

**REQUEST FOR PROPOSALS**

**TECHNICAL ASSISTANCE FOR THE**

**NEDCO MANAGEMENT AND INVESTMENT PLANNING**

Submission Deadline: **2:00PM**  
**LOCAL (ACCRA) TIME**  
**March 11, 2013**

Submission Place: Managing Director  
Northern Electricity Distribution Company (NEDCo)  
NORRIP Block  
P.O. Box TL 77  
Tamale, Ghana

Contacts Tel: +233 37 2022363  
Email: [mdnedco@vra.com](mailto:mdnedco@vra.com)

**SEALED PROPOSALS SHALL BE CLEARLY MARKED AND RECEIVED PRIOR TO THE TIME AND DATE SPECIFIED ABOVE. PROPOSALS RECEIVED AFTER SAID TIME AND DATE WILL NOT BE ACCEPTED OR CONSIDERED.**

## REQUEST FOR PROPOSALS

SECTION 1: INTRODUCTION .....	4
1.1 BACKGROUND SUMMARY.....	4
1.2 OBJECTIVE .....	5
1.3 PROPOSALS TO BE SUBMITTED .....	5
1.4 CONTRACT FUNDED BY USTDA.....	5
SECTION 2: INSTRUCTIONS TO OFFERORS .....	6
2.1 PROJECT TITLE.....	6
2.2 DEFINITIONS.....	6
2.3 DEFINITIONAL MISSION REPORT .....	6
2.4 EXAMINATION OF DOCUMENTS .....	6
2.5 PROJECT FUNDING SOURCE.....	6
2.6 RESPONSIBILITY FOR COSTS .....	7
2.7 TAXES.....	7
2.8 CONFIDENTIALITY.....	7
2.9 ECONOMY OF PROPOSALS .....	7
2.10 OFFEROR CERTIFICATIONS .....	7
2.11 CONDITIONS REQUIRED FOR PARTICIPATION .....	7
2.12 LANGUAGE OF PROPOSAL.....	8
2.13 PROPOSAL SUBMISSION REQUIREMENTS .....	8
2.14 PACKAGING .....	8
2.15 OFFEROR’S AUTHORIZED NEGOTIATOR .....	8
2.16 AUTHORIZED SIGNATURE .....	8
2.17 EFFECTIVE PERIOD OF PROPOSAL .....	9
2.18 EXCEPTIONS .....	9
2.19 OFFEROR QUALIFICATIONS .....	9
2.20 RIGHT TO REJECT PROPOSALS .....	9
2.21 PRIME CONTRACTOR RESPONSIBILITY .....	9
2.22 AWARD .....	9
2.23 COMPLETE SERVICES .....	10
2.24 INVOICING AND PAYMENT .....	10
SECTION 3: PROPOSAL FORMAT AND CONTENT .....	10
3.1 EXECUTIVE SUMMARY .....	11
3.2 U.S. FIRM INFORMATION.....	11
3.3 ORGANIZATIONAL STRUCTURE, MANAGEMENT, AND KEY PERSONNEL .....	11
3.4 TECHNICAL APPROACH AND WORK PLAN .....	11
3.5 EXPERIENCE AND QUALIFICATIONS .....	12
SECTION 4: AWARD CRITERIA .....	12

ANNEX 1	FEDBIZOPPS ANNOUNCEMENT
ANNEX 2	PORTIONS OF BACKGROUND DEFINITIONAL MISSION REPORT
ANNEX 3	USTDA NATIONALITY REQUIREMENTS
ANNEX 4	USTDA GRANT AGREEMENT, INCLUDING MANDATORY CONTRACT CLAUSES
ANNEX 5	TERMS OF REFERENCE (FROM USTDA GRANT AGREEMENT)
ANNEX 6	U.S. FIRM INFORMATION FORM

## **Section 1: INTRODUCTION**

The U.S. Trade and Development Agency (USTDA) has provided a grant in the amount of US\$410,000 to Ghana's Northern Electricity Distribution Company (NEDCo) (the "Grantee") in accordance with a grant agreement dated December 5, 2012 (the "Grant Agreement") to provide technical assistance ("TA") in developing a five-year investment plan, which will identify necessary procurements in areas related to demand side management, load management, and networks operations, control, and management in Ghana ("Host Country"). The TA will also include training that will build the capacity of NEDCo's staff to implement the TA's recommendations.

The Grant Agreement is attached at Annex 4 for your reference. The Grantee is soliciting technical proposals from qualified U.S. firms to provide expert consulting services to perform the TA.

