



ECOWAS CENTER FOR RENEWABLE ENERGY
AND ENERGY EFFICIENCY
Regional Off-Grid Solar Market Assessment and
Private Sector Support Facility Design

Regional Off-Grid Electrification Project
Off-Grid Solar Market Assessment

June 26, 2018

Accra, Ghana



Agenda



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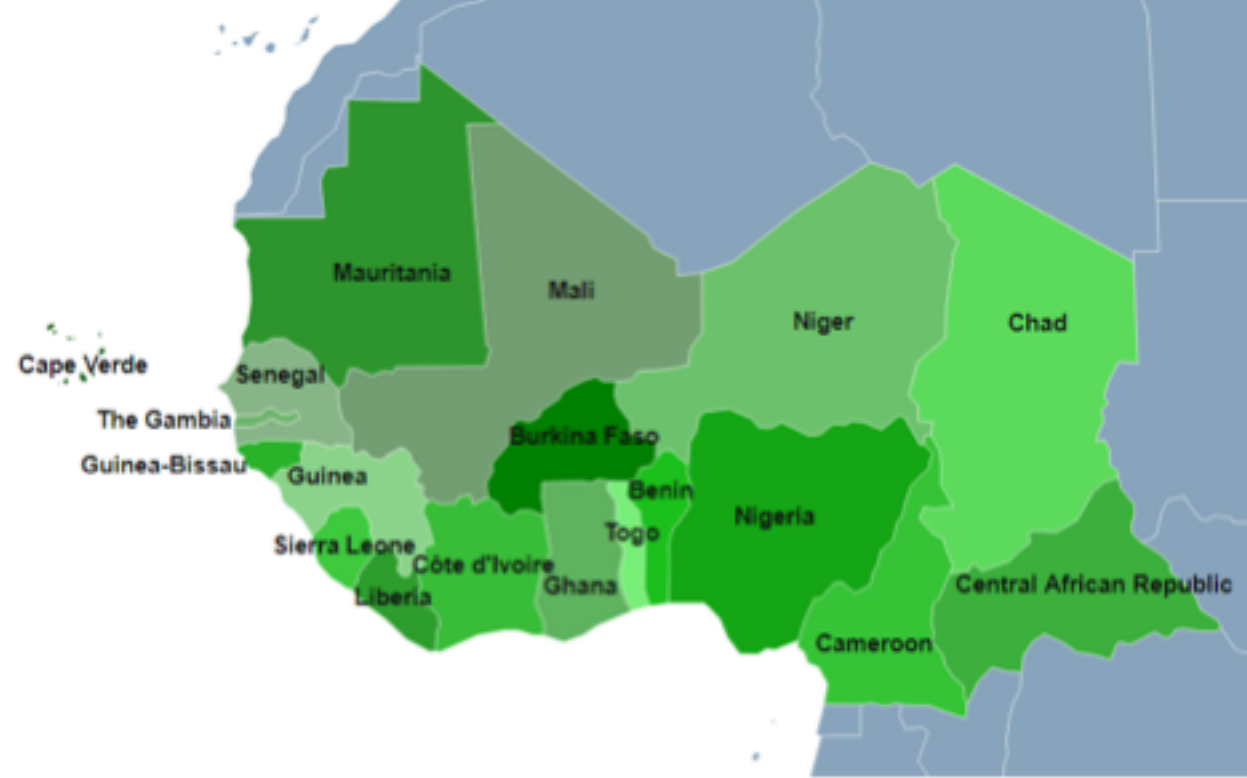
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INTRODUCTION & OBJECTIVES

Introduction

- Several ECOWAS countries have significantly **low rural electrification rates**; it is estimated that less than 40% of the population in the Sahel and broader West African region has access to electricity.
- Off-grid solutions are vital for achieving universal access and **solar energy** has the most promise as a technology, as it presents the most economical solution for off-grid electrification in remote areas including home systems as well as mini/micro-grids that are useful for productive applications.
- In this context, with funding from the World Bank, ECREEE is launching a **Regional Off-grid Electrification Project (ROGEP)** focused on enhancing shared capacity, institutions and knowledge in order to jointly increase electricity access to households, businesses and communities throughout the region.
- As part of the first phase of ROGEP, an initial assessment of 19 markets across West Africa (**ECOWAS Member States plus Cameroon, Central African Republic, Chad, and Mauritania**) is being undertaken in order to develop appropriate regional and national policy, regulatory and financing frameworks to promote stand-alone solar technologies and services and reinforce regional integration in the renewable energy sector.

