United States Energy Association
Request for Proposal: System Stability and Reliability Study - Prospective State – National Electricity Transmission Company of Uzbekistan

REQUEST FOR PROPOSAL – System Stability and Reliability Study - Prospective State – National Electricity Transmission Company of Uzbekistan (NETC)

Closing date of RFP: **December 3, 2021**

Implementing Agency: **United States Energy Association (USEA)**

Funding Agency: **United States Agency for International Development (USAID)**

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 System Stability and Reliability Study – Prospective State for the National Electricity Transmission Company of Uzbekistan.

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 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.

In Central Asia, EUPP works to create an enabling environment for the regional transfer to cleaner, more reliable power supply and encourage establishment of an integrated power market.

II. BACKGROUND

Uzbekistan has a vast amount of energy resources and is the largest electricity producer in Central Asia. The country's generating capacity is currently estimated at 12.9 GW, including 11 GW from thermal power plants (TPPs), 1.85 GW from hydropower plants (HPPs), and 133 MW from autoproducers. According to a 2020 Concept Note, the Government of Uzbekistan anticipates that generation capacity will be increased to 29.3 GW and electricity production will be raised to 120.8 billion kWh by 2030.

In Uzbekistan, hydropower generation is considered as renewable energy and accounts for slightly more than 10% of the total electricity production. However, Uzbekistan plans to increase the share of renewable generation to 25% by constructing new renewable generation facilities, including solar, wind and hydropower, with a total capacity of over 8,400 MW.

The National Electricity Transmission Company (NETC) carries out the operation and development of Uzbekistan's main electric network, supplies electricity to customers, and manages interstate transit and parallel operations with electric power systems of the neighboring states. The total length of the grid is approximately 158,450 miles, including 6,027 miles of 220-500 kV of major overhead transmission lines. NETC owns and operates 14 regional electric networks, a national dispatch center, a central relay protection and automation service, and 78 220-500 kV substations.

NETC utilizes DIgSILENT's PowerFactory software tool for transmission network analysis, modeling, and planning. In 2021, USEA provided NETC with a national dynamic model of Uzbekistan's network for the existing network topology, planning models – static and dynamic – for 5- and 10-year horizons to include planned renewable generation, and with comprehensive training on developing and improving national models using the DIgSILENT's PowerFactory software.

III. IMPLEMENTATION AND APPROACH

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

Subcontract Agreement Management and Oversight

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 are mentioned in USEA's cooperative agreement (Annexure-E)

Subcontract 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 subcontract.

USEA Involvement and Responsibilities

USEA will be involved in all the activities under a subcontract agreement between USEA and the 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. This includes arrangements and associated costs for the following, for the 3-day workshop:

- Economy-class roundtrip airfare to Tashkent, Uzbekistan 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 (Lodging to be provided according to U.S. government regulations)
- Reimbursement of visa fees
- Reimbursement of vaccinations (if needed), travel medication costs and COVID-19 tests
- International health insurance for the duration of the travel to Uzbekistan
- Ground transportation to/from the airport
- Local transportation to sites (if needed)
- Meeting space and A/V

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 Consultant might be requested to sign a Non-Discloser Agreement (NDA) with NETC.

IV. SCOPE OF WORK

Purpose

The purpose of this program is to enhance the capacity of NETC for integration of renewable generation while maintaining stability and reliability of the national grid. The ultimate outcome will be the creation of an enabling environment for expanded integration of renewable generation and for the establishment of a unified power system in Central Asia.

Objective

The objective of this program is two-fold:

- To analyze the future system behavior and develop possible technical and engineering solutions to avoid network instability that might be caused by the integration of new renewable generation facilities (System Stability and Reliability Study – Prospective State);
- To train NETC engineers to model stability and reliability issues using DIgSILENT PowerFactory software.

Tasks

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

Task 1: Conduct a webinar on project methodology and data collection to prepare NETC to collect and provide all data necessary to conduct the System Stability and Reliability Study – Prospective State.

Task 2: Conduct a long-term load flow and N-1 security study to analyze the future system behavior and develop possible technical and engineering solutions to avoid network instability that might be caused by the integration of new renewable generation facilities (System Stability and Reliability Study – Prospective State).