### **1.1 BACKGROUND SUMMARY**

NEDCo is a subsidiary of the Volta River Authority (VRA), Ghana's state owned generation company, and operates Ghana's northern distribution network. Due to low customer density in the north, NEDCo's distribution network was developed with relaxed design standards in order to make the distribution network extension economically feasible. The relaxed network standards have led to extensive technical, non-technical, and collection losses in the north reaching almost forty percent, while NEDCo's consumers have expanded exponentially from 20,000 in 1990 to 380,000 in 2011. Thus NEDCo has prioritized loss reduction through pre-paid metering and smart grid technologies as well as capacity building for its operations and management staff. These efforts are geared towards effective management and improved services to a fast growing customer base. The TA will assist NEDCo in developing a five-year investment plan, which will identify necessary procurements in areas related to demand side management, load management, and networks operations, control, and management. The TA will also include training that would build the capacity of NEDCo's staff to implement the TA's recommendations.

In addition, VRA is requesting that NEDCo become operationally independent by 2017. NEDCo must have an adequate business plan as well as build its operations and management capacity prior to becoming an independent entity. The TA will develop strategies to assist NEDCo in reaching these goals. The TA will provide NEDCo with specific recommendations for improving its business operations including recommendations for technology requirements, an investment plan, and a curriculum for an intensive capacity building training program that will improve NEDCo's distribution management operations. The investment plan will outline the necessary procurements for NEDCo to become an effective, independent utility. U.S. companies are internationally competitive in the supply of the technologies, software, and hardware that NEDCo needs. As such, USTDA support for this technical assistance will help ensure U.S. private sector participation in NEDCo's infrastructure modernization plans.

NEDCo will also receive two weeks of capacity building under the TA, which will facilitate its ability to implement the TA's recommendations and move closer to becoming a functional utility

independent of VRA. Portions of a background Definitional Mission are provided for reference in Annex 2.

## **1.2 OBJECTIVE**

The objective of the Project is to support NEDCo in restructuring its business operations and prioritizing its investments.

The Terms of Reference (TOR) for this TA are attached as Annex 5.

## **1.3 PROPOSALS TO BE SUBMITTED**

Technical proposals are solicited from interested and qualified U.S. firms. The administrative and technical requirements as detailed throughout the Request for Proposals (RFP) will apply. Specific proposal format and content requirements are detailed in Section 3.

The amount for the contract has been established by a USTDA grant of US\$410,000. **The USTDA grant of US\$410,000 is a fixed amount. Accordingly, COST will not be a factor in the evaluation and therefore, cost proposals should not be submitted.** Upon detailed evaluation of technical proposals, the Grantee shall select one firm for contract negotiations.

## **1.4 CONTRACT FUNDED BY USTDA**

In accordance with the terms and conditions of the Grant Agreement, USTDA has provided a grant in the amount of US\$410,000 to the Grantee. The funding provided under the Grant Agreement shall be used to fund the costs of the contract between the Grantee and the U.S. firm selected by the Grantee to perform the TOR. The contract must include certain USTDA Mandatory Contract Clauses relating to nationality, taxes, payment, reporting, and other matters. The USTDA nationality requirements and the USTDA Mandatory Contract Clauses are attached at Annexes 3 and 4, respectively, for reference.

## **Section 2: INSTRUCTIONS TO OFFERORS**

### **2.1 PROJECT TITLE**

The project is called NEDCo Management and Investment Planning.

### **2.2 DEFINITIONS**

Please note the following definitions of terms as used in this RFP.

The term "Request for Proposals" means this solicitation of a formal technical proposal, including qualifications statement.

The term "Offeror" means the U.S. firm, including any and all subcontractors, which responds to the RFP and submits a formal proposal and which may or may not be successful in being awarded this procurement.

### **2.3 DEFINITIONAL MISSION REPORT**

USTDA sponsored a Definitional Mission to address technical, financial, socio-political, environmental and other aspects of the proposed project. Portions of the report are attached at Annex 2 for background information only. Please note that the TOR referenced in the report are included in this RFP as Annex 5.

### **2.4 EXAMINATION OF DOCUMENTS**

Offerors should carefully examine this RFP. It will be assumed that Offerors have done such inspection and that through examinations, inquiries and investigation they have become familiarized with local conditions and the nature of problems to be solved during the execution of the Technical Assistance.

Offerors shall address all items as specified in this RFP. Failure to adhere to this format may disqualify an Offeror from further consideration.

Submission of a proposal shall constitute evidence that the Offeror has made all the above mentioned examinations and investigations, and is free of any uncertainty with respect to conditions which would affect the execution and completion of the TA.