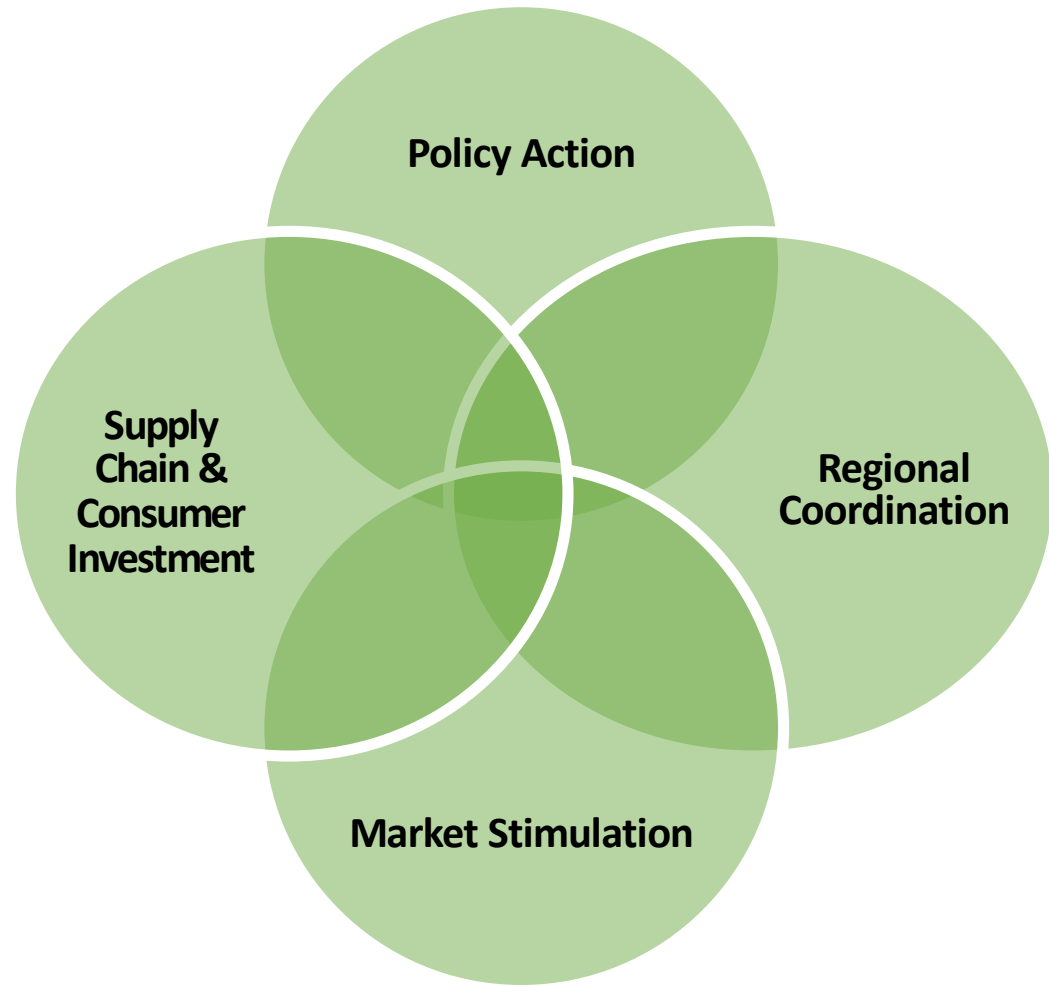


Project Objectives

ROGEP Objective:

To assess the market for stand-alone off-grid solar systems in 19 West African countries and recommend the most realistic market-based mechanism(s) to scale up access using private sector-supplied solar technologies.

This assignment is the first step in the multi-stage ROGEP initiative, which seeks to build regional cooperation strategies to increase electricity access throughout West Africa.



Project Objectives



The specific objectives of this market assessment built on the ROGEP conceptual focus are organized into **four main tasks**:

TASK 1: Review state of energy access and enabling market environment in each country (grid and off-grid electricity access, national and regional policy/regulation, government and development initiatives, etc.) including GIS analysis.

Task 2: Comprehensive assessment of off-grid solar PV market in each country, including analysis of:

(2.1) Household demand;

(2.2) Institutional/community demand;

(2.3) Productive use/SME demand, and

(2.4) The supply-chain

(2.5) Inclusive participation (Gender dimension, etc)

Task 3: Analysis of the level, capability and willingness of existing financial institutions (commercial banks, MFIs etc.) to provide financing to the off-grid solar sector in each country.