Task 3: Conduct a 3-day workshop to present the System Stability and Reliability Study – Prospective State and to train the NETC engineers to model stability and reliability issues using DIgSILENT PowerFactory software.

The workshop training agenda must include the following topics:

- Steady state analyses (for peak and off-peak prospective regimes)
- Stability analyses
- Voltage profile assessment
- Reactive power compensation

The webinar and the workshop shall be delivered in the Russian language.

The workshop 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

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

Task 1: **Deliverable 1.** Digital copies – in English and in Russian – of a presentation outlining project methodology and data questionnaires to be provided to NETC for collecting all data necessary to conduct the System Stability and Reliability Study – Prospective State submitted to USEA at least 2 weeks prior to conducting the webinar.

Task 2: **Deliverable 2.** Digital copies – in English and in Russian – of a **draft** report on the System Stability and Reliability Study – Prospective State submitted to USEA and NETC for their review.

Deliverable 3. Digital copies – in English and in Russian – of a **final** report on the System Stability and Reliability Study – Prospective State. The report shall incorporate updates and responses to USEA and NETC's comments.

Task 3: **Deliverable 4.** Digital copies – in English and in Russian – of a draft presentation of the System Stability and Reliability Study – Prospective State report and training workshop curriculum, and pre-training and post-training surveys submitted to USEA at least 2 weeks prior to conducting the training.

Deliverable 5. Digital copies – in English and in Russian – of the final presentation of the System Stability and Reliability Study – Prospective State report and full training curriculum, including manuals, presentations and all other training materials developed for NETC and distributed to the participants.

Deliverable 6. Digital copy – in English – of a Training Report on workshop approach, accomplishments and recommendations.

Deliverable 7. 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 operations of the utility based on the work performed during this consultancy
- Recommendations for further technical assistance.

Reporting

The Consultant will report to USEA.

Schedule

The project is expected to begin in January 2022 and take approximately 12 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			
	Description	**Notes**	**Maximum page limit**
	Must include bidder's current Data Universal Numbering System (D-U-N-S) number Provide status of System of Award Management (SAM) registration	Proposals without a DUNS number will not be considered and need not apply.	2 pages
Technical proposal			
Subject heading	**Description**	**Notes**	**Maximum page limit**
Understanding of the issues	Demonstration of an understanding of the issues outlined in the SoW		1 page
Technical approach	Approach to implementing the SoW		4 pages
Schedule of tasks	Proposed schedule of tasks and deliverables per the SoW		2 pages
Team assignments & 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 experience with the subject matter	The 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 contract with USEA and be in compliance with the SAM and DUN registration noted in this RFP.	1 page per person total ½ page for assignment per person, followed by ½ page for bio sketch
Financial proposal			
Subject heading	**Description**	**Notes**	**Maximum page limit**
Summary of costs	Line-item budget excluding labor with detailed justification of all costs associated with the project, including direct and indirect costs (printing, administrative supplies, etc.).	Must be in USD Must be inclusive of taxes (if applicable)	2 pages
Labor fees	Anticipated labor costs, broken down by the number of man-hours and fully loaded daily rate for each individual proposed for this project	Must include names and titles of the individuals Must be in USD Must be inclusive of taxes & fees (if applicable) All salary information will be kept confidential	2 pages

Annex			
	Description	**Notes**	**Maximum page limit**
Annex 1	Proof of System of Award Management (SAM) registration	Please note that SAM registration is a 10-step process and can take several weeks to complete. Please refer to this guide 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 apply.	
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 for each employee proposed for this project https://www.usaid.gov/sites/default/files/documents/1868/AID-1420- 17-6-13-19FINAL.doc	1 page per person
Annex 4	Organization experience	Summary of the company's or companies' background and experience with similar projects	5 pages

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:
- 25%: Experience with similar projects (for each consultant & the organization in general)
- 25%: Subject matter expertise (education and professional experience)
- 30% Technical approach
- 20%: 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 **November 19, 2021**. All questions and answers will be posted on USEA's website.

END OF RFP