

**MITIGATION
NON-BLENDED**

PROJECT NAME	Off-Grid Solar Uganda Acceleration¹
COUNTRY/REGION	Uganda
SECTOR	Distributed Solar
PROJECT/INVESTMENT AMOUNT	EUR 50m (USD 50.5m) EIB is investing EUR 12.5m (USD 12.6m)
DEVELOPMENT PARTNER(S)/STAKEHOLDERS	European Investment Bank (EIB)
COUNTERPARTY MINISTRY/ INSTITUTION	N/A
INVESTOR(S) AND FUNDERS	EIB
GUIDEBOOK TAXONOMY FINANCIAL SYSTEM ACTOR	Multilateral development finance institution Corporate Balance Sheet
PROJECT OVERALL GOAL	The project will finance Fenix International (a subsidiary of ENGIE)'s deployment of solar home systems (SHS) in Uganda. The systems are composed of a solar panel, a central unit and several appliances and will be sold on a payment plan basis to individual beneficiaries under pay as you go contracts.
PROJECT OUTCOMES	The deployment of solar home systems will provide about 1,656,000 direct beneficiaries with improved access to energy, replacing traditional, polluting and less efficient alternatives such as kerosene lanterns, candles, and battery torches. Estimated CO2 emission reductions are in the order of 61,900 tons per year.
ALIGNMENT WITH COUNTRY IDENTIFIED CLIMATE STRATEGIES, NDCs, ETC. (IF APPLICABLE)	The proposed operation is highly supportive of development priorities in Uganda, as it will improve access to energy, the main bottleneck to social and economic progress, in a sustainable way. The project is fully aligned with EU objectives for the region and Uganda development program (Green Growth Development Strategy).
CONTRIBUTION OF THE PROJECT TO THE UN SDGs	SDG 1: Ending poverty in all its forms SDG 5: Achieve gender equality and empower all women and girls, as also pursued by the operation, as women and girls tend to be more exposed to indoor air pollution from kerosene lights. SDG 7: Affordable and clean energy SDG 8: Promote sustained, inclusive and sustainable growth, full and productive employment and decent work for all SDG 13: Climate action
SOCIOECONOMIC IMPACT	<ul style="list-style-type: none"> • The proposed operation will increase the deployment of renewable energy, displacing polluting and expensive kerosene or diesel generators, whilst at the same time increasing the share of low-income population having access to electricity. The operation will therefore contribute to climate change mitigation. • SHS offer a limited, but immediate access to electricity for populations that are not served by the grid and have the potential to significantly improve living conditions of the final beneficiaries, including better health and education outcomes.

¹ This case was provided by the European Investment Bank (EIB) as a contribution to the Sharm El-Sheikh Guidebook for Just Financing

	<ul style="list-style-type: none"> • Insufficient and inadequate electricity generation, as well as transmission and distribution, presents one of the main constraints on economic growth and socio-economic development of sub-Saharan Africa and particularly of Uganda. Rural areas are particularly affected by low coverage, and also by relatively high electricity prices. • The proposed operation will contribute to increased and cleaner supply and reliability of electricity, to better access to electricity, as well as energy efficiency, thus supporting economic activity and employment, as well as household needs. This in turn should translate into additional economic growth, leading to poverty reduction where the impact will be on the poor. Furthermore, locally generated electricity will ease the import bill and thus positively affect the balance of payments, leading to reduced macroeconomic imbalances in target economies.
ENVIRONMENTAL IMPACT (ON CLIMATE MITIGATION AND/OR ADAPTATION)	The project is expected to generate strong positive environmental and social impacts by providing access to reliable clean energy and lighting to households that are mostly not served by the grid and relying more expensive and polluting alternatives. The operation is expected to result in annual CO2 emission reductions of at least 62 kt.
ENABLING ENVIRONMENT (SUPPORTING POLICIES)	The proposed operation is strongly supportive of the EU development priorities in Africa. The Africa-EU energy partnership aims to secure reliable and sustainable energy services, to extend access to modern energy services and to expand the use of renewable energies in Africa. The proposed operation will promote private sector led activity, economic diversification and job creation.
TECHNICAL ASSISTANCE (IF PROVIDED)	N/A
FINANCING MODEL/APPROACH (EX: BLENDED FINANCE)	The project entails an investment loan of up to USD 12.5m from the EIB own resources to Fenix International Uganda to support the scaling up of its off-grid solar operations and the growth of the Pay-As-You-Go ("PAYGO") business of the company. The project falls under the Impact Financing Envelope ("IFE") of the Investment Facility. The IFE supports projects that generate superior developmental impacts with the overarching objective of poverty reduction, which could not otherwise be pursued due to a high level of risk. The proposed loan will be financed under the IFE due to its high developmental impact through its provision of first-time access to power for rural and poor communities in Uganda.
RATIONALE FOR FINANCING MODEL/APPROACH	See above
FINANCIAL INSTRUMENT(S) (LOANS (COMMERCIAL/ CONCESSIONAL), EQUITY, GUARANTEE)	Loans

Executive Summary

The operation aims at facilitating access to energy for households and micro-entrepreneurs in Uganda by financing the design, production, distribution, installation and payment plans of about 290,000 Solar Home Systems (SHS). These SHS provide basic, clean energy services, such as lighting and phone charging to households without grid access which have to rely on inferior and more expensive alternatives. The operation is expected to significantly improve living conditions of the final beneficiaries and thereby generate high development impact.