Task 4: Based on the results of Tasks (1), (2) and (3), provide recommendations on

(i) models/mechanisms to incentivize the private sector and financial institutions to enter or expand their activity in the off-grid solar sector in all 19 project countries; and

(ii) how to strengthen the enabling market environment towards a harmonized region



Approach

Methodology & Approach

(Energy Context Research)

Participatory and
Consultative
Approach

Evidence based
Approach

Interviews/
Consultations

Focus Group
Discussions

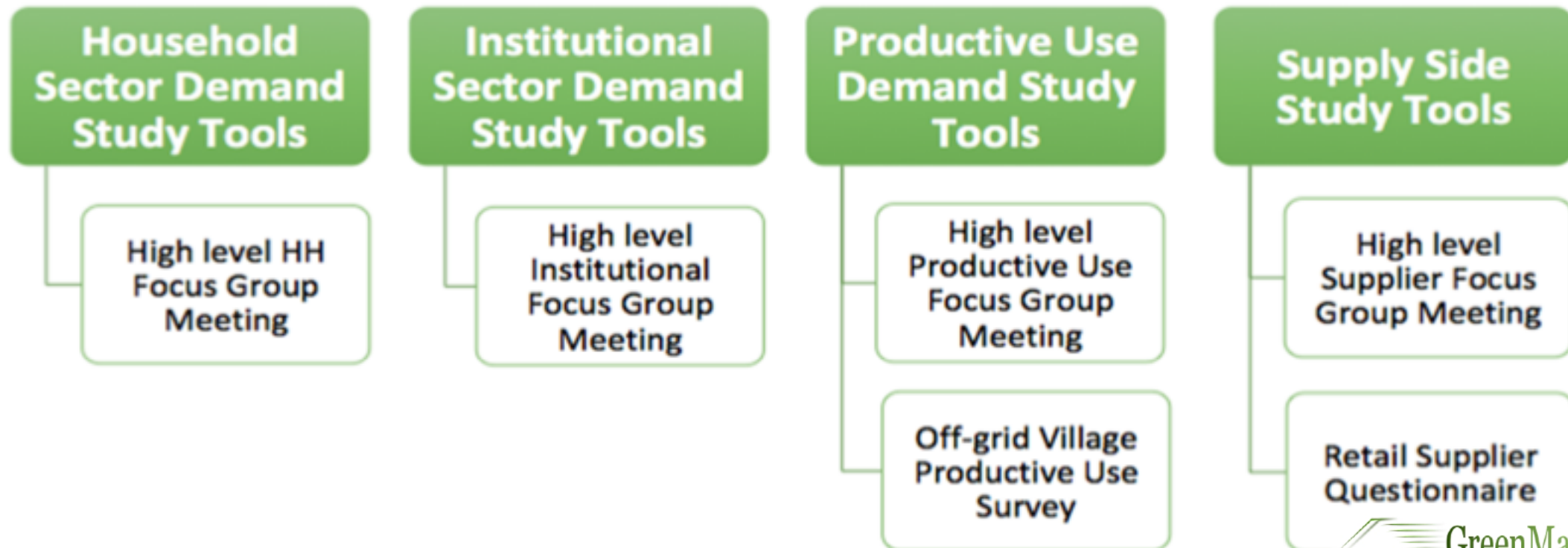
Workshops

Literature
Reviews

GIS Data collection
(and Situation
analysis)

Off-grid Solar Market Analysis

- ❖ Utilizing a combination of three data collection tools to analyze the off-grid solar market under Task 2: (i) desk research, (ii) interviews, and (iii) questionnaires/surveys.
- ❖ Questionnaires/survey instruments deployed in the form of (i) focus group discussion meetings that will be held in each country with professionals providing data on the household, institutional, productive use and supplier market segments and (ii) targeted surveys of off-grid productive use and supply chain stakeholders



EXISTING FINANCIAL INSTITUTIONS

Levels, capability and willingness to provide financing to the off-grid solar sector in the countries.