### **2.5 PROJECT FUNDING SOURCE**

The Technical Assistance will be funded under a grant from USTDA. The total amount of the grant is not to exceed US\$410,000.

## **2.6 RESPONSIBILITY FOR COSTS**

Offeror shall be fully responsible for all costs incurred in the development and submission of the proposal. Neither USTDA nor the Grantee assumes any obligation as a result of the issuance of this RFP, the preparation or submission of a proposal by an Offeror, the evaluation of proposals, final selection or negotiation of a contract.

## **2.7 TAXES**

Offerors should submit proposals that note that in accordance with the USTDA Mandatory Contract Clauses, USTDA grant funds shall not be used to pay any taxes, tariffs, duties, fees or other levies imposed under laws in effect in the Host Country except for taxes of a de minimis nature imposed on local lodging, food, transportation, or airport arrivals or departures.

## **2.8 CONFIDENTIALITY**

The Grantee will preserve the confidentiality of any business proprietary or confidential information submitted by the Offeror, which is clearly designated as such by the Offeror, to the extent permitted by the laws of the Host Country.

## **2.9 ECONOMY OF PROPOSALS**

Proposal documents should be prepared simply and economically, providing a comprehensive yet concise description of the Offeror's capabilities to satisfy the requirements of the RFP. Emphasis should be placed on completeness and clarity of content.

## **2.10 OFFEROR CERTIFICATIONS**

The Offeror shall certify (a) that its proposal is genuine and is not made in the interest of, or on behalf of, any undisclosed person, firm, or corporation, and is not submitted in conformity with, and agreement of, any undisclosed group, association, organization, or corporation; (b) that it has not directly or indirectly induced or solicited any other Offeror to put in a false proposal; (c) that it has not solicited or induced any other person, firm, or corporation to refrain from submitting a proposal; and (d) that it has not sought by collusion to obtain for itself any advantage over any other Offeror or over the Grantee or USTDA or any employee thereof.

## **2.11 CONDITIONS REQUIRED FOR PARTICIPATION**

Only U.S. firms are eligible to participate in this RFP. However, U.S. firms may utilize subcontractors from the Host Country for up to 20 percent of the amount of the USTDA grant for specific services from the TOR identified in the subcontract. USTDA's nationality requirements, including definitions, are detailed in Annex 3.

## **2.12 LANGUAGE OF PROPOSAL**

All proposal documents shall be prepared and submitted in English, and only English.

## **2.13 PROPOSAL SUBMISSION REQUIREMENTS**

The **Cover Letter** in the proposal must be addressed to:

Managing Director  
Northern Electricity Distribution Company (NEDCo)  
NORRIP Block  
P.O. Box TL 77  
Tamale, Ghana

**An Original and eight (8) copies of your proposal must be received at the above address no later than 2:00PM, Local (Accra) Time, on March 11, 2013.**

Proposals may be either sent by mail, overnight courier, or hand-delivered. Whether the proposal is sent by mail, courier or hand-delivered, the Offeror shall be responsible for actual delivery of the proposal to the above address before the deadline. Any proposal received after the deadline will be returned unopened. The Grantee will promptly notify any Offeror if its proposal was received late.

Upon timely receipt, all proposals become the property of the Grantee.

## **2.14 PACKAGING**

The original and each copy of the proposal must be sealed to ensure confidentiality of the information. The proposals should be individually wrapped and sealed, and labeled for content including the name of the project and designation of "original" or "copy number x." The original and eight (8) copies should be collectively wrapped and sealed, and clearly labeled, including the contact name and the name of the project.

Neither USTDA nor the Grantee will be responsible for premature opening of proposals not properly wrapped, sealed and labeled.

## **2.15 OFFEROR'S AUTHORIZED NEGOTIATOR**

The Offeror must provide the name, title, address, telephone number, e-mail address and fax number of the Offeror's authorized negotiator. The person cited shall be empowered to make binding commitments for the Offeror and its subcontractors, if any.

## **2.16 AUTHORIZED SIGNATURE**

The proposal must contain the signature of a duly authorized officer or agent of the Offeror empowered with the right to bind the Offeror.

## **2.17 EFFECTIVE PERIOD OF PROPOSAL**

The proposal shall be binding upon the Offeror for NINETY (90) days after the proposal due date, and Offeror may withdraw or modify this proposal at any time prior to the due date upon written request, signed in the same manner and by the same person who signed the original proposal.

