



United States Energy Association Request for Proposal: National Grid Control Center Dispatchers Training for the Tanzania Electric Supply Company Limited (TANESCO)

Issue date of RFP: July 20, 2023

Closing date/time for questions: August 11, 2023

Closing date of RFP: August 18, 2023

Implementing Agency: United States Energy Association

Funding Agency: United States Agency for International Development

Award Ceiling: \$50,000 (fifty thousand US Dollars)

Program: Energy Utility Partnership Program (EUPP)

Subject: Request for Proposal (RFP) No. USEA/EUPP-2023-762-83-02 — United States

Energy Association

Re: Partnership with United States Energy Association for National Grid Control Center Dispatchers Training for the Tanzania Electric Supply Company Limited (TANESCO)

Components of this RFP as follows:

- Scope of Work (SOW) described under article IV
- Instructions for the preparation of the proposal described under article V
- Evaluation criteria described under article VI
- Budget Template

Dear Offeror,

The United States Energy Association is inviting prospective organizations or individuals through this Request for Proposal (RFP) to submit proposals for implementing a project on National Grid Control Center Dispatchers Training for the Tanzania Electric Supply Company Limited (TANESCO). This is an activity implemented by USEA under the United States Agency for International Development (USAID) Power Africa Initiative.

USEA intends to subaward a sub-agreement and/or consultancy agreement with period of performance for 8 months.

Offerors are requested to submit their most responsive technical proposal addressing the SOW outlined under article IV of this RFP and a competitive offer proposing a reasonable price to accomplish the objectives of the work.

Questions concerning this request shall be submitted via email to attention of Ms. Marina N. Barnett, Program Manager, at mbarnett@usea.org by 17:00 hours EST on August 11, 2023. In compliance with standard

procedure, all inquiries and comments will be shared with the rest of the Offerors along with the Project's response. Questions received after the closing date for questions will not be answered.

- 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, Program Manager, at mbarnett@usea.org. Proposals must be in digital format (PDF). Please note that USEA will not accept responsibility for delays with transmission or receipt of proposals. Proposals received after that date and/or time specified will not be considered.
- LANGUAGE REQUIREMENTS The proposal and all deliverables shall be produced in English.
- AUTHORIZED GEOGRAPHIC CODE The authorized geographic code for procurement of services under this
 contract is 937.
- **ELIGIBILITY** This RFP is open to qualified organizations domestically (in the U.S.) and internationally (abroad).
- USEA will evaluate responsive and technically acceptable proposals in accordance with the evaluation criteria stated under article VI, "Evaluation Criteria." USEA will not evaluate nonresponsive or technically unacceptable proposals. Please note that USEA will find proposals technically unacceptable if they fail to comply or fully respond with the material terms of this RFP.
- Issuance of this RFP does not constitute a subaward commitment on the part of USEA, nor does it commit USEA to pay for costs incurred in the preparation and submission of an application. Further USEA reserves the right to reject any or all applications received.

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

I. INTRODUCTION

The United States Energy Association is a nonprofit, apolitical, nonlobbying organization founded in 1924. USEA's mission has two pillars of equal importance. USEA serves as a resource, by convening energy stakeholders to share policy, scientific, and technological information to foster the advancement of the entire energy sector. Internationally, USEA promotes energy development by expanding access to safe, affordable, and environmentally acceptable energy in partnership with the U.S. Government.

Through a cooperative agreement with the United States Agency for International Development (USAID) Bureau for Development, Democracy, and Innovation (DDI), USEA implements an Energy Utility Partnership Program (EUPP) available to all USAID-assisted countries and USAID missions. EUPP supports USAID-partner countries in their efforts to increase environmentally sustainable energy production and improve the operational efficiency and 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.

Power Africa is a U.S. Government-led partnership, coordinated by USAID, that brings together the collective resources of over 200 public and private sector partners to double access to electricity in sub-Saharan Africa.

II. UTILITY/COUNTRY BACKGROUND

Tanzania is the sixth-most populous country in sub-Saharan Africa; it connects six land-locked countries to the Indian Ocean; and, with the announcement of natural gas reserves, plus abundant and world-class wind and solar resources, hosts many natural resources. The Government of Tanzania (GOT) has committed to reform the operations of TANESCO (the national utility) and meet new demand through low-cost solutions. Historically, Tanzania relied on hydro

power generation, which due to climate change were unreliable and forced the sector to occasionally deploy expensive thermal and emergency generation sources. In recent years, major generation sources have been natural gas and all emergency power plants have been decommissioned. Tanzania is currently carrying out renewable energy power auctions which are expected to add up to 350 MW of wind and solar power. Currently, Tanzania is also constructing a large and ambitious 2,115 MW hydropower plant that is expected to be operational by 2024. There are several rural electrification projects being implemented in areas which have never had centrally supplied electricity and are served by solar home systems or micro grids. In addition, financial challenges persist due to issues with cost-reflective tariffs and off-taker creditworthiness.