Characterization of the Lending Environment & Assessment of local FIs



Consultations with Financial Intermediaries in each country

- ❖ Objective is to assess the potential and readiness of FIs to enter or expand their operations into the off-grid market and to better understand their capital needs to offer viable financial products in their country (or in the wider region)
- ❖ A key objective of this exercise will also be to get a picture of the lending environment in each country vis-à-vis the off-grid sector in order to identify potential opportunities for collaboration with ROGEP
- ❖ Study will include an assessment of program objectives, budgets, target groups, financing, TA, etc. and how ROGEP can complement these initiatives/potential for cooperation with ECREEE including;
 - **DFI & Multilateral Off-Grid Programs**
 - **Bilateral Programs**
 - **NGO and Country Specific Efforts**

- ✓ Understanding of Off Grid Market Segment?
- ✓ Perceived complexities and barriers?
- ✓ Any transactions completed? Number, volumes, experience on loan performance and profitability?
- ✓ Transactions rejected? Reasons, possible mitigations?
- ✓ Pipeline of transactions?
- ✓ Dedicated team to energy/off grid?
- ✓ Which department handles off grid (consumer, SME, corporate, project finance)
- ✓ Generally provide working capital financing to SMEs?
- ✓ Generally provide trade financing?
- ✓ Generally provide inventory and receivables financing?



Evaluation of ROGEP Finance and TA Support Components



Business Type (Stage)	Technical Assistance Intervention	Financing Intervention	Enabling Environment Support
Tier 1 (Startup)	<ul style="list-style-type: none"> • Entrepreneurship and Business Training 	<ul style="list-style-type: none"> • Matching Grants 	<ul style="list-style-type: none"> • Quality assurance infrastructure at national and regional level - i.e. ECOWAS Quality Assurance and Installer Certification Schemes • Capacity building for government agencies involved in policy making and regulation of the solar sector • Technical assistance for improvement of the policy and regulatory framework, including import duties and VAT • Capacity building and training on energy efficiency policy, schemes and solutions • Market intelligence and awareness raising
Tier 2 (Early Stage)	<ul style="list-style-type: none"> • Customized Business Acceleration Support • Facilitation for non-solar businesses to expand into the solar industry 	<ul style="list-style-type: none"> • Matching Grants • Repayable Grants • Co-Investment Grants 	
Tier 3 (Growth/Mature)	<ul style="list-style-type: none"> • Facilitation for non-solar businesses to expand into the solar industry 	<ul style="list-style-type: none"> • Debt Facility • Financing for Productive Uses 	

Progress & Preliminary Findings

Milestones Achieved

- ❖ Macro-economic, social, and geographic data needed to feed into Task 1 analysis collected from all 19 countries.
 - ❖ 75% of the Task 1 report writing has been completed.
 - ❖ GIS Analysis in all 19 countries underway
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- ❖ Data collection and training of in-country experts for 19 countries successfully conducted.
 - ❖ Focus Group Discussions have been planned and participants invited in 16/19 countries.
 - ❖ Focus Group Discussion already conducted in Sierra Leone, Liberia, Gambia, Guinea-Bissau, Cape Verde, Cote d'Ivoire, Guinea, Mauritania, and Burkina Faso.
 - ❖ Gender analysis Ongoing in 19 countries.
 - ❖ Market sizing calculation
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- ❖ Financial sector desk research analysis has commenced in 19 countries
 - ❖ Training on Interviews with Financial institutions successfully completed.
 - ❖ Invitations for interviews sent to financial institutions in all 19 countries and scheduling the interviews has commenced in various French and English speaking countries.
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- ❖ Desk research on lessons learned as well as successful attributes of other off-grid programs and related multilateral initiatives throughout Africa has commenced.
- ❖ Evaluation criteria for ROGEP financial and technical support facility are being defined

Preliminary Findings

- ❖ Different countries have different energy contexts and face varying challenges. In some regions, financial interventions are most vital to deployment of off-grid systems. In others, policy interventions would be most catalytic.
- ❖ A few FIs don't have clear ideas of how much credit support would be required to boost interest in off-grid market segments, or which particular credit instruments would be most applicable.

Emerging Challenges

- ❖ Lack of new and updated information in various countries.
- ❖ Low participation during Ramadhan. Low participation in afternoons during World Cup. Deviations from discussion objectives in some FGDs. In some countries, lack of willingness of FGD invitees to participate without compensation.
- ❖ Lack of access to current Financial Institution contact databases. Low responsiveness from a few FIs given that interviews are being conducted remotely.
- ❖ Lack of information about recent initiatives in some countries.



OBRIGADO
Thank You
Merci Beaucoup



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