

TERMS OF REFERENCE

1. INTRODUCTION

1.1 General

With this document eligible advisory Individual consultant is invited to submit their Expression of Interest for Capacity Building, Technology Transfer and Support Services (Advisory) to Rusumo Power Company Limited (RPCL) on the subject of Operation and Maintenance of Rusumo Power Company Limited (RPCL). Capacity building shall be limited to Operation, Maintenance and Management aspects of the RPCL facilities.

1.2 Background

Rusumo Power Company Limited (RPCL) is a Special Purpose Vehicle (SPV) established and created by three beneficiary countries: Burundi, Rwanda and Tanzania. RPCL is a jointly owned Company and institutional mechanism for the co-management of power generation and supply to national power utilities. The Rusumo Power Company Limited/SPV is publicly financed, publicly owned and privately managed to oversee activities during Power Plant operations.

The generation facility is located in Tanzanian side, the Switchyard is located in Rwandan side and the dam is between Tanzania and Rwanda border in Kagera River. Three outgoing lines respectively to Rwanda, Burundi and Tanzania depart from the Switchyard to the respective national grids.

The Employer and the Advisory Individual consultant will together finalize, case by case, the form of advisory and training for the operation and maintenance of the hydro-electromechanical equipment, for Technical and Non-Technical Staff. The Individual consultant will define and provide the level of advisory and training necessary for the operation and maintenance of Power Plant equipment and machinery.

2. OBJECTIVES

The purpose of the advisory and capacity building is to enhance RPCL Staff familiarity with the techniques and technologies of all Rusumo Hydropower plant facilities, so that they are able to ensure proper operation and maintenance. The Individual consultant will advise, explain

and train technical staff by practice to fully understand the plans, diagrams and other technical documents provided after completion of works.

3. SCOPE OF WORKS

The selected Advisory Individual consultant shall support Operations and Maintenance of Rusumo Power Plant for two years. Transfer knowledge to RPCL staff and provide Advisory service to RPCL. RPCL has 51 employees who will participate in this Program.

Task 1: Advisory on O&M

1. To support services of Operations of RPCL Facilities and Maintenance of all RPCL Equipment;
2. Quick responsiveness 24/7 service, to accept any requirement for support as created and triggered by RPCL regarding equipment. The Individual consultant should offer rapid solution-oriented assistance to solve any problem related to plant operation which may occur as soon as possible in order to bring the units back online. Additionally, to provide diagnosis for repairs both on-site and remotely;
3. Develop O&M practices by guiding RPCL to establish goals and aligning set targets with appropriate long-term generation plans;
4. Develop O&M practices regarding equipment and system performance to meet the overall plant availability and reliability.
5. Advise RPCL staff in monitoring the budget, analyzing financial plan results, and recommending changes in goals and plans;
6. Advise RPCL in developing strategies to expand access to other available power markets. Scale-up access is an important component of the RPCL's long-term economic growth plan and is one of the RPCL's highest priorities in the context of the Power Market. Lack of access to other Countries energy services constrains RPCL's growth potential, can contribute to loss of revenue and isolation from Power Pool, and affects provision of other key services Market, such as East Africa Power Pool, Southern Africa power pool and other countries;

7. Advise RPCL in developing strategies to improve capacity on management of environment (water hyacinth management, biodiversity monitoring, water quality monitoring, etc.), Health (health of staff) and safety (Safety of workers during operation and safety of infrastructure). RPCL would like to ensure that measures of health and safety are regularly respected in particular the PPE for workers, the safety material and equipment are regularly serviced (fire extinguishers, etc.). The individual consultant will train the staff on how to monitor and manage the Environment, Social, Health and Safety (ESHS) related issues;

Task 2: Capacity Building

A: The Individual consultant will provide more in-depth training on Operation and Maintenance Best Practices with focus on:

1. Operation and Maintenance Technologies;
2. Plant Efficiency and Reliability
3. Asset Management Standards;
4. Hydropower Plant Assessment;
5. Instrumentation, Automation and Calibration;
6. Monitoring and Diagnosis;
7. Preventive and Predictive Maintenance;
8. Resources Optimisation
9. Spares Parts Management
10. Technical Reports and Documentation
11. Computerized Maintenance Management Systems (example SAP);
12. Improve environment, social and safe work practice. (Mechanical and Electrical Safety, Work Place Safety, Personal Protective Equipment, Waste Management, protective Hazard Management etc.);

