



**United States Energy Association
Power Africa: A U.S. Government-Led Partnership to Increase Sub-Saharan Africa’s Access to Energy
Request for Proposal: Improving Operations of the National Control Center – Rwanda**

REQUEST FOR PROPOSAL – Improving Operations of the National Control Center – Rwanda

Closing date of RFP: September 4, 2020

Implementing Agency: United States Energy Association

Funding Agency: United States Agency for International Development

The United States Energy Association (USEA) is inviting prospective organizations or individuals through this Request for Proposal (RFP) to submit proposals for short-term technical assistance on improving operations of the National Control Center for the Rwanda Energy Group (REG). This is an activity implemented by USEA under the United States Agency for International Development (USAID) Power Africa Initiative.

Proposals are due by 17:00 hours EST of the closing date. Please submit all proposals with a read receipt to Ms. Marina N. Barnett, Senior Program Coordinator, at mbarnett@usea.org. Proposals must be in digital format (PDF).

As this is a USAID-funded program, the RFP follows USAID Procurement Regulations and Laws. All bidder details will be kept confidential.

I. INTRODUCTION

The United States Energy Association (USEA) is an association of public and private energy-related organizations, corporations, and government agencies. USEA represents the broad interests of the U.S. energy sector by increasing the understanding of energy issues, both domestically and internationally.

Through a cooperative agreement with the USAID Bureau for Economic Growth, Education and Environment (E3), USEA implements the Energy Utility Partnership Program (EUPP), available to all USAID-assisted countries and USAID Missions. EUPP supports the efforts in USAID-assisted developing countries to increase environmentally sustainable energy production and to improve the operational efficiency and increased financial viability of their utilities and related institutions, with the goal of increasing the access of these countries to safe, reliable, affordable and environmentally sound energy services.

USEA conducts a number of activities under the EUPP mechanism for Power Africa - a U.S. Government-led partnership to increase Sub-Saharan Africa’s access to energy. Power Africa uses a wide range of U.S. government tools to support investment in Africa’s energy sector. From policy and regulatory best practices, to pre-feasibility studies and capacity building, to long-term financing, insurance, guarantees, credit enhancements and technical assistance, Power Africa provides coordinated support to help African partners expand their generation capacity and access.

II. UTILITY/COUNTRY BACKGROUND

The Government of Rwanda is striving to overcome several constraints as they aim to promote economic growth in the country. It is understood that Rwanda's economic development will not be realized without the elaboration of a well-designed plan to provide reliable and affordable electricity. Rwanda has steadily increased electricity availability but at present, only about 54.5% of households have access to electricity. Under the National Strategy for Transformation (NST) 2018 - 2024, electricity access would be increased to 100% by 2024 with the government also supporting the expansion of electricity generation to meet projected demand.

The currently installed power generation capacity is approximately 227 MW, including 98 MW hydroelectric, 103 MW thermal and 12 MW solar power. The transmission grid is comprised of 911 km transmission lines rated at 110-kV. Higher voltage 220-KV transmission lines are under construction. The sub-transmission lines and distribution lines are rated at 30-kV, 15-kV, and 6.6-kV.

The Rwanda Energy Group (REG) is a holding company responsible for generation, transmission, and distribution of electrical energy in the country. There are two subsidiaries, the Energy Utility Corporation Limited (EUCL), responsible for operations and maintenance, and the Energy Development Corporation Limited (EDCL), responsible for project development.

III. IMPLEMENTATION AND APPROACH

The purpose of this RFP is to solicit proposals from various candidate organizations or individuals, conduct a fair evaluation, and select the organization deemed most suitable to undertake the project.