## **2.18 EXCEPTIONS**

All Offerors agree by their response to this RFP announcement to abide by the procedures set forth herein. No exceptions shall be permitted.

## **2.19 OFFEROR QUALIFICATIONS**

As provided in Section 3, Offerors shall submit evidence that they have relevant past experience and have previously delivered advisory, feasibility study and/or other services similar to those required in the TOR, as applicable.

## **2.20 RIGHT TO REJECT PROPOSALS**

The Grantee reserves the right to reject any and all proposals.

## **2.21 PRIME CONTRACTOR RESPONSIBILITY**

Offerors have the option of subcontracting parts of the services they propose. The Offeror's proposal must include a description of any anticipated subcontracting arrangements, including the name, address, and qualifications of any subcontractors. USTDA nationality provisions apply to the use of subcontractors and are set forth in detail in Annex 3. The successful Offeror shall cause appropriate provisions of its contract, including all of the applicable USTDA Mandatory Contract Clauses, to be inserted in any subcontract funded or partially funded by USTDA grant funds.

## **2.22 AWARD**

The Grantee shall make an award resulting from this RFP to the best qualified Offeror, on the basis of the evaluation factors set forth herein. The Grantee reserves the right to reject any and all proposals received.

## **2.23 COMPLETE SERVICES**

The successful Offeror shall be required to (a) provide local transportation, office space and secretarial support required to perform the TOR; (b) provide and perform all necessary labor, supervision and services; and (c) in accordance with best technical and business practice, and in accordance with the requirements, stipulations, provisions and conditions of this RFP and the resultant contract, execute and complete the TOR to the satisfaction of the Grantee and USTDA.

## **2.24 INVOICING AND PAYMENT**

Deliverables under the contract shall be delivered on a schedule to be agreed upon in a contract with the Grantee. The Contractor may submit invoices to the designated Grantee Project Director in accordance with a schedule to be negotiated and included in the contract. After the Grantee's approval of each invoice, the Grantee will forward the invoice to USTDA. If all of the requirements of USTDA's Mandatory Contract Clauses are met, USTDA shall make its respective disbursement of the grant funds directly to the U.S. firm in the United States. All payments by USTDA under the Grant Agreement will be made in U.S. currency. Detailed provisions with respect to invoicing and disbursement of grant funds are set forth in the USTDA Mandatory Contract Clauses attached in Annex 4.

## **Section 3: PROPOSAL FORMAT AND CONTENT**

To expedite proposal review and evaluation, and to assure that each proposal receives the same orderly review, all proposals must follow the format described in this section.

Proposal sections and pages shall be appropriately numbered and the proposal shall include a Table of Contents. Offerors are encouraged to submit concise and clear responses to the RFP. Proposals shall contain all elements of information requested without exception. Instructions regarding the required scope and content are given in this section. The Grantee reserves the right to include any part of the selected proposal in the final contract.

The proposal shall consist of a technical proposal only. A cost proposal is NOT required because the amount for the contract has been established by a USTDA grant of US\$410,000, which is a fixed amount.

Offerors shall submit one (1) original and eight (8) hard copies of the proposal. Proposals received by fax or e-mail cannot be accepted.

Each proposal must include the following:

- Transmittal Letter, as signed by an authorized negotiator,
- Cover/Title Page,
- Table of Contents,
- Executive Summary,

Firm Background Information,  
Completed U.S. Firm Information Form,  
Organizational Structure, Management Plan, and Key Personnel,  
Technical Approach and Work Plan, and  
Experience and Qualifications.

Detailed requirements and directions for the preparation of the proposal are presented below.

### **3.1 EXECUTIVE SUMMARY**

An Executive Summary should be prepared describing the major elements of the proposal, including any conclusions, assumptions, and general recommendations the Offeror desires to make. Offerors are requested to make every effort to limit the length of the Executive Summary to no more than five (5) pages.

### **3.2 U.S. FIRM INFORMATION**

A U.S. Firm Information Form in .pdf fillable format is attached at the end of this RFP in Annex 6. The Offeror must complete the U.S. Firm Information Form and include the completed U.S. Firm Information Form in its proposal.

### **3.3 ORGANIZATIONAL STRUCTURE, MANAGEMENT, AND KEY PERSONNEL**

Describe the Offeror's proposed project organizational structure. Discuss how the project will be managed including the principal and key staff assignments for this TA. Identify the Project Manager who will be the individual responsible for this project. The Project Manager shall have the responsibility and authority to act on behalf of the Offeror in all matters related to the TA.