The operation will contribute to the EU development priorities in the Africa-EU Strategic Partnership, and the Agenda for Change, endorsed by the EU Ministers for Development Cooperation. The project also supports the objectives of the UN Sustainable Energy for All Initiative (SE4All), and the Sustainable Development Goal (SDG) 1 (Ending poverty in all its forms), SDG 7 (Affordable and clean energy), SDG 8 (Promote sustained, inclusive and sustainable growth, full and productive employment and decent work for all) and SDG 13 (Climate action). SDG 5 (Achieve gender equality and empower all women and girls) is also pursued by the operation, as women and girls tend to be more exposed to indoor air pollution from kerosene lights.

The demand for modern energy services in Uganda is high, both in the rural areas that are mostly not connected to the grid, and (peri-)urban areas where households and SMEs only have access to an unreliable grid. More than 5 million households live off-grid in Uganda. These households rely mostly on kerosene lanterns, candles, and flashlights for lighting and often face high cost and considerable travel for cell phone charging. The traditional off-grid solutions are expensive, polluting and provide inferior lighting.

Relatively recently, solar devices and SHS have become a more affordable, clean and reliable alternative for off-grid households. These solutions provide better energy services at lower cost. However, the relatively high up-front cost presents a challenge to low- and medium-income households. Pay-as-you-go (or lease-to-own) financing models are a solution to this issue and have enjoyed rapid uptake in Sub-Saharan Africa but result in high financing needs for off-grid solar companies. The present operation aims to address this need.

The Promoter (Fenix Uganda) is one of the pioneering companies in the SHS sector and is active in Uganda since 2013, providing a complete service including sale, maintenance and customer care. Products include an entry-level SHS with two light points and mobile phone charging capabilities at about 3.7 EUR per month over a lease-to-own tenor of 35 months. Larger systems can power more light points, a radio, a hair trimmer and even a small TV. However, over 70% of sales is expected to concern the smaller, basic SHS systems, in line with the high share of low-income rural clients and the Promoter's focus to serve these clients.

The Promoter offers a lease-to-own model for SHS, which enhances the product affordability for lower income households by allowing users to pay for the SHS in small instalments instead of the entire product cost upfront. In this model, it is the Promoter who needs to shoulder the capital-intensive up-front financing of the SHSs that are then leased out to the final beneficiaries. The proposed financing will allow the Promoter to finance the SHSs upfront and repay with lease payments from the leased-out units.

Overall, the operation is expected to have an important positive social impact, which will be monitored and reported by the Promoter. The operation supports the provision of improved energy access to about 290,000 households and SMEs, reaching approximately 1.7m final beneficiaries. Moreover, the operation is expected to result in annual CO2 emission reductions of at least 62 kt.

Analysis

<p>WHAT MADE THIS PROJECT SUCCESSFUL?</p>	<ul style="list-style-type: none"> • Having an investor that cares about positive socioeconomic and environmental impacts and has greater risk tolerance, such as the EIB • The presence of an established solar home system provider with a track record and experience managing pay-as-you-go repayments was important to securing the loan from EIB. ENGIE Africa, the parent company of Fenix International, is already providing decentralized electricity to more than 4.5 million people in nine countries.
<p>TO WHAT EXTENT IS THIS MODEL SCALABLE?</p>	<p>The model is very scalable. The pay-as-you-go structure for solar energy access has been shown to generate reliable payments, as households save substantial amounts of money previously spent on kerosene. As this model is replicated and investors gain familiarity with it, the risk profile of such investments should improve and the need for risk-tolerant finance should lessen.</p>
<p>WHAT ARE THE NECESSARY CONDITIONS TO MAKE IT REPLICABLE IN OTHER COUNTRIES/REGIONS?</p>	<ul style="list-style-type: none"> • Presence of an established provider of solar home systems, with technical expertise • During early stages, a financing partner that can offer more risk-tolerant capital and that is interested in generating positive socioeconomic and environmental impacts
<p>CONSTRAINTS/DRAWBACKS OF FINANCING MODEL</p>	<p>Until lenders become more comfortable with pay-as-you-go structures and understand its risk profile better, promoters like Fenix International may have to rely on impact-oriented and risk-tolerant sources of capital, such as the EIB's IFE.</p>
<p>LESSONS LEARNT</p>	<p>Investing in off-grid solar for rural energy access is relatively new and its risk profile is not well defined. To build investors' confidence in business model with an unproven business model, companies such as Fenix International can first leverage DFI financing which incorporates risk-tolerant loans and guarantees. After proving that the model works, companies should be able to access non-concessional finance from private lenders.</p>