4. METHOD OF PERFORMING TRAINING

Since technicians and engineers can take initiative in quality job only when they have theoretical knowledge along with practical experience, the training course shall combine theoretical and practical elements with a clear priority on practical learning. The Individual consultant shall design the training modules to include the following methods of training:

1. Theoretical: class-room training (Including volume of training sessions);
2. Practical: On-the-job training (OJT) or hands-on practice;
3. Workshops;

Apart from lectures, emphasis will be put on practical training for O&M of the plant. The training shall cover methods for plant operation, procedures for periodic inspections, search and assessment of faults, preventive maintenance procedures. The consultant has to submit video recording of all classroom lectures and OJT and site visits. The individual consultant shall organize every year one workshop for dissemination of knowledge and experience and networking with stakeholders to establish an exchange of knowledge, experience and lessons learned in operation and maintenance of hydroelectric power plants.

5. DELIVERABLES AND REPORTING

The Advisory Services are expected to be completed within 24 months from the effective date of the contract. The reporting language is English.

The Individual consultant will discuss his/her work plans, schedules, and findings at review meetings to be held with the RPCL team on a regular basis and RPCL Board of Directors. The Firm will be responsible for the following deliverables:

S/NO	Deliverables	Due from the commencement of the consultancy
1	Draft Inception Report including conceptual approach, methodology proposed, design of advising and capacity building programme, work plan and scheduling of activities.	1 Month

S/NO	Deliverables	Due from the commencement of the consultancy
2	Final Inception Report, after incorporating comments from all stakeholders.	1.5 Months
3	Quarterly Progress Reports of Advising and Capacity Building programme.	2 weeks after end of each Quarter
4	The Consultant will make the advising and training activities	21.5 Months
5	Final Report (Summary of services provided.)	At the end of the contract

All reports should be submitted with two hard copies and one soft copy. Additional copies may be requested by RPCL based on the need.

6. MINIMUM REQUIREMENTS

- This position should be filled by an international expert or by a regional expert with international experience, having at least 20 years of experience in the hydropower sector of which at least 10 in O&M.
- The expert shall have experience in O&M of hydropower plants.
- The persons should be expert in the field of O&M of medium or large size hydroelectric power plant focusing on Mechanical and Hydro-mechanical systems.
- The expert should have minimum Bachelors' Degree in Mechanical Engineering.
- The expert with methodological skills in practical and theoretical trainings shall be preferred.

7. JOB STRUCTURE

The consultant shall be based full time at Rusumo Power Plant.

The working and training language is English.

8. SERVICES TO BE PROVIDED BY RPCL

The RPCL will provide its contributions as mentioned below:

1. The RPCL will provide free of charge all available information, documents, data, reports, drawings manuals and where necessary, it shall assist the experts in obtaining other relevant information and material from Contractors and Manufacturers. However, it is the duty of the expert to check quality and suitability of existing documents and information. The information, data, reports etc. as mentioned above will be available for the experts' unlimited use during execution of the proposed services. Due provision shall be made in the proposal in case he has to procure on his own expenses any additional documents/information necessary to carry out the services;
2. The RPCL will provide laptops for trainees, video projectors, printers and consumables, flipchart paper etc. and will provide housing and transportation for advisor staff;
3. The RPCL will take care that the personnel nominated for capacity building/training remain available for being trained throughout the duration of the training programme and would stay assigned to the operation and maintenance of the hydropower plant and will not be diverted to other occupations;
4. The RPCL shall assist the experts in obtaining permits and licenses necessary for performance of the services. The RPCL will also assist the Firm in customs clearance of all equipment, materials and personal effects to be imported (and re-exported upon completion of his assignment) for the purpose of the advising and Capacity building programme;
5. Office space, site accommodation, transport, lecture rooms and practical training sites during the execution of Experts' services will be availed by RPCL;