Provide a listing of personnel (including subcontractors) to be engaged in the project, including both U.S. and local subcontractors, with the following information for key staff: position in the project; pertinent experience, curriculum vitae; other relevant information. If subcontractors are to be used, the Offeror shall describe the organizational relationship, if any, between the Offeror and the subcontractor.

A manpower schedule and the level of effort for the project period, by activities and tasks, as detailed under the Technical Approach and Work Plan shall be submitted. A statement confirming the availability of the proposed project manager and key staff over the duration of the project must be included in the proposal.

### **3.4 TECHNICAL APPROACH AND WORK PLAN**

Describe in detail the proposed Technical Approach and Work Plan (the "Work Plan"). Discuss the Offeror's methodology for completing the project requirements. Include a brief narrative of the Offeror's methodology for completing the tasks within each activity series. Begin with the information gathering phase and continue through delivery and approval of all required reports.

Prepare a detailed schedule of performance that describes all activities and tasks within the Work Plan, including periodic reporting or review points, incremental delivery dates, and other project milestones.

Based on the Work Plan, and previous project experience, describe any support that the Offeror will require from the Grantee. Detail the amount of staff time required by the Grantee or other participating agencies and any work space or facilities needed to complete the TA.

### **3.5 EXPERIENCE AND QUALIFICATIONS**

Provide a discussion of the Offeror's experience and qualifications that are relevant to the objectives and TOR for the Technical Assistance. If a subcontractor(s) is being used, similar information must be provided for the prime and each subcontractor firm proposed for the project. The Offeror shall provide information with respect to relevant experience and qualifications of key staff proposed. The Offeror shall include letters of commitment from the individuals proposed confirming their availability for contract performance.

As many as possible but not more than six (6) relevant and verifiable project references must be provided for each of the Offeror and any subcontractor, including the following information:

- Project name,
- Name and address of client (indicate if joint venture),
- Client contact person (name/ position/ current phone and fax numbers),
- Period of Contract,
- Description of services provided,
- Dollar amount of Contract, and
- Status and comments.

Offerors are strongly encouraged to include in their experience summary primarily those projects that are similar to the Technical Assistance as described in this RFP.

### **Section 4: AWARD CRITERIA**

Individual proposals will be evaluated by a Procurement Selection Committee of representatives from the Grantee, which will rank qualified Offerors. The Grantee will notify USTDA of the best qualified Offeror, and upon receipt of USTDA's no-objection letter, the Grantee shall promptly notify all Offerors of the award and negotiate a contract with the best qualified Offeror. If a satisfactory contract cannot be negotiated with the best qualified Offeror, negotiations will be formally terminated. Negotiations may then be undertaken with the second most qualified Offeror and so forth.

The selection of the Contractor will be based on the following criteria:

**Offeror's Experience and Qualifications: 35 points maximum**

- Offeror's experience and qualifications in training and the assessment of capacity building needs at all levels of a distribution company's operations: 10 points
- Offeror's experience and qualifications related to the assessment and development of a distribution company's management, business plan and investment program: 10 points
- Offeror's experience and qualifications in project financing, cost estimating, and the development of implementation plans for distribution projects: 5 points
- Offeror's experience and qualifications in distribution prepaid and smart meter equipment and technologies: 5 points
- Offeror's experience and qualifications in performing similar technical assistance or other closely related work: 5 points

**Organizational Structure, Management, and Key Personnel: 35 points maximum**

- Quality of the Offeror's proposed organizational structure and management plan for the Technical Assistance: 5 points
- Experience and expertise of the Offeror's proposed Project Manager in performing similar Technical Assistance or other closely related work: 10 points
- Experience and expertise of the Offeror's other key personnel (including U.S. subcontractors, if any) in fulfilling the various functions required for the Technical Assistance: 10 points
- Experience and expertise of the Offeror's local subcontractors in fulfilling the various functions required for the Technical Assistance: 10 points

**Technical Approach and Work Plan: 25 points maximum**

- Quality of the Offeror's proposed Technical Approach and Work Plan for the Technical Assistance: 15 points
- Quality of the Offeror's proposed schedule for carrying out the Technical Assistance: 10 points

**Country/Regional Experience: 5 points maximum**

- Offeror's experience working in Ghana, sub-Saharan Africa, and/or other similar environments, preferably in distribution technologies: 5 points

Proposals that do not include all requested information may be considered non-responsive.

Price will not be a factor in contractor selection.