Tanzania Electric Supply Company Limited (TANESCO), established in 1931, generates, purchases, transmits, distributes, and sells electricity to Tanzania mainland and sells bulk power to the Zanzibar Electricity Corporation (ZECO), which in turn sells it to the public on the islands of Unguja and Pemba. TANESCO owns most of the electricity generating, transmitting, and distributing facilities in Tanzania mainland with an estimated population of over 50 million.

Later this summer, the Tanzania and Kenya power systems are scheduled to be connected through a 400kV transmission line and related substations. When completed, the interconnection will ensure a stable, reliable, and affordable power supply and reduce the operational costs of energy production in both countries, as well as elsewhere in the region. Lower electric costs will contribute significantly to East Africa's economic development. Several more electrical grid interconnections between Tanzania and Uganda, Mozambique, Zambia and Malawi are under feasibility studies to be implemented in 2025 – 2027. In the long run, these interconnections will establish a favorable environment for cross-border power trade and contribute to the reduction of Greenhouse Gas (GHG) emissions by replacing some of thermal energy production with cheaper hydropower.

III. IMPLEMENTATION AND APPROACH

The purpose of this RFP is to solicit proposals from interested organizations or individuals (private/government/nongovernmental/institutes/not-for-profit/civil societies) deemed most suitable to undertake the project. The applicant can propose an association/consortium/partnership of maximum two organizations, however, one organization must be identified as the lead organization.

Award Ceiling

USEA is constrained by a \$50,000 budget for this project. This budget does not include travel and logistical expenses that USEA will be responsible for (see Section on USEA Responsibilities).

USEA Involvement and Responsibilities

USEA will be involved in all the activities under a subaward agreement between USEA and the Subawardee and/or Consultant in the following ways:

- Review and approval of proposed activities
- Review and approval of deliverables
- Approval of invoices for payment

USEA will also be responsible for all logistical arrangements for the participants and consultants for the activities conducted in Tanzania and in the country of training. This includes arrangements and associated costs of 2 (two) 10-day training sessions (Training 1 and Training 2):

 Meeting space and audio-visual equipment in Tanzania for the 5 days of theoretical training, conducted remotely. USEA will also arrange and bear all travel costs of TANESCO trainees, including (per trip):

- Economy-class roundtrip airfare to the training site
- Per diem (meals and lodging) to include all travel and training days (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 Tanzania
- Ground transportation to/from the airport
- Local transportation to training facilities
- Training facility rent fee (if necessary)

Consultant's travel costs to the training site (if different from the consultant's place of business) shall be borne by the consultant. These costs, if any, must be included in the financial proposal.

USEA will follow the U.S. Department of State and the Centers for Disease Control and Prevention (CDC) guidelines when making travel and in-person programming decisions and arrangements.

Non-Disclosure Agreement

Depending on data requirements, the Subawardee and/or Consultant might be requested to sign a Non-Discloser Agreement (NDA) with TANESCO.

Subaward Agreement Management and Oversight

An agreement between USEA and the potential selected applicant shall be subject to all USEA/USAID Special Terms and Conditions, including all mandatory standard provisions (RAAs and ADS) 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
- Standard Provisions for Non-U.S. Nongovernmental Organizations: https://www.usaid.gov/sites/default/files/documents/303mab.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 are mentioned in USEA's cooperative agreement (attached).

Subaward agreement management, oversight of contractual obligations, and payment will be carried out by USEA. USEA will be responsible for any communication with USAID regarding the subaward. Subawardees and contractors have no relationship with USAID under the terms of this subaward. All required USAID approvals must be directed and processed through USEA.

IV. SCOPE OF WORK

Purpose

The purpose of this program is to ensure that TANESCO has adequate capacity to take full advantage of the Tanzania – Kenya interconnection and maintain the stability of the Tanzania's national power grid.

Objectives

The objective of this program is to provide power dispatchers of TANESCO's National Grid Control Center with comprehensive training 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 1: Design a training curriculum for TANESCO's National Grid Control Center power dispatchers to develop the knowledge and skills of multi-tasking dispatchers, including the management of essential control room equipment, the understanding and application of the latest operational procedures, and the understanding of operating an interconnected power system.

