

**INTEGRATED SAFEGUARDS DATA SHEET  
CONCEPT STAGE**

Report No.: 114168

**Date ISDS Prepared/Updated:** April 10, 2017

**I. BASIC INFORMATION**

**A. Basic Project Data**

Country: Regional	Project ID: P160708	
	Additional Project ID (if any):	
Project Name: Regional Off Grid Electrification Project		
Task Team Leader: Raihan Elahi		
Estimated Appraisal Date: October 2, 2017	Estimated Board Date: February 15, 2018	
Managing Unit: GEE01	Lending Instrument: IPF	
Sector: EEX		
Theme: Renewable Energy		
IBRD Amount (US\$m.):		
IDA Amount (US\$m.): 200		
GEF Amount (US\$m.):		
PCF Amount (US\$m.):		
Other financing amounts by source:		
Environmental Category: FI-2		
Simplified Processing	Simple <input checked="" type="checkbox"/>	Repeater <input type="checkbox"/>
Is this a transferred project	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

**B. Project Objectives [from section 2 of PCN]:**

To enhance shared capacity, knowledge and to jointly increase electricity access to households, businesses and communities using modern off-grid electrification technologies in project countries. The project will focus on a selected set of country-specific initiatives that are crucial to meeting the regional strategic goals.

**C. Project Description [from section 3 of PCN]:**

The proposed regional project will address the key barriers to attract private sector participation in promoting off-grid electrification in the project countries. It will support private sector to become distributors and suppliers of standalone quality verified solar PV systems to electrify households and businesses. It will also support private sector service providers to supply electricity from standalone solar PV systems through long term supply contracts, to public institutions i.e schools, health centers, etc.

Access to finance all along the supply chain has been identified as a critical need for the private sector for the functioning and growth of the off-grid market. Distributors need working capital to hold adequate product stocks and service providers need long term debt to finance their capital investment. The proposed project will provide this support to the private sector in forms of working capital loans or longer term loans through an experienced and responsible financial intermediary that can enable the private

sector distributors and service providers to provide electricity access to the un-electrified population. It will also extend the Quality Assurance standards developed by the Lighting Africa Program (and currently housed as Lighting Global Quality Standards<sup>1</sup>) to the project countries to help them develop quality assurance (QA) framework for off-grid solar electricity systems for institutional applications such as health clinics, schools, and other public administration offices to ensure the long-term performance of these systems. The proposed project will inform the potential end users on the many benefits of high quality off-grid solar products through producing consumer awareness materials and conducting consumer awareness campaigns in project countries aimed at behavioral change towards off-grid product familiarity and adoption.

### **Component 1:**

The Technical Assistance activities will precede the other activities in the project and will be provided to all the project countries in parallel. These TA activities will be responsible for creating an ecosystem to implement the electrification activities within the project detailed in other components. This component will specifically include the following seven activities:

1. **Market Intelligence and Awareness** support to new and existing players through analyzing consumer trends and market insights. Emphasis on different modes to provide access to finance to private sector service providers will be explored using a Financial Intermediary. Affordability for consumers will also be explored and mechanisms to make products more affordable to consumers without distorting commercial market will be researched.
2. **Policy and Regulatory support** on aspects on incentives to off-grid businesses to create a level playing field with on-grid businesses, import and sales tax waivers, investment protection and dispute resolution and standards for after sales service. Support on spatial planning would also be considered.
3. **Quality Assurance:** The following activities will be required to develop the quality assurance (QA) framework for the project:
  - a. Adopt International Electrotechnical Commission (IEC) guidelines for solar lanterns for the project
  - b. Reference existing standards and test methods published by the International Electrotechnical Commission (IEC) and/or other relevant standards organizations for solar PV modules, batteries, charge controllers, inverters, and other relevant equipment to specify a set of requirements for equipment used in the systems.
  - c. Develop design and installation guidelines along with a framework for evaluating compliance related to quality of service.
  - d. Develop a standard for service delivery that can be used to verify whether the system's performance matches contractually specified targets – energy delivered, availability, reliability etc.
4. **Business development** support by forging Business-to-Business (B2B) partnerships through global networks, training and conferences.
5. **Engagement with Public Institutions** to provide upstream assistance to engage with Public Institutions to identify their needs and level of demand, assistance to make public institutions aware and to manage their expectations regarding the level and quality of service that can be provided through off-grid solutions and appropriate training on usage, care and maintenance provided to the staff of the public institutions.

