



**REPUBLIC OF LIBERIA
LIBERIA ELECTRICITY CORPORATION (LEC)**



**LIBERIA ELECTRICITY SECTOR ENHANCEMENT PROJECT
(LESEP)**

PROJECT ID: P120660

CREDIT NUMBER: 50550 LR

**REQUEST FOR EXPRESSION OF INTEREST
CONSULTANCY (FIRM)
FOR**

**A FEASIBILITY STUDY OF SMALL HYDRO SITES, OPTIMIZATION OF
POWER SUPPLY OPTIONS AND DETAILED ENGINEERING DESIGN OF MINI-
GRID IN LOFA COUNTY, LIBERIA**

REFERENCE NO.:RREA/SREP/FS-02/15

1. INTRODUCTION

The Government of Liberia has received additional financing from the International Development Association (IDA), toward the cost of the Liberia Electricity Sector Enhancement Project (LESEP), and intends to apply part of the proceeds of this fund towards payments under contract for a **Feasibility Study of Small Hydro Sites, Optimization of Power Supply Options and Detailed Engineering Design of Mini-grid in Lofa County** for use by projects under the Scaling-Up Renewable Energy Program (SREP).

2. BACKGROUND

The Government of Liberia is embarking on a Renewable Energy Electrification Program supported by Scale-up Renewable Energy Program (SREP) to provide electricity services outside of greater Monrovia where two-thirds of the population live. The program will focus on the development of mini-grids systems based on small hydro and biomass—backed up by photovoltaic (PV) systems to compensate for seasonal variation—and stand-alone systems. The focal point for the program is the Rural and Renewable Energy Agency (RREA), which focuses on providing modern energy services – mainly through renewable sources – to those rural areas that will remain far from the grid for a long time.

3. OBJECTIVES

The objective of the study is to design renewable energy-based mini-grid electricity supply and distribution systems for the population in Voinjama and other towns to be determined (Foya, Kolahun and/or Zorzor and some villages around the selected towns) in the Lofa County, Liberia. The specific objectives of the assignment are as follow:

- a. Undertake full feasibility studies of two small Hydro Sites
- b. To optimize and design appropriate hybrid mini-grid supply systems using a combination of PV, small hydro power and diesel gen set / battery storage using the energy demand profiles of Voinjama and other towns to be determined (Foya, Kolahun and/or Zorzor and some villages around the selected towns) in the Lofa County, Liberia.
- c. To design the required 33kV transmission lines and the distribution networks including final connections to the end-users in selected the communities
- d. To include in that design measures that will ensure safety in service delivery and maintain adequate service quality.

4. SCOPE OF SERVICES

The scope of services will include but not be limited to the following:

Task 1: Feasibility study of two small hydro power plants;

Task-2: Optimization of system;

Task-3: Detailed Engineering Design;

Task-4: Economic and Financial Analysis;

Task-5: Financial Modelling; and

Task-6: Training of national stakeholders.

More details are provided in the Terms of Reference.

5. The LEC and RREA now invite eligible consulting firms to indicate their interest in providing the services. Interested firms must provide information indicating that they are qualified to perform the services. The shortlisting criteria are:
 - The Consultant should have at least 10 years of practical experience in undertaking feasibility studies of small hydro power systems, optimization of Power Supply Options and design of mini grid systems. Must have carried out at least 3 similar projects one of which involves rural electrification.
 - Should have a team of qualified key professional staff of which majority should be full time employees in the firm within the last 5 years.
6. The attention of interested Consultants is drawn to paragraph 1.9 of the World Bank's [Guidelines: Selection and Employment of Consultants \[under IBRD Loans and IDA Credits & Grants\] by World Bank Borrowers](#) [January 2011] ("Consultant Guidelines"), setting forth the World Bank's policy on conflict of interest.
7. A Consultant will be selected in accordance with the Quality and Cost-Based Selection (QCBS) method set out in the Consultant Guidelines.
8. Interested Consultants may obtain further information from the LEC at the address below during office hours 9.00 to 17:00 hours.
9. Expressions of interest must be delivered in a written form to the address below (in person, or by mail, or by fax, or by e-mail) on or before, July 9, 2015 at 16:00 hours.

Liberia Electricity Corporation,
Attn: Mr. Curtis Lavalley, Acting Chief Executive Officer
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