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## REQUEST FOR PROPOSAL

## Feasibility Study and Design for Oserian Two Lakes – High Voltage KPLC Interconnection

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| <b>RFP issue date:</b>                   | <b>September 30, 2021</b>   |
| <b>Last date for queries submission:</b> | <b>October 15, 2021 (18:00 ET)</b>  |
| <b>Response to queries:</b>              | <b>October 18 2021</b>  |
| <b>Closing date of RFP:</b>              | <b>October 29, 2021 (18:00 ET)</b>  |
| <b>Implementing Program:</b>             | <b>East Africa Geothermal Partnership (EAGP), Energy Utility Partnership Program (EUPP)</b> |
| <b>Implementing Agency:</b>              | <b>U.S. Energy Association (USEA)</b>   |
| <b>Funding Agency:</b>                   | <b>United States Agency for International Development (USAID)</b>                           |
| <b>Assistance recipients:</b>            | <b>Oserian Two Lakes Power (OTLP)</b>   |
| <b>Location of study:</b>                | <b>Online via video conferencing (Zoom or Microsoft Teams), Desktop study</b>               |

This feasibility study and design for the Oserian Two Lakes Power corporation will contribute to the completion of an interconnection between their planned industrial park and KPLC. It will provide OTLP with the power redundancy to support their master plan and maintain their commitment to be powered by 100% renewable energy resources. This study will be conducted as part of the U.S. Agency for International Development’s (USAID) East Africa Geothermal Partnership (EAGP).

Please submit your offer in soft copy with a read receipt to Mr. Ernest Wyatt, Program Coordinator, East Africa Geothermal Partnership, at [ewyatt@usea.org](mailto:ewyatt@usea.org).

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### I. INTRODUCTION

This activity is funded by the United States Agency for International Development (USAID)’s East Africa Geothermal Partnership (EAGP), which is implemented through a cooperative agreement between USAID’s USAID Bureau for Development, Democracy, and Innovation (DDI), and the U.S. Energy Association (USEA).

USEA, headquartered in Washington, DC, is an association of public and private energy-related organizations, corporations, and government agencies. USEA is the implementing partner of USAID’s Energy Utility Partnership Program (EUPP). EUPP, which is available to all USAID-assisted countries, assists developing countries to increase environmentally sustainable energy production and use and improve the operational efficiency and increased financial viability of their utilities and related institutions. The goal of the EUPP is to increase access in USAID-assisted countries to environmentally sound energy services.

The East Africa Geothermal Partnership (EAGP) is a public-private partnership between the U.S. Agency for International Development (USAID) and the U.S. Energy Association (USEA). It was established in September 2012 to promote the development of geothermal energy projects and increase private sector investments in geothermal in East Africa. It also encourages and facilitates the involvement of the U.S. geothermal industry in the region. With an estimated 15,000 MW of potential geothermal capacity in East Africa - a clean, reliable, baseload power solution – geothermal energy is critical to East Africa’s economic development especially as a base-load power source.

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

## **II. BACKGROUND**

EAGP supports the development of the geothermal sector in East Africa by providing technical assistance, capacity building and executive exchanges to stakeholders in the region. The Oserian Two Lakes Power (OTLP) geothermal industrial park has approached the Power Africa team and EAGP to provide technical assistance for the specification and design of a synchronized interconnection between the nearby 33kV KPLC line to the OTLP 11kV mini grid. The design should provide an instantaneous and continuous source of power to the industrial park and include the design for a step down substation from the 33KV line to 11KV mini grid. OTLP is a privately owned subsidiary of Oserian Development Corporation (ODC), Oserian is the largest flower farm in Kenya. Oserian occupies a farming area of 20,000 acres adjacent to the KenGen Olkaria Geothermal Resource Area. Included within this area is an estimated 5,000 acres encompassing a proven geothermal resource area.

ODC has developed a master plan for the implementation of the Two Lakes Industrial Park. Oserian’s plan includes hosting manufacturing companies, food production facilities and other facilities. Oserian would supply electrical and thermal power to these companies through renewable generation options within the Oserian land holdings. The initial estimate includes a 0.8 MW textile manufacturer, 1.2 MW agribusiness and 2 MW supply to future consumers such as a greenhouse film manufacturer or other potential tenants. Oserian has a high growth target to expand the industrial park to a total of 8 MW of demand over the next two (2) years. Oserian holds a private retail energy license for the industrial park, allowing them to generate, transmit, and sell electricity within their land area.

Currently, OTLP does not have enough installed renewable power generation capacity to support their planned industrial park. Therefore, they will need to establish a synchronized interconnection between KPLC’s 33KV Line and Oserian’s 11KV mini grid for backup power supply. Implementing this connection will provide OTLP with the power redundancy to support their master plan and maintain their commitment to be powered by 100% renewable energy resources. In the future, OTLP plans to bring more geothermal and solar energy resources online to meet the demand from the industrial park.

## **III. SCOPE OF WORK**

### **Study Objectives**

While OTLP works to deliver on their master plan to build a 100% renewable energy powered industrial park with a baseload of geothermal energy they will need additional power from KPLC while they continue to provide energy from existing geothermal and solar resources and develop new generation capacity. The purpose of this study is to:

- Conduct a feasibility study and design for a synchronized interconnection that will meet KPLC’s distribution grid code requirements
- Provide OTLP with a list of next steps needed to formalize the KPLC connection including
  - Specifications required for a contractor to make the connection
  - Required data needed for the contractor to establish the connection

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

The information will be compiled via desktop research, web conferencing and emails to relevant stakeholders. USEA will liaise with Oserian to provide the necessary source materials; however, the consultant should be prepared and experienced to collect this material independently if needed.

