay, customer segmentation, availability and use of mobile money systems, etc.;

- ii. Providing support to establish an institutional and regulatory framework for commercially-oriented, sustainable off-grid solutions that can be scaled up; and
- iii. Outlining a set of economically efficient incentives appropriate to the state of maturity of the market.

**B) Structuring competitive procurement of PPPs**

- i. Providing advisory support to design country-specific PPP agreements. This would include defining service areas based on geospatial information and developing standard documentation to reduce transaction costs and ensure a fair and bankable allocation of risks between the government and private sector developers; and
- ii. Structuring robust financing packages that blend commercial and concessional financing to reduce the viability gap between expected and actual returns on investment, as needed;

**C) Transaction Advisory support**

- i. Providing transaction advisory services to support the competitive selection of private operators that will design, co-invest, construct, operate and maintain the electrification infrastructure for a minimum fixed period. Under this activity, private operators would be assessed and selected based on criteria such as technical performance, number and service tiers of electricity connections, economic and financial viability of business plans, concessional financing requirements, and experience in providing high quality rural services;

**D) Implementation support**

- i. Providing operational and technical support to ensure that the partnerships stay on track to deliver results; and
- ii. Setting up systems to ensure that the expected performance of operators selected to participate in the market is met, and that monitoring can be done by relevant public entities.

Throughout the program, the IFC will engage closely with governments, power utilities, private sector players and development partners, to ensure that activities are tailored to countries' specific needs. IFC expects to introduce some new approaches, such as joint development agreements (JDA) where IFC engages with companies directly to develop off-grid energy solutions and partnerships with other development partners to accelerate the development of off-grid energy solutions.

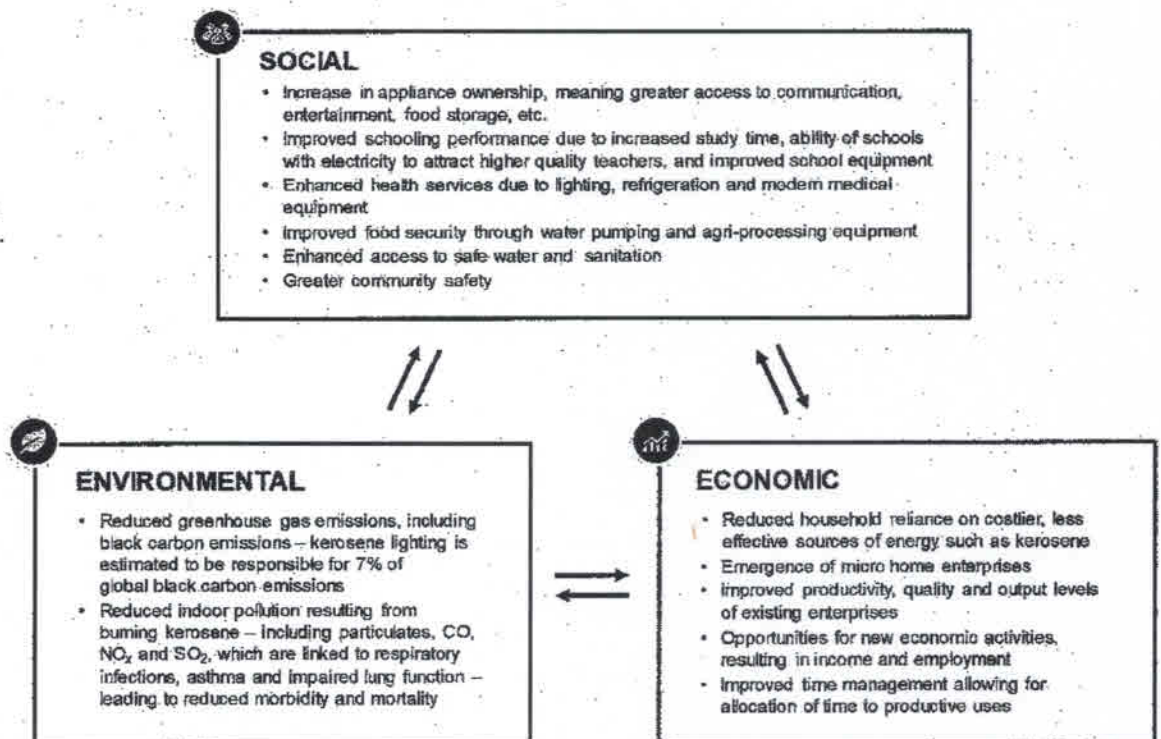
### Focus countries

IFC will select several countries to focus on, depending on interest and appetite of both public and private sector players. The Program will initially focus on Zambia, with the intention being to demonstrate the viability of this PPP approach before expanding to other countries. Other countries which may be interested in the Program include Cote D'Ivoire, Malawi and Mozambique, among others. In addition, as MELS is aiming to increase its footprint in the Sahel region, this program will seek to engage in the countries in that subregion, where possible.

### Expected results and impact

The program will enable access to modern energy solutions for households, enterprises and public services, resulting in social, economic and environmental benefits, as set out in Figure 2 below. Along with energy access objectives, the program will also contribute to transitioning towards a low-carbon economy and, therefore, to combating climate change.

Figure 2: Potential benefits of off-grid renewable energy access solutions



The program will measure impact against targets using the following key indicators:

- Number of people receiving access to improved electricity services
- Value of financing facilitated
- Renewable energy expected to be produced
- GHG emissions expected to be reduced

A further key benefit of the program will be demonstration of a PPP approach, which can then be replicated both within focus countries and in other countries to achieve delivery of off-grid energy solutions at scale.

#### Program Budget

Below is a table with the estimated costs across the different program activities.

Program Activities	ALLOCATIONS		
	ORIGINAL	ADDITIONAL	REVISED TOTAL
1. Upstream work	1,800,000	380,000	2,180,000
2. Structuring competitive procurement of PPP	1,550,000		1,550,000
3. Transaction Advisory Support		1,140,000	1,140,000
4. Implementation support	700,000	427,500	1,127,500
5. Program Development & Management	800,000	190,000	990,000
6. Travel	265,446	237,500	502,946
Administration Fee (5%)	269,234	125,000	394,234
<b>Total</b>	<b>\$ 5,384,680</b>	<b>\$ 2,500,000</b>	<b>\$ 7,884,680</b>