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<sup>1</sup> <https://www.lightingglobal.org/qa/standards/>

6. **Consumer Awareness:** Actions to be undertaken could include: market research on awareness levels in the underserved counties to determine appropriated messaging to be developed, determine specific channels (e.g. which radio stations, which county officials are best placed to carry the messaging etc.) to utilize, develop a preliminary plan (including timing and human and financial resource allocation), identify TOT beneficiaries, pilot campaign and identify improvements, develop full scale roll out plan. Consumer awareness activities will extend to education, health and water sectors both for the benefit of government agencies and beneficiaries to facilitate electrification of public facilities. Final list of activities will be determined during the project preparation phase.
7. **Program Coordination:** Setting up the Project Implementation Unit (PIU) to coordinate project activities across multiple countries. The work may also establish a forum for sharing lessons learned, and training national staff on monitoring and implementation.
8. **Pilot Testing:** ECREEE will use the Project Advance to support a pilot activity to install solar PV systems in selected health centers, schools and water pumping facilities in Niger and Nigeria, to test the project design and identify implementation challenges. The solar panels will be installed on the beneficiaries' rooftop or on the ground next to the building, owned by the beneficiaries. Performance of the solar PV systems will be monitored and accordingly technical specification for the solar PV systems to be used under the project will be finalized. This will enable the project to develop a more robust quality assurance and service quality framework resulting from the experiences of operating the pilot activity. This will inform the broader design of the project during the preparation stage.

## **Component 2: Support Financial Intermediary to finance private sector enterprises to electrify Households and Commercial Enterprises**

This component will support electrification of households and commercial enterprises using standalone solar systems in areas where load clusters do not exist and the best technical and financial solution is standalone solar systems. The key constraint for implementation of such programs has been identified as access to finance for the service providers; consequently, this component will establish a regional credit facility managed by the FI for private sector enterprises and households to develop the market for off-grid electricity products and services in the project countries. The regional credit facility takes into account the existing challenges in the market related to access to finance such as: lack of liquidity, lack of access to foreign exchange, and lender requirements such as collateral.

## **Component 3: Support Private Sector Electricity Suppliers to Electrify Public Institutions**

This component will support electrification of public institutions and community facilities using mini-grids and standalone systems. The total number of public institutions electrified under the project will be determined through multiple factors including (i) electrification coverage requested by the multiple countries and their respective ministries, (ii) electricity demand profile of different institutions at various levels, (iii) geographic spread and clustering of institutions, and (iv) extent of financing available from all sources in the project counties.

Lessons learned from past approaches taken by the Bank to electrify public institutions will be incorporated in the design of this component. Some notable lessons include:

1. A lifecycle approach to electrification should be followed so that the program considers costs and service delivery associated not only with the initial installation, but also with ongoing operations, maintenance, equipment replacement and recycling.
2. Eligibility criteria for selection of service providers should be robust to include those that have capability to provide O&M support over a long-term horizon.

- The sustainability of the project, particularly in terms of budgetary provisions beyond the life of the Bank project, should be addressed to avoid stranded or failed systems.

**D. Project location and salient physical characteristics relevant to the analysis of environmental and social risks and impacts (if known):**

This regional project will be implemented in 15 ECOWAS and 4 Sahel countries.

As of now, 8 countries (Benin, Ghana, Guinea, Guinea-Bissau, Mali, Niger, Senegal, and Sierra Leone) have confirmed their interest to benefit from the project. It is expected that Cameroon, Central Africa Republic, Chad, and Mauritania will agree to benefit from this project.