The training shall be conducted in 2 separate 10-day long sessions (utilizing the same curriculum), for up to 7 TANESCO trainees per session. The curriculum shall include, <u>as a minimum</u>, the following topics:

- 1. Differences between isolated and interconnected operation
 - a. Maintaining the frequency and exchange power at a given level
 - b. External observability zones
 - c. Determination of transmission capacities of cross-border lines
 - d. Cooperation with neighboring TSOs
- 2. Area Control Error (ACE) calculation
 - a. ACE in isolate mode frequency deviation
 - b. ACE in interconnected mode Exchange power deviations with the influence of frequency deviations
 - c. Unintentional deviations
- 3. Basics of SCADA/EMS applications
 - a. State estimator
 - b. Automatic Generation Control (AGC)
 - c. Study Power Flow Application
 - d. Alarms and Intelligent alarm processing
- 4. Power System Preparation
 - a. Usage of power system steady state models
 - b. Models updating and performing n-1 contingency analyzes
 - c. Planning of disconnections Outage Planning Coordination (OPC)
 - d. Preventive Remedial Actions preparation
- 5. Real Time Power System operation
 - a. Real time system operation tools
 - b. Normal system state system balancing
 - c. Safety and maintenance switching operations
 - d. Frequency and voltage control
 - e. Abnormal Operation:
 - i. Pre-disturbance stages
 - ii. Curative Remedial Actions
 - iii. Outages and disturbances
 - iv. System Restauration and Defense Plans

Both training sessions will consist of 2 parts -5 days of theoretical training, conducted remotely, and 5 days of hands-on-training utilizing a Dispatcher Training Simulator (DTS) at a training facility outside

of Tanzania. The 2nd part of the training must be conducted outside of Tanzania as there is no DTS available in the country.

- Task 2: Assist USEA with securing visas for TANESCO trainees, should they require visas to travel to the training site.
- Task 3: Conduct a 10-day training (Training 1) for the 1st group of TANESCO power dispatchers as described above. It is the responsibility of the consultant to provide an appropriate training facility with adequate equipment, including DTS.
- Task 4: Conduct a 10-day training (Training 2) for the 2nd group of TANESCO power dispatchers as described above. It is the responsibility of the consultant to provide an appropriate training facility with adequate equipment, including DTS.

Both trainings shall include pre-training and post-training surveys administered to all participants. A pre-training survey shall be designed to assess participants' baseline knowledge and competencies and to identify knowledge gaps and weak areas. The planned training course shall be modified to address the identified gaps. A post-training/skill assessment survey shall be designed to measure participating trainees' progress.

Deliverables

- Task 1: Deliverable 1: Digital copies in English of a draft training curriculum, and pre-training and post-training surveys submitted to USEA at least 2 weeks prior to conducting the training.
 - Deliverable 2. Digital copies in English of the full final training curriculum, including manuals, presentations and all other training materials developed for TANESCO and distributed to the participants.
- Task 2: Deliverable 3. Digital copies of all documents (formal letters of invitation, notarized letters of visa support, etc.) necessary to secure visas to the country of training for TANESCO trainees, should visas be required for their travel.
- Task 3: Deliverable 4. A digital copy in English of a Training Report 1 with training overview, conclusions about the overall productiveness of the training, and recommendations for further capacity building activities.
- Task 4. Deliverable 5. A digital copy in English of a Training Report 2 with training overview, conclusions about the overall productiveness of the training, and recommendations for further capacity building activities.

Deliverable 6. A digital copy – in English – of a final Project Report to include the following:

- An overview of the consultancy (background and the Scope of Work)
- Statement of consultant's background and key qualifications
- Recommendations for improving TANESCO's capacity to operate Tanzania's national grid and to maintain Tanzania's interconnections with neighboring power systems reliably, safely and efficiently
- Recommendations for other technical assistance to improve utility operations

Reporting:

The Subawardee and/or consultant will report to USEA.

Schedule:

The project is expected to begin in October 2023 and take approximately 6 months to complete. 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 follow the structure outlined below, contain the following components, and be within page limitations. Failure to follow the outline and page limits prescribed or exclusion of any of the required items will impact the proposal's scoring. Maximum proposal limit 50 pages (inclusive of cover page and annexes).

