

REQUEST FOR PROPOSAL

Energy Technology and Governance Program **of the** **United States Agency for International Development** **and the** **United States Energy Association**

USEA is seeking proposals from consulting firms experienced in developing long term electricity distribution network development plans as described in the TOR of this document. USEA will work with the selected organizations to refine a cost proposal. Final approval of the contractor and selected staff is subject to USAID approval.

TERMS OF REFERENCE FOR **FIVE YEAR ELECTRIC DISTRIBUTION MASTER NETWORK DEVELOPMENT PLAN** **FOR “ENERGOPRO” IN THE REPUBLIC OF GEORGIA**

The United States Energy Association (USEA) in Cooperation with the United States Agency for International Development (USAID) is seeking a consulting firm to develop a five-year electric distribution master network development plan for EnergoPro, one of three distribution system operators (DSOs) in the Republic of Georgia.

Background

EnergoPro is the largest of three DSOs in the Republic of Georgia, providing both generation and distribution services to over 1,000,000 customers covering 47,265 km², or approximately 70% of the country. The network includes over 4,200 km of distribution lines and over 450 transformers at the 110KW and 35KW voltage levels.

The national energy regulatory commission for Georgia (GNERC) recently enacted a new Electric Distribution Network Code in April 2016, requiring each DSO to provide a five-year distribution network development plan (5YNDP) based upon a computer simulation software analysis of a detailed model of their distribution network.

The Georgian DSOs, however, do not possess a detailed model of their distribution network, nor the appropriate distribution network simulation software to develop this type of long-term network development plan.

At a minimum, the 5YNDP will require the following elements:

- 5 year current capacity by transformer and circuit
- 5 year forecast demand by transformer and circuit
- Forecast of network upgrades required to integrate expected new generation facilities, distributed generation, batteries, and/or distribution technology (e.g. Volt Var Optimization) by transformer and circuit

- List of all planned projects previously agreed to with GNERC
- Forecast of expected investments to the distribution network and the associated cost-benefit analyses relative to competing technologies
- Forecast of transmission upgrades / investments that can impact distribution network
- Service quality forecasts including SAIFI, SAIDI and energy not supplied
- Current and forecasted reactive power on the network and plans to reduce the associated electricity losses
- Plans to modify connection points to the distribution network and arrangements of expected new connection points

Scope of Work

The selected firm (“Consultant”) will possess the technical expertise and appropriate distribution network simulation software to create a distribution network model for EnergoPro and to perform the network analysis to develop the 5YNDP as required under the new distribution network grid code of Georgia.

The Consultant will also train the EnergoPro team on the use of the simulation software throughout the period of performance of this agreement to ensure their ability to develop future distribution network development plans.

The Consultant will perform the following major tasks:

1. Review the new Electric Distribution Grid Code enacted by GNERC in April 2016 to gain a clear understanding of the information required in the 5YNDP.
 - For purposes of this assignment the distribution network model will include all medium voltage distribution elements (35KV – 10KV). Engineering assumptions will be utilized to model the elements on the lower voltage levels.
2. Develop and distribute to EnergoPro a listing of the types of data and information that will be needed to create the distribution network model.
3. Travel to Tbilisi, Georgia for approximately one week to conduct initial meetings with the EnergoPro team responsible for developing the distribution network development plan. During this visit the Consultant will:
 - Develop a mutually agreed upon schedule of tasks, responsibilities and deadlines to create the distribution network model and to complete the network analysis.
 - Install the distribution network simulation software on EnergoPro’s computer system.
 - Begin to identify and collect the required network data.
4. Travel to Tbilisi, Georgia on a bi-monthly (every other month) basis throughout the period of performance of this agreement to work with the EnergoPro team to collect the required data, populate the simulation software and create the distribution network model, and perform the necessary analyses.
 - The consultant will also provide hands-on trainings with the EnergoPro team on the use of the simulation software to ensure their ability to develop future distribution network development plans.

5. Communicate via Skype or similar VOIP with the EnergoPro team on a regular basis while not in country to monitor performance and to make adjustments to the scheduled tasks as needed.
6. Finalize the 5YNDP Plan and work with EnergoPro to present it to USEA, USAID, GNERC and other interested stakeholders.

The Consultant should take into account the following assumptions regarding this project:

1. USEA will provide EnergoPro with a licensed copy of a commercially available distribution system simulation software program – including all modules necessary to provide the required information. Selection of this software will be mutually determined by USEA, the Consultant and EnergoPro.
2. USEA will separately fund all travel related costs including airfare, ground transportation, lodging and meals & incidental expenses up to US government allowances through its Cooperative Agreement with USAID.
3. The consultant will be required to submit to USEA formal monthly progress reports highlighting work performed, accomplishments and any obstacles encountered during the previous month.
4. All U.S. Government procurement, standard provisions, regulations and travel rules apply.

Illustrative Schedule:

| Action | Date |
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| Review new GNERC Electric Distribution Grid Code to gain a clear understanding of the information required in the Five Year Distribution Network Development Plan. | Immediately upon signing of the contract |
| Develop and distribute to EnergoPro a DIR clearly listing all of the data and information that will be needed to create the distribution network model. | One month following signing of contract |
| Travel to Tbilisi, Georgia for approximately one week to conduct initial meetings with the EnergoPro team responsible for developing the network development plan and to assist EnergoPro to properly install the simulation software. | Two weeks following distribution of DIR |
| Travel to Tbilisi, Georgia on a regular basis to assist EnergoPro to develop the network model, perform the analyses, conduct training and complete the Five Year Network Development Plan | Every 1-2 months throughout the period of performance of the agreement |
| Complete EnergoPro distribution network model of all medium voltage network elements (35KV - 10KV level). | To be determined |
| Complete EnergoPro distribution network analyses and develop network development plan | To be determined |
| Prepare and deliver a PowerPoint presentation to USEA, EnergoPro management and the USAID Mission detailing | To be determined |

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| the final 5YNDP | |
| Submit to USEA formal monthly progress reports highlighting work performed, accomplishments and any obstacles encountered during the previous month. | To be submitted within one week following the end of each month |
| Submit Final Report to USEA | Signing of contract + 10 months |

Proposal Requirements:

Cost proposals should only be for labor, other direct costs and indirect costs. USEA, through its cooperative agreement with USAID, will separately fund all travel related costs associated with this project including airfare, ground transportation, interpretation, lodging and meals and incidental expenses up to US government allowances.

Proposals should address at a minimum the following information:

- Experience with similar projects in the Europe & Eurasia region and/or developing countries.
- 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 elements of the 5YNDP listed on pages 1-2 of this RFP. (Maximum 2 pages).
- Proposed project schedule to perform the tasks under this project highlighting any deviations to the proposed scope of work specified above.
- Cost proposal including the daily rate, indirect costs, and level of effort for each employee proposed for this project.
- CV's and completed USAID Contractor Employee Biographical Data Sheet forms for each employee proposed for this project
- A summary of the work to be performed by each employee proposed for this project.
- Qualifications demonstrating ability to conduct the work to be performed under this project.

Evaluation Criteria

- 30%: Experience with similar projects in the European/Eurasian region and/or Developing Countries
- 30%: Technical Approach
- 40%: Cost

Timeframe:

All questions related to this RFP should be submitted via email to Albert Doub at adoub@usea.org no later than October 31, 2016. All questions and answers will be provided to all prospective bidders.

Interested parties are requested to submit final proposals no later than November 15, 2016. Proposals should be sent via email to Albert Doub at adoub@usea.org. Mr. Doub can be contacted for further information at 202-312-1254.