## **ANNEX 1**

Managing Director  
Northern Electricity Distribution Company (NEDCo)  
NORRIP Block  
P.O. Box TL 77  
Tamale, Ghana

### **NEDCo Management and Investment Planning (USTDA Activity No. 2013-11001A)**

POC: Anthony O'Tapi, USTDA, 1000 Wilson Boulevard, Suite 1600, Arlington, VA 22209-3901, Tel: (703) 875-4357, Fax: (703) 875-4009. NEDCo Management and Investment Planning. The Grantee invites submission of qualifications and proposal data (collectively referred to as the "Proposal") from interested U.S. firms that are qualified on the basis of experience and capability to provide technical assistance ("TA") for the restructuring of business operation and developing a five-year investment plan, which will identify necessary procurements in areas related to demand side management, load management, and networks operations, control, and management in Ghana ("Host Country"). The TA will also include training that would build the capacity of NEDCo's staff to implement the TA's recommendations.

NEDCo is a subsidiary of the Volta River Authority (VRA), Ghana's state owned generation company, and operates Ghana's northern distribution network. Due to low customer density in the north, NEDCo's distribution network was developed with relaxed design standards in order to make the distribution network extension economically feasible. The relaxed network standards have led to extensive technical, non-technical, and collection losses in the north reaching almost forty percent. Thus NEDCo has prioritized loss reduction through pre-paid metering and smart grid technologies as well as capacity building for its operations and management staff. These efforts are geared towards effective management and improved services to a fast growing customer base. The TA will assist NEDCo in developing a five-year investment plan, which will identify necessary procurements in areas related to demand side management, load management, and networks operations, control, and management. The TA will also include training that would build the capacity of NEDCo's staff to implement the TA's recommendations. Portions of a background Definitional Mission are provided for reference in Annex 2.

The U.S. firm selected will be paid in U.S. dollars from a US\$410,000 grant to the Grantee from the U.S. Trade and Development Agency (USTDA).

A detailed Request for Proposals (RFP), which includes requirements for the Proposal, the Terms of Reference, and portions of a background definitional mission report are available from USTDA, at 1000 Wilson Boulevard, Suite 1600, Arlington, VA 22209-3901. To request the RFP in PDF format, please go to: <https://www.ustda.gov/businessopps/rfpform.asp>. Requests for a mailed hardcopy version of the RFP may also be faxed to the IRC, USTDA at 703-875-4009. In the fax, please include your firm's name, contact person, address, and telephone number. Some firms have found that RFP materials sent by U.S. mail do not reach them in time for preparation of an adequate response. Firms that want USTDA to use an overnight delivery service should include the name of the delivery service and your firm's account number in the request for the RFP. Firms that want to send a courier to USTDA to retrieve the RFP should allow one hour after faxing the request to USTDA before scheduling a pick-up. Please note that no telephone requests for the RFP will be honored. Please check your internal fax verification receipt. Because of the large number of RFP requests, USTDA cannot respond to requests for

fax verification. Requests for RFPs received before 4:00 PM will be mailed the same day. Requests received after 4:00 PM will be mailed the following day. Please check with your courier and/or mail room before calling USTDA.

Only U.S. firms and individuals may bid on this USTDA financed activity. Interested firms, their subcontractors and employees of all participants must qualify under USTDA's nationality requirements as of the due date for submission of qualifications and proposals and, if selected to carry out the USTDA-financed activity, must continue to meet such requirements throughout the duration of the USTDA-financed activity. All goods and services to be provided by the selected firm shall have their nationality, source and origin in the U.S. or host country. The U.S. firm may use subcontractors from the host country for up to 20 percent of the USTDA grant amount. Details of USTDA's nationality requirements and mandatory contract clauses are also included in the RFP.

Interested U.S. firms should submit their Proposal in English directly to the Grantee by 2:00PM Local (Accra) Time, March 11<sup>th</sup> 2013 at the above address. Evaluation criteria for the Proposal are included in the RFP. Price will not be a factor in contractor selection, and therefore, cost proposals should NOT be submitted. The Grantee reserves the right to reject any and/or all Proposals. The Grantee also reserves the right to contract with the selected firm for subsequent work related to the project. The Grantee is not bound to pay for any costs associated with the preparation and submission of Proposals.

## ANNEX 2



U.S. Trade and Development Agency

## Definitional Mission: Ghana and Nigeria Power Projects

Project No. CO201211226

Final Report

January 19, 2013

**Prepared by**

CORE International, Inc.  
5101 Wisconsin Avenue, N.W., Suite 305  
Washington, DC 20016



This report was funded by the U.S. Trade and Development Agency (USTDA), an agency of the U.S. Government. The opinions, findings, conclusions, or recommendations expressed in this document are those of the author(s) and do not necessarily represent the official position or policies of USTDA. USTDA makes no representation about, nor does it accept responsibility for, the accuracy or completeness of the information contained in this report.