Cover Letter							
Subject heading	Description	Notes	Maximum Page Limit				
Cover Letter	Must include the bidder's current Unique Entity ID (UEI) assigned to an entity by SAM.gov.	UEI and SAM registrations are only required for proposals over \$25,000 USD.	1 page				
	Give the status of System of Award Management (SAM) registration.	Proposals in value of \$25,000 or greater without a UEI number will not be considered and need not apply.					
Technical Proposa	al						
Subject heading	Description	Notes	Maximum Page Limit				
Understanding of the issues	Demonstration of an understanding of the issues outlined in the SoW	Bidder to avoid repeating the information already provided in the RFP.	1 page				
Technical approach	Approach to implementing the SoW		2 pages				
Schedule of tasks	Proposed schedule of tasks and deliverables per the SoW		1 page				
Team members, key assignments and bio sketches	For each member of the team: 1st: Summary of work to be performed by/assignment of each individual proposed. 2nd: (Immediately following the assignment) Short bio sketch that highlights the individual's direct	Bidder can propose a consortium of multiple organizations and/or individuals; however, one organization must be identified as the lead organization who will enter into a contract with USEA and be in compliance with the SAM and UIE	1 page per person total ½ page for assignment per person, followed by ½ page for bio				
F '	experience with the subject matter.	reguirements noted in this RFP.	sketch				
Financial proposa Subject heading	Description	Notes	Maximum Page Limit				
Summary of costs fees	Line-item budget excluding labor with detailed justification of all costs associated with the project, including direct and indirect costs (printing, admin supplies, etc.).	Must be in USD Must be inclusive of taxes (if applicable) USEA reserves the right to request a budget narrative after a proposal has been submitted	1 page				

Labor	Anticipated labor costs, broken down	Must include names and titles of the	1 page
	by the number of man-hours and	individuals. Must be in USD. Must be	
	fully loaded daily rate for each	inclusive of taxes & fees (if	
	individual proposed for this project.	applicable)	
		All salary information will be kept confidential.	
		USEA reserves the right to request a	
		budget narrative after a proposal has	
		been submitted	

Annexes	Annexes						
	Description	Notes	Maximum Page Limit				
Annex 1	Proof of System of Award Management (SAM) registration	Please note that <u>SAM registration</u> is a 10-step process and can take several weeks to complete. Please refer to this <u>guide</u> for more information. If a bidder has not completed the SAM registration process by the proposal submission due date, USEA will accept a proposal if it includes a PDF copy of an email from "notification@sam.gov" to the bidder stating that the bidder "successfully submitted the entity registration for NAME OF COMPANY in the U.S. Government's System for Award Management (SAM)". Proposals without proof of SAM registration or an email from notification@sam.gov stating acceptance of SAM application, will not be considered and need not be submitted.	1 page				
Annex 2	Curricula Vitae	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).	2 pages per person				
Annex 3	USAID Contractor Employee Biographical Data Sheet	Completed USAID Contractor Employee Biographical Data Sheet forms (https://www.usaid.gov/forms/aid-1420-17) for each employee proposed for this project. Bidders must fill the form completely and should follow the instructions provided in the form. Salary information must be included, but the information will be kept confidential. Bidders must submit the form for all team members mentioned in the proposal as per the template provided. Bidders are not allowed to not make any modification in the template. USEA reserves the right to reject a proposal that does not meet the aforementioned requirements.	1 page per person				
Annex 4	Organization experience	Summary of the company's or companies' background and experience with similar projects.	3 pages				

VI. EVALUATION CRITERIA

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

In evaluating the proposals, USEA will seek the **best value for money** rather than the lowest priced proposal. Selection of an offer for a subaward award will be based on an evaluation of proposals against qualifications, subject matter expertise and budget justification. USEA will use a two-stage selection procedure:

- the first stage will evaluate the Technical Proposal: Proposals shall first be evaluated from a technical standpoint (qualifications and subject matter expertise) without regard to proposed budget justification.
- the second stage will evaluate the Cost Proposal for proposals that pass the Technical Proposal evaluation.

Specifically, the selection committee will evaluate each proposal upon the following criteria and using the following weighting:

Evaluation Criteria: 20%: Experience with similar projects (for each consultant & the organization in general)

10% Experience implementing projects in Tanzania and/or East Africa

20%: Subject matter expertise (based on education and other relevant experience)

30% Technical approach

20%: Cost

If at any time prior to award USEA deems there to be a need for a significant modification to the terms and conditions of this RFP, USEA will issue such a modification as a written RFP amendment to all competing bidders. No oral statement of any person shall in any manner be deemed to modify or otherwise affect any RFP term or condition, and no bidder/applicant shall rely on any such statement. Such amendments are the exclusive method for this purpose.

USEA is not bound to accept the lowest or any proposal and reserves the right to accept any proposal in whole or in part and to reject any or all proposals.

USEA shall not be legally bound by any award notice issued for this RFP until an agreement is duly signed and executed with the winning bidder/applicant.

Any resulting agreement will be subject to the terms and conditions contained in the Subaward and/or Consulting Agreement.

VII. QUESTIONS AND CLARIFICATIONS

All questions and clarification requests related to this RFP should be submitted via email to Ms. Marina N. Barnett, Program Manager, at mbarnett@usea.org no later than August 11, 2023. All questions and answers will be posted on USEA's website.

END OF RFP