

## TERMS OF REFERENCE

### Recruitment of a staff of NAWEC-PIU for The Gambia related part of ECOWAS-REAP1 project

#### POSITION: NAWEC - PIU SENIOR POWER ENGINEER

## 1. BACKGROUND

The Project Implementation Unit of National Water and Electricity Company Ltd, NAWEC-PIU, is preparing and implementing the Gambia-related part of the ECOWAS-Regional Electricity Access Project, Phase 1 (REAP1), a World Bank funded project. The Project Development Objective is to increase grid electricity access in Guinea-Bissau, Mali, and The Gambia. The project aims to provide access to around 1.1 million people in specific localities in each country selected, following a first-order least cost geospatial planning within a 100-km radius of the substations of the OMVG in The Gambia and Guinea Bissau, and the substations of the OMVS in Mali. The project comprises three components: (i) Design and construction of electricity distribution grid aiming to maximize new people's connections; to the grid, (ii) Supervision of the construction and technical advisory, and (iii) Technical assistance and project management.

The design phase for the major contract of the REAP1 is complete, and this covers a base-list of 298 communities with the Following scope : 521 km MV lines, 361 substations and 1 259 km LV lines. Then, additional communities (around 85) are identified and the recruitment of a firm, to design the additional scope and develop and Employer's Requirements, is ongoing. NAWEC-PIU is also implementing in the rural areas' other projects similar to the ECOWAS REAP1 and funded by EU, EIB, World Bank, and AfDB. In total, more than 1000 km MV lines, more than 2000 km LV lines, and more than 700 communities are identified and committed. In the GBA (Grand Banjul Area), the NAWEC-PIU also implements a 20 MWp Solar Plant, a National Control Centre, a 17 km 225kV Transmission Line, a HV/MV Substation, MV/MV Substations, and MV/LV substations.

To address temporary overload of staff due to the significant increase of activities, the NAWEC-PIU needs to get an additional senior power engineer directly operational in the team. Hence, a Senior Power Engineer is now being recruited by NAWEC - PIU, in relation with the World Bank, to work on relevant projects activities of the unit. The assignment will be for a period of **one-year renewable**, full time.

## 2. SCOPE OF SERVICES

The Senior Power Engineer's responsibility will be ensuring technical preparation and monitoring of implementation of all the power lines and substations projects, under the PIU and in relation with the RCU and the owner's engineer. Activities to be performed include but are not limited to the following:

- i. Provide engineering support to the PIU during projects preparations, managements, and implementations
- ii. Provide inputs to specifications/employers' requirements/ToRs for bidding documents/RFPs, for power lines and substations;

- iii. Oversee project preparations, particularly in aspects related to designs, works, equipment specifications, and other technical aspects like substation protection and control system, under the general management of the Coordinator of the PIU;
- iv. Provide technical support during bidding stages, prequalification, shortlisting, bid evaluation, contract negotiation, drafting of contract, etc.
- v. Review all technical documents; designs, specifications, and construction schedule submitted by Contractors, ensuring strict control for proper and quality implementations of the project, in relation with the owner's engineer;
- vi. Ensure that bidding documents, project implementations, and contracts adheres to all technical details and international standards, for the lines and substations as well;
- vii. Attend Factory Acceptance Tests, and inspect the quality and quantity of the equipment
- viii. Supervise the implementation of all the projects to conform to approved design.
- ix. Supervise commissioning conducted on all the projects and issue reports
  - x. Follow up on correspondences between the RCU, Owner's Engineers, Contractors, and the other stakeholders
  - xi. Monitor the implementation of the projects schedules to ensure adherence with the project timeline
  - xii. Review the reporting from Contractors and Owners' Engineers
  - xiii. Review the invoices of Owners' Engineers and contractors
  - xiv. Monitor the implementation of the Quality Management Plan set up by contractors and safety arrangements during works (Personal protective equipment, Staff certifications to handle specific electricity related tasks, etc.)
  - xv. Collect all relevant information on the constructions, anticipate and identify problems and risks arising and recommend necessary actions to the Project Coordinator
  - xvi. Assess and advise on all proposed technical variations and report on justification or otherwise of claims
  - xvii. Respond effectively to any other job assigned by the Project Coordinator
  - xviii. Contribute to elaborate Annual Work Plans, annual budgets, as well as the quarterly, biannual, and annual reports of the projects
  - xix. Assist the Project Coordinator in supervising contractors' performances in handling technical issues, then provide corrective instructions as needed
  - xx. Assist the Project Coordinator in the preparation during missions of supervisions, meetings with the RCU, internal meetings and Steering Committee meetings
  - xxi. Other activities, as instructed by the Managing Director through the Project Coordinator.

### **3. QUALIFICATION AND EXPERIENCE REQUIREMENTS**

#### **Qualification and skills requirements**

##### ***Qualification***

Must hold a Master's degree in Electrical Engineering or related fields;

##### ***Skills***

- Ability to work in a multidisciplinary team;
- Excellent writing and reporting skills;

- Experienced computer user, including excellent knowledge of Microsoft Office suite;
- Good skills in information technology and communication tools;
- Fluent in English, and knowledge in French will be an added advantage;

### **General Experience**

- Significant exposure to the electricity sector with a minimum of 10 years' professional experience in working on power distribution projects.
- Desirable regional (West Africa) experience of 3 years.

### **Specific experience**

- Have been involved, in the last five (5) years, at least in two (2) engineering or implementation of projects of power distribution grid extension/reinforcement in rural or suburban areas, with following minimum size: 100 km MV lines, 25 substations, 200 km LV lines.
- Experience and understanding of methodology of power system planning and analysis software, as well as rules for the interconnection of electricity networks;

## **4. DUTY STATION AND CONTRACT DURATION**

It is estimated that the workload will be 120 staff-days spread over the total contract period of one year. NAWEC, at its discretion, and based on the evaluation of performance, may extend the services.