**Mailing and Delivery Address:** 1000 Wilson Boulevard, Suite 1600, Arlington, VA 22209-3901

**Phone:** 703-875-4357 • **Fax:** 703-875-4009 • **Web site:** [www.ustda.gov](http://www.ustda.gov) • **email:** [info@ustda.gov](mailto:info@ustda.gov)

## **The U.S. Trade and Development Agency**

The U.S. Trade and Development Agency (USTDA) advances economic development and U.S. commercial interests in developing and middle-income countries. The agency funds various forms of technical assistance, feasibility studies, training, orientation visits and business workshops that support the development of a modern infrastructure and a fair and open trading environment.

USTDA's strategic use of foreign assistance funds to support sound investment policy and decision-making in host countries creates an enabling environment for trade, investment and sustainable economic development.

Operating at the nexus of foreign policy and commerce, USTDA is uniquely positioned to work with U.S. firms and host countries in achieving the agency's trade and development goals. In carrying out its mission, USTDA gives emphasis to economic sectors that may benefit from U.S. exports of goods and services.

## **Project Description**

### **Power Sector Background in Ghana**

**Context:** Ghana currently gets about 70% of its electricity from hydropower stations, but it aims to supply 10% of its domestic demand through modern renewable technologies by 2020. The current national access to electricity supply is about 43% of the population yet over 80% of the domestic electricity supply is consumed in cities and towns. Currently, the country has an installed capacity of 1960 MW made up of hydropower stations and thermal facilities.

Ghana has an extensive transmission system, which covers all the regions of the country. Transmission infrastructure has, however, deteriorated over the years, resulting in transmission bottlenecks, overloaded transformer sub stations, and high system losses. The electricity distribution infrastructure is extensive providing access to about 66% of the population. However, it is old and obsolete, leading to frequent interruptions in power supply and relatively high system losses. While national electricity access is about 66%, access in the three northern regions is about 30%.

Major energy sources in Ghana include petroleum, gas, hydropower, and wood fuels. Ghana is looking to explore and integrate more alternative energy sources such as solar, wind, and waste to energy, into its national power mix. Renewable energy is estimated to make up less than 0.01% in the current of the national energy mix. One reason is because of the high start up and production costs of renewable technologies. But Ghana is working to utilize cost-effective technologies and provide tax and other financial incentives to attract private sector investments in renewable energy technologies.

**Renewable Energy Potential in Ghana:** The development of wind energy resource for commercial power generation in Ghana is steadily taking center stage of national discourse. Preliminary wind resource assessments results in selected sites along the coasts and high elevations showed moderate to excellent wind potentials. Especially, sites with good wind regimes are those along the east coastlines. The gross wind electric potential is about 5,600 MW representing some 1,128 km<sup>2</sup>. Infrastructure such as road, grid network and load centers coincide with most areas where these wind potentials exist.

**Solar Energy Resource Potential:** Ghana is endowed with enormous solar energy resource spread across the entire country. Daily solar irradiation level ranges from 4 kWh/m<sup>2</sup> to 6 kWh/m<sup>2</sup>. Areas of highest irradiation levels are spread across the entire northern belt, which represents over 60% of the total national, land mass. The annual sunshine duration ranges between 1800 to 3000 hours offering very high potential for grid connected and off-grid applications. Over 6,000 solar systems with an installed capacity of 3.2 MW have been installed in the country mainly for off-grid applications.

**Hydropower Resource Potential:** The potential exploitable hydro resource for Ghana is about 2500 MW. Already, 1,180 MW of this potential have been developed and operational at Akosombo and Kpong. An additional 400 MW is under construction, bringing the total exploited capacity to 1,580 MW or about 60%. The remaining 840 MW capacity is located at about 21 sites with capacities ranging from medium (95 MW) to small (17 MW) hydropower

potentials. The Directorate focuses on promoting and developing the country’s small hydropower (SHP) potential considered below 40 MW.

**Bioenergy Resource Potential:** Ghana has appreciable bioenergy potential with biomass energy in the form of wood fuel and charcoal consumption accounting for about 72% of total energy consumption. Two-thirds of the country or 18.3 Mha is under tree cover. The climatic and soil conditions are very suitable for large-scale agriculture, energy crops, and sustainable wood fuel productions. It is estimated that with annual rainfall of 1,300 – 2,200 mm, about 243 PJ/yr or 65,000 GWh/yr of wood fuel could be obtained from the existing tropical forests.