The project will provide solar PV based standalone electrification equipment to households and commercial enterprises. Private sector service providers will also sell electricity to public institutions from solar PV modules. In most cases, the solar panels will be installed on the beneficiaries' rooftop. Solar panels could also be installed on the ground of public institutions. Recycling methods for batteries and led lights will be adopted. No persons are expected to be negatively affected by the project. As of now, the environmental footprint of this project is considered to be low to moderate.

**E. Borrower's Institutional Capacity for Effective SEMS:**

ECOWAS Center for Renewable Energy and Energy Efficiency (ECREEE) is the designated implementing agency of this regional project. Selected Financial Intermediaries and project developers (private sector enterprises - PSEs, small and medium enterprises - SMEs, etc.) are expected to be involved in project implementation.

**F. Environmental and Social Safeguards Specialists on the Team:**

**Ruma Tavorath, GENDR**

**Alexandra Bezeredi, GPSURR**

**II. PERFORMANCE STANDARDS THAT MIGHT APPLY**

<b>Performance Standards</b> <i>(please explain why)</i>	<b>Yes</b>	<b>No</b>	<b>TBD</b>
<b>PS 1: Assessment and Management of Environmental and Social Risks and Impacts</b>	<b>Y</b>		
There may be some local impact during the installation and use of the solar PV equipment, with regard to the location, safety of installation and worker safety conditions. The Borrower's Environmental and Social Management System (ESMS) and institutional capacity will be assessed during project preparation. The project will need to establish systems for operations and maintenance and also waste disposal at end of life.			
<b>PS 2: Labor and Working Conditions</b>	<b>Y</b>		
While these activities will not require significant manual labor, safety of workers during installation will need to be ensured (in terms of heights, accidents due to falling parts etc).			
<b>PS 3: Resource Efficiency and Pollution Prevention</b>			<b>TBD</b>
Disposal of solar PV equipment may have an impact on land and water, unless disposed properly.			

<b>Performance Standards</b> <i>(please explain why)</i>	<b>Yes</b>	<b>No</b>	<b>TBD</b>
<b>PS 4: Community Health, Safety, and Security</b>	<b>Y</b>		
During installation and operations, community safety needs to be ensured, from accidental falling of badly installed equipment or installations in unsafe places			
<b>PS 5: Land Acquisition and Involuntary Resettlement</b>			<b>TBD</b>
Installation of equipment may require temporary land acquisition leading to economic or physical displacement when the panels are being installed			
<b>PS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources</b>		<b>N</b>	
Project activities are not expected to have any impact on natural resources or natural habitats			
<b>PS 7: Indigenous Peoples</b>			<b>TBD</b>
Impact on Indigenous is not expected but will need to be determined			
<b>PS 8: Cultural Heritage</b>		<b>N</b>	<b>TBD</b>
Project activities are not expected to have any impact on physical cultural property			

### III. SAFEGUARD PREPARATION PLAN

- A. Target date for the Quality Enhancement Review (QER), at which time the ESRS would be disclosed and the PAD-stage ISDS would be prepared: June 20, 2017
- B. For Category C or Category FI projects that do not require an ESRS, the target date for preparing the PAD-stage ISDS:
- C. Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing<sup>2</sup> should be specified in the PAD-stage ISDS:  
October 2, 2017

### IV. APPROVALS

<i>Signed and submitted by:</i>		<b>Date</b>
<b>Task Team Leader:</b>	<b>Name: Raihan Elahi</b>	<b>02/14/2017</b>
<i>Approved by:</i>		
<b>Regional Safeguards Coordinator:</b>	<b>Name: Maman-Sani Issa</b>	<b>04/07/2017</b>
<b>Comments:</b>		
<b>Practice Manager:</b>	<b>Name: Charles Joseph Cormier</b>	<b>11/16/2016</b>
<b>Comments:</b>		

<sup>2</sup> Reminder: The Bank's Access to Information Policy requires that safeguard-related documents be disclosed before appraisal (i) at the InfoShop and (ii) in-country, at publicly accessible locations and in a form and language that are accessible to potentially affected persons.