USEA Responsibilities

USEA will be responsible for arrangements and associated costs related to the following activities:

1. A trip to Rwanda for technical meetings (for up to 2 weeks). USEA will arrange and bear the costs of:
 - Economy-class roundtrip airfare to Kigali for up to 2 consultants;
 - Per diem (meals and lodging) for up to 2 consultants to include all travel and training days and maximum of 1 full day of rest prior to start of activity (Note: Lodging to be provided according to U.S. government regulations);
 - Reimbursement of visa fees;
 - Reimbursement of vaccinations (if needed) and travel medication costs;
 - International health insurance for the duration of the travel to Rwanda;
 - Ground transportation to/from the airport;
 - Local transportation to sites (if needed).

2. Two 10-day technical trainings (Training 1 and Training 2) for National Control Center operators. USEA will arrange and bear all travel costs of REG/EUCL trainees, including (per trip):
 - Economy-class roundtrip airfare to the training site;
 - Per diem (meals and lodging) to include all travel and training days and maximum of 1 full day of rest prior to start of activity (Note: Lodging to be provided according to U.S. government regulations);
 - Reimbursement of visa fees;
 - Reimbursement of vaccinations (if needed) and travel medication costs;
 - International health insurance for the duration of the travel outside of Rwanda;
 - Ground transportation to/from the airport;
 - Local ground transportation to training facilities;
 - Training facility rent fee (if necessary).

Subcontract Agreement Management and Oversight

A subcontract agreement between USEA and the Consultant shall be subject to all USAID Special Terms and Conditions, including all mandatory FAR Flow-Down clauses, where applicable, and the provisions included in 2CFR200 and 2CFR700. All bidders are strongly encouraged to review these provisions prior to submitting a proposal.

- Standard Provisions for U.S. Nongovernmental Organizations:
<https://www.usaid.gov/sites/default/files/documents/1868/303maa.pdf>
- 2CFR200: <https://www.gpo.gov/fdsys/pkg/CFR-2014-title2-vol1/pdf/CFR-2014-title2-vol1-part200.pdf>
- 2CFR700: <https://www.gpo.gov/fdsys/pkg/CFR-2015-title2-vol1/pdf/CFR-2015-title2-vol1-part700.pdf>

Subcontract agreement management, oversight and payment will be carried out by USEA.

IV. SCOPE OF WORK

Purpose: The purpose of this program is to enhance the capacity of the Rwanda Energy Group (REG) for reliable and efficient operation of Rwanda’s national electric grid, reducing outages and interruptions and delivering uninterrupted power supply.

Objectives: The objectives of this program shall include the following:

- Perform a comprehensive audit of the National Control Center’s operations and procedures, identify deficiencies and potential problems, and provide technical solutions and recommendations for improvement.
- Conduct two 10-day trainings (utilizing the same curriculum) for National Control Center operators to develop the knowledge and skills of multi-tasking dispatchers, including the management of essential control room equipment and the understanding and application of the latest operational procedures.

Tasks: The tasks to be performed by the Consultant under this Scope of Work shall include the following:

- Task 0:** Sign Subcontract Agreement: Once the subcontract agreement has been signed by both parties, the consultant will be allowed to invoice 10% of the total cost of the subcontract agreement.
- Task 1:** Conduct technical meetings in country: Up to 2 weeks will be allowed for technical review meetings (including site visits to the National Control Center) to collect and verify required data, review system operation procedures and grid codes, observe control center operators’ performance, and to discuss project methodology and approaches with EUCL engineers and executives.
- Task 2:** Conduct a comprehensive audit of the National Control Center’s operations and procedures, identify deficiencies and potential problems, and develop technical solutions and recommendations for improvement.
- Task 3:** Design a training curriculum for the National Control Center’s operators to develop the knowledge and skills of multi-tasking dispatchers, including the management of essential control room equipment and the understanding and application of the latest operational procedures. The curriculum will be developed to include training solutions to shortcomings in operators’ performance observed during visits to the National Control Center. The curriculum will include the following general topics:
- USE of SCADA/EMS Applications
 - Active Power Control
 - Daily Operations
 - Dynamic Performance of Equipment