The feasibility study and design will include:

- A list of next steps on how OTLP can meet the KPLC distribution grid code requirements. Interconnection requirements under Kenya's grid code can be found [here](#).
- The interconnection feasibility study and design should include, but not be limited to:
  - A protection system design model to safeguard the OTLP mini grid from issues with either the KPLC or Oserian electricity supplies.
  - Synchronization system design with necessary protection systems included.
  - Voltage, reactive power, and power factor control.
  - Metering location for KPLC and Oserian sources.
  - Micro grid controller to give OTLP the control to feed power to the industrial park and avoid back feed to KPLC grid.
  - Conductors/cable sizing requirements to connect to the distribution panels.
  - Budget estimates for implementing the scope of work.
  - Design drawings
  - Technical assessment and cost benefit analysis to help OTLP determine when it is best to use OTLP generated power or power from the KPLC line.
    - a. Perform a comparative analysis of the cost of KPLC power vs power produced in the park, with the assumption that sufficient generation resources have been developed in the park to meet peak demand.

### **Expected Outcome**

The technical assistance provided to OTLP through the feasibility study and design will enable OTLP to meet the requirements of the KPLC grid code and receive approval to move forward with building a synchronized interconnection between OTLP and KPLC.

### **Responsibilities of USEA**

- Liaison with USAID, OTLP and the selected consultants to ensure all necessary information is provided.
- Feedback on the draft study and design reports
- Liaison between OTLP and selected consultants regarding the final report to ensure that all information and analysis is done.

### **Deliverables**

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

- Draft work plan
- Draft feasibility study and design outline
- Final feasibility study and design report that will be shared with OTLP. Report to include:
  - Feasibility study and design drawings of the interconnection between the industrial park's 11kV line and KPLC 33kV grid.
  - Outline of necessary steps to meet KPLC grid code requirements
  - System impact study
  - Technical assessment and cost benefit analysis to help OTLP determine when it is best to use OTLP generated power or power from the KPLC line.
  - Facilities study Summary of other relevant findings

## Schedule of Activities

The project has an expected duration of 16-20 weeks, from contract signing to final deliverables. Ideally, study and design research will begin in mid-November, but launch will depend on the time required to obtain USAID procurement approval and reach contract agreement.

## Reporting

The selected bidder will report to USEA.

### IV. PROPOSAL CONTENT

The proposal **must** follow the structure outlined below, contain the following components, and be within the page limitations specified below. Failure to follow the outline and page limits prescribed or exclusion of any of the required items will impact the proposal's scoring and may even lead to disqualification.

- a. A cover letter to the proposal.
- b. A technical proposal, not to exceed fifteen (15) pages, including:
  - Proposed work plan and methodology;
  - Description of past technical studies
  - A timeline for this consultancy
- c. A financial proposal, including:
  - Detailed justification (i.e. line item budget);
  - Labor, other direct costs, indirect costs, and level of effort for the consultant(s) proposed for this project.
- d. Short CVs/bio sketches of all proposed Consultant(s);
- e. Summary of the work to be performed by each employee proposed for this project;
- f. Company/organization Data Universal Numbering System (DUNS) number and confirmation of current status in the System of Award Management (SAM);

Completed USAID Contractor Employee Biographical Data Sheet forms for each employee proposed for this project (<https://www.usaid.gov/forms/aid-1420-17>).

### V. AGREEMENT MANAGEMENT AND OVERSIGHT

The bidder can propose an association/consortium/partnership of organizations; however, one organization must be identified as the lead organization. Individuals are also invited to submit proposals. An agreement between USEA and the selected bidder shall be subject to all USEA/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>
- USAID Mandatory Standard Provisions that apply to USEA's cooperative agreement (Annexure A)

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

### VI. EVALUATION CRITERIA

Selection of an offer for 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 to arrive at the best value for money.

Evaluation Criteria:     20%:   Bidder’s experience with similar projects  
                              30%:   Expertise of team members (education and professional experience)  
                              25%:   Technical approach  
                              25%:   Fee

**VII.     QUESTIONS AND PROPOSAL TIMEFRAME**

All questions related to this RFP should be submitted via email with a read-receipt to Ernest Wyatt at [ewyatt@usea.org](mailto:ewyatt@usea.org) no later than 18:00 ET, October 15, 2021. All questions and answers will be posted on USEA’s website in the same location as the RFP by October 18, 2021.

Interested parties are requested to submit final proposals no later than 18:00 ET, October 29, 2021. Proposals should be sent via email with a read receipt to Derek Burke at [ewyatt@usea.org](mailto:ewyatt@usea.org).

**VIII.    PROPOSAL VALIDITY**

The bidder shall submit the response to this RFP document, which shall remain valid up to sixty days from the RFP closing date (“Bid Validity”). USEA reserves the right to reject the proposal that does not meet the aforementioned validity requirements.

**IX.     ERRORS & OMISSIONS**

Prospective bidders shall not take advantage of any apparent errors or omissions in the RFP document. In the event that any errors or omissions are discovered, it is requested to inform Ernest Wyatt at [ewyatt@usea.org](mailto:ewyatt@usea.org) immediately.

**X.     ANNEXURES AND ENCLOSURES**

Interested parties are requested to review the USAID Mandatory Standard Provisions to USEA cooperative agreement (Annexure-A). The enclosures shall be treated as an integral part of this RFP document and the agreement that will result from this RFP.

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