



United States Energy Association

Power Africa: A U.S. Government-Led Partnership to Increase Sub-Saharan Africa's Access to Energy

Request for Proposal: Reviews – Black Start Plan, Relay Protection Coordination, Integration of Power System Stabilizers – Rwanda

REQUEST FOR PROPOSAL – Reviews: Black Start Plan, Relay Protection Coordination, Integration of Power System Stabilizers – Rwanda

Closing date of RFP: October 25, 2019

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 conducting reviews of the Black Start Plan, relay protection coordination and the integration of power system stabilizers (PSS) 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 U.S. Energy Association (USEA) is the U.S. Member Committee of the World Energy Council (WEC). Headquartered in Washington, DC, USEA is an association of public and private energy-related organizations, corporations, and government agencies.

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 42% 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 218-MW, including 98 MW hydroelectric, 103 MW thermal and 12 MW solar power. The transmission grid is comprised of 423 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 for 1 (one) trip to Rwanda. 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).

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 further stabilizing the grid. The program will help ensure that:

- REG has sufficient black start capabilities to restore the Rwandan electric grid from a total or partial shutdown in the shortest time possible;
- REG's protection systems are set up to operate with the necessary reliability and security; and
- There is sufficient integration of power system stabilizers to attenuate disturbances and increase an overall stability of the grid.

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

Issue 1 – Black Start Plan: to perform a comprehensive audit of REG's Black Start Plan, identify deficiencies and potential problems, and provide technical solutions and recommendations for improvement.

Issue 2 – Protection Coordination (transmission lines, transformers, distribution): to perform a comprehensive review of REG's current transmission and distribution protection systems to ensure that protective devices are coordinated to insure minimal outage exposure, identify deficiencies and potential problems, and provide technical solutions and recommendations for improvement.

Issue 3 – Integration of Power System Stabilizers (PSS): to conduct a comprehensive assessment of the integration of power system stabilizers, identify deficiencies and potential problems, and provide technical solutions and recommendations for improvement.

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

- Task 1:** Preliminary review of documents: Conducting a preliminary review of all relevant data and documents.
- Task 2:** Technical meetings in country: 5-days will be allowed for technical review meetings (including site visits, if necessary) to collect and verify required data and to discuss approaches and system operation procedures with EUCL engineers and executives.
- Task 3:** Conducting a comprehensive audit of REG's Black Start Plan, including line/cable charging strategies, protective systems and general restoration policies.
- Task 4:** Performing a comprehensive review of REG's current transmission and distribution relay protection coordination.
- Task 5:** Conducting a comprehensive assessment of the effectiveness of integrated power system stabilizers in enhancing the stability of the national grid.
- Task 6:** Satisfactory submission of a draft report on Black Start Plan: Electronic submission, in English, of a draft copy of the Black Start Plan Audit Report to USEA for USEA and REG review.
- Task 7:** Satisfactory submission of a draft report on Relay Protection Coordination: Electronic submission, in English, of a draft copy of the Relay Protection Coordination Review Report to USEA for USEA and REG review.
- Task 8:** Satisfactory submission of a draft report on Power System Stabilizers: Electronic submission, in English, of a draft copy of the Report on Review of Integration of Power System Stabilizers to USEA for USEA and REG review.
- Task 9:** Satisfactory submission of the final report on Black Start Plan: Electronic submission, in English, of the final copy of the Black Start Plan Audit Report incorporating USEA and REG's comments.

Task 10: Satisfactory submission of the final report on Relay Protection Coordination: Electronic submission, in English, of the final copy of the Relay Protection Coordination Review Report incorporating USEA and REG’s comments.

Task 11: Satisfactory submission of the final report on Power System Stabilizers: Electronic submission, in English, of the final copy of the Report on Review of Integration of Power System Stabilizers incorporating USEA and REG’s comments.

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

Deliverable 1: Digital copies of a draft report on the Black Start Plan to be submitted to USEA and REG for their review. The report will include results of a comprehensive audit of REG’s Black Start Plan, existing deficiencies and possible issues, and technical solutions and recommendations for improvement.

Deliverable 2: Digital copies of a draft report on Relay Protection Coordination to be submitted to USEA and REG for their review. The report will include results of a comprehensive review of REG’s current transmission and distribution relay protection coordination, existing deficiencies and possible issues, and technical solutions and recommendations for improvement.

Deliverable 3: Digital copies of a draft report on Power System Stabilizers to be submitted to USEA and REG for their review. The report will include results of a comprehensive assessment of REG’s current integration of power system stabilizers, existing deficiencies and possible issues, and technical solutions and recommendations for improvement.

Deliverable 4: Digital copies of the Final Report on the Black Start Plan incorporating updates and responses to USEA and REG’s comments.

Deliverable 5: Digital copies of the Final Report on Protection Coordination incorporating updates and responses to USEA and REG’s comments.

Deliverable 6: Digital copies of the Final Report on Power System Stabilizers incorporating updates and responses to USEA and REG’s comments.

Reporting: The consultant will report to USEA.

Schedule: The project is expected to begin in January 2020 and take approximately 4 months to complete.

Task(s)	Activities	Deliverables	Duration
Preliminary review of documents	Conducting a preliminary review of all relevant data and documents.		2 weeks
Technical Meetings	Conducting a 5-day technical meeting to collect data and to discuss approaches.		1 week
Audit of the Black Start Plan	Conducting a comprehensive audit of REG’s Black Start Plan.	Draft Report	2 weeks
Review of Protection Coordination	Performing a comprehensive review of REG’s current protection set-up.	Draft Report	2 weeks
Assessment of Power System Stabilizers	Conducting a comprehensive assessment of the effectiveness of the integrated power system stabilizers.	Draft Report	2 weeks
Update the Black Start Report	Updating the draft report to incorporate responses to USEA and REG’s comments	Final Report	4 weeks
Update the Protection Coordination Report	Updating the draft report to incorporate responses to USEA and REG’s comments	Final Report	4 weeks
Update the Power System Stabilizers Report	Updating the draft report to incorporate responses to USEA and REG’s comments	Final Report	4 weeks

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. Proposed project schedule to perform the tasks under this project highlighting any deviations from the scope of work specified above;
 - c. 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;
 - d. 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 2 pages for each proposed team member;
 - e. 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 and budget justification. Proposals shall first be evaluated from a technical standpoint (qualifications and subject matter expertise) without regard to proposed budget justification. For those proposals determined to be technically acceptable, budget justification will be evaluated.

Evaluation Criteria:	15%:	Experience with similar projects (for each consultant and the organization in general)
	30%:	Subject matter expertise (education and other relevant experience)
	25%:	Technical approach
	30%:	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 October 15, 2019. All questions and answers will be provided to all prospective bidders.

END OF RFP