- Economic Operations
- Safety and Maintenance
- Operating Guidelines and System Security
- Dynamic Performance of System (incl. steady state and transient stability)
- Frequency and Voltage Control
- Abnormal Operations (abnormal conditions, remedial actions, system recovery/restoration)
- System Disturbances Management
- Incident Monitoring, Logging & Reporting
- Substation Equipment Monitoring
- Switching Operations
- Basic Power System
- Tie-line Operation & Interconnection Trade
- Real-time Line Simulation

The training will utilize current models of the Rwanda network. The models – developed and verified in 2018 – 2019 by international consultants – will be provided by the utility.

Task 4: Conduct a 10-day training (Training 1) for the 1st group of National Control Center operators (6 operators and 1 supervisor), including all necessary theoretical and practical elements, to develop the knowledge and skills of multi-tasking dispatchers, including the management of essential control room equipment and the understanding and application of the latest operational procedures. It is the responsibility of the consultant to provide an appropriate training facility outside of Rwanda as there are no such facilities in the country. It is also responsibility of the consultant to ensure that the training facility has adequate equipment including operator training simulator (OTS). Internationally recognized certificates issued upon successful completion of the training course will be highly preferred.

Task 5: Conduct a 10-day training (Training 2) for the 2nd group of National Control Center operators (6 operators and 1 supervisor), including all necessary theoretical and practical elements, to develop the knowledge and skills of multi-tasking dispatchers, including the management of essential control room equipment and the understanding and application of the latest operational procedures. It is the responsibility of the consultant to provide an appropriate training facility outside of Rwanda as there are no such facilities in the country. It is also responsibility of the consultant to ensure that the training facility has adequate equipment including operator training simulator (OTS). Internationally recognized certificates issued upon successful completion of the training course will be highly preferred.

Deliverables: Based on the Scope of Work, the following deliverables and products shall be submitted:

Deliverable 1. Satisfactory completion of technical meetings in country: Digital copies of a brief report on technical meetings in country shall be submitted to USEA. The report will include brief summaries of meetings, describe challenges encountered, and provide a draft outline of proposed training curriculum.

Deliverable 2. Satisfactory completion of an audit of the National Control Center’s operations and procedures: Digital copies of a comprehensive **draft** report shall be submitted to USEA and REG/EUCL for their review. The report will identify deficiencies and potential problems in the National Control Center’s operations and procedures, as well as shortcomings in National Control Center operators’ performance, and provide technical solutions and recommendations for improvement.

Deliverable 3. Digital copies of a comprehensive **final** report on the National Control Center’s operations and procedures shall be submitted to USEA and REG/EUCL. The report will incorporate updates and responses to USEA and REG/EUCL’s comments.

- Deliverable 4.** Satisfactory development of a training curriculum for the National Control Center’s operators: Digital copies of a **draft** training curriculum for National Control Center operators shall be submitted to USEA and REG/EUCL for their review. The curriculum will be developed to include training solutions to shortcomings in operators’ performance observed during visits to the National Control Center, as well as general topics described in Task 3.
- Deliverable 5.** Digital copies of the **final** training curriculum for National Control Center operators shall be submitted to USEA and REG/EUCL.
- Deliverable 6.** Satisfactory completion of National Control Center operators’ training (Training 1): Digital copies of all training materials, including manuals, presentations, exercises and all other materials distributed to the trainees, shall be submitted to USEA upon completion of the first training.
- Deliverable 7.** Satisfactory completion of National Control Center operators’ training (Training 1): Digital copies of a Training Report, comprising training overview, conclusions about the overall productiveness of the training, and recommendations for future steps.
- Deliverable 8.** Satisfactory completion of National Control Center operators’ training (Training 2): Digital copies of all training materials, including manuals, presentations, exercises and all other materials distributed to the trainees, shall be submitted to USEA upon completion of the first training.
- Deliverable 9.** Satisfactory completion of National Control Center operators’ training (Training 2): Digital copies of a Training Report, comprising training overview, conclusions about the overall productiveness of the training, and recommendations for future steps.
- Deliverable 10:** A short benchmarking report on international utilities’ recruitment, promotion and compensation practices for control room dispatchers, including educational qualifications, expertise requirements and remunerations, shall be submitted to USEA and REG/EUCL with the Training 2 Report.

Reporting: The consultant will report to USEA.

Schedule: The project is expected to begin in November 2020 – pending lifting of international travel restrictions due to COVID-19 – and take approximately 10 months to complete. If international consultants are unable to travel to Rwanda in November/December 2020 due to COVID-19 related travel restrictions, the project will commence as soon as these restrictions are lifted.

Task(s)	Deliverables	Target Completion Date
Technical Meetings in country	Brief report	December 31, 2020
Audit of the National Control Center’s operations and procedures	Draft Report	February 28, 2021
	Final Report	March 31, 2021
Training curriculum for the National Control Center’s operators	Draft Curriculum	February 28, 2021
	Final Curriculum	March 31, 2021
Training 1	Training Materials, Report	April 30, 2021/June 30, 2021
Training 2	Training Materials, Report	July 31, 2021/August 31, 2021

These tentative assignment dates are provided solely for information purposes and the benefit of bidders. Modification of these assignment dates will not constitute a change in scope.

V. PROPOSAL CONTENT

The proposal must contain the following:

- a) A cover letter to the proposal, including a bidder's Data Universal Numbering System (D-U-N-S) number and proof of a current registration in the System of Award Management (SAM). **Proposals without a DUNS number or proof of SAM registration will not be considered.**
- b) A technical proposal, including:
 - a. Demonstration of an understanding of the issues to be addressed under the proposed scope of work specified above by providing a summarized technical approach for each of the tasks listed (not to exceed 3 pages);
 - b. Technical approach must include adequate description of training methodology and available technical solutions (computer simulations of operational issues), and possibility of issuing internationally recognized certificates;
 - c. Proposed project schedule to perform the tasks under this project highlighting any deviations from the scope of work specified above;
 - d. Bio sketches of personnel, including at least 1 – 2 subject matter experts one of which will be a team leader that will be dedicated to the project;
 - e. Summary of relevant experience of each proposed team member for (not beyond) the past 10 years. Relevant experience should be listed chronologically (starting with the most recent). Not to exceed 3 pages for each proposed team member;
 - f. Summary of the work to be performed by each employee proposed for this project.
- c) A financial proposal, including:
 - Detailed justification (i.e. line item budget);
 - Labor, other direct costs, indirect costs, and level of effort for each employee proposed for this project.
- d) Completed USAID Contractor Employee Biographical Data Sheet forms for each employee proposed for this project (<https://www.usaid.gov/forms/aid-1420-17>).

VI. EVALUATION CRITERIA

All bidders are required to provide a DUNS number and maintain a current SAM registration. Proposals without a DUNS number or proof of SAM registration will not be considered.

Selection of an offer for a subcontract award will be based on an evaluation of proposals against qualifications, subject matter expertise, technical approach and budget justification. Proposals shall first be evaluated from a technical standpoint (qualifications, subject matter expertise and technical approach) without regard to proposed budget justification. For those proposals determined to be technically acceptable, budget justification will be evaluated.

Evaluation Criteria:	20%:	Experience with similar projects (for each consultant & the organization in general)
	20%:	Subject matter expertise (education and professional experience)
	35%	Technical approach
	25%:	Cost

VII. QUESTIONS AND CLARIFICATIONS

All questions and clarification requests related to this RFP should be submitted via email to Ms. Marina N. Barnett, Senior Program Coordinator, at mbarnett@usea.org no later than August 28, 2020. All questions and answers will be provided to all prospective bidders.

END OF RFP