**Transmission and Distribution Potential:** In addition to power generation, Ghana needs to rehabilitate its transmission and distribution assets. It is estimated that rehabilitation of the current T&D system alone would require an investment of over \$400 million. In addition, to keep pace with demand and increase access of power to peri-urban and rural areas could take an additional \$500 million. Major interconnection projects with neighboring countries and under the planning of the West African Power Pool (WAPP) are expected to require over \$2 billion in HV transmission networks and substation.

**Key Energy Sector Institutions in Ghana:** Exhibit 2 lists the key energy sector institutions in Ghana that will be visited during the DM in addition to private project sponsors and companies that have already approached the American Embassy with project requests.

**Exhibit 2: Key Energy Sector Institutions in Ghana**

AGENCY	RESPONSIBILITIES
<p><b><u>POWER SUB-SECTOR</u></b></p> <ul style="list-style-type: none"> <li>• Volta River Authority (VRA)</li> <li>• Bui Power Authority</li> <li>• Independent Power Producers (IPPs)</li> <li>• Ghana Grid Company (GRIDCo)</li> <li>• Electricity Company of Ghana (ECG)</li> <li>• Northern Electricity Department (NED)</li> </ul>	<ul style="list-style-type: none"> <li>• Power Generation</li> <li>• Power Generation</li> <li>• Power Generation</li> <li>• Power Transmission</li> <li>• Power Distribution in Southern Ghana</li> <li>• Power Distribution in Northern Ghana</li> </ul>
<p><b><u>REGULATORY AGENCIES</u></b></p> <ul style="list-style-type: none"> <li>• Public Utilities Regulatory Commission (PURC)</li> <li>• Energy Commission (EC)</li>   <li>• National Petroleum Authority (NPA)</li> </ul>	<ul style="list-style-type: none"> <li>• Electricity tariffs approval, monitoring quality of service and consumer protection</li> <li>• Licensing of operators in the power sectors and setting technical standards for their performance, sector planning and policy advice to Minister of Energy</li> <li>• Licensing of operators in the petroleum sector and setting of technical standards and enforcement</li> </ul>

The Ministry of Energy is responsible for formulating, monitoring and evaluating policies, programs and projects for the energy sector in general. The Ministry is also responsible implementing the Government’s National Electrification Scheme, which seeks to extend the reach of electricity to all communities in the long term.

Electricity generation is undertaken by the state-owned Volta River Authority (VRA), which operates the Akosombo Hydro Power Station, Kpong Hydro Power Station and the Takoradi Thermal Power Plant (TAPCO) at Aboadze. VRA is also a minority joint partner with TAQA, a private sector company that owns and operates the Takoradi International Power Company (TICO) thermal power plant also located at Aboadze. Bui Power Authority (BPA), another state-owned entity, is charged with the implementation of the Bui Hydro electric Power Project.

The distribution of electricity is mainly done by two state-owned enterprises, namely the Electricity Company of Ghana (ECG) and Northern Electricity Department (NED), which is a subsidiary of VRA. ECG distributes electricity in the southern part of the country; NED distributes power in the northern part of the country, while Enclave Power provides power to the Free Zones.

The Electricity Supply Industry is regulated by the Energy Commission (EC) and the Public Utilities Regulatory Commission (PURC), two key regulators in Ghana. The EC is responsible for technical regulation of the power sector, including licensing of operators. In addition, EC also advises the Minister of Energy on matters relating to energy planning and policy. The PURC is an independent regulatory agency, and is responsible for economic regulation of the power sector, specifically approving rates for electricity sold by distribution utilities to the public. Its functions also include monitoring of quality of electricity services delivered to consumers.

**Key Energy Sector Projects in Ghana:** Demand for power is currently at 1400 MW and is increasing 10% annually. The Republic of Ghana is working to develop, modernize and diversify their energy sector. There are a variety of projects currently underway to help meet these energy consumption demands. One project, an \$850 million Gas Infrastructure Project at Atuabo is expected to be completed in November 2012. The project will enable the country to transport natural gas from the Jubilee Fields for processing and then transporting to the Aboadze Thermal Plant (still under construction) for generation. Excess gas would then be exported to neighboring countries.

Ghana and its partners on the Jubilee Field, which include Tullow Oil Plc and Anadarko Petroleum Corporation, will invest an estimated \$20 billion over the next 10 years to develop newly discovered oil fields. Jubilee Field currently produces 63,000 barrels of oil per day, but new discoveries in the Deep Water Tano Block will help boost total production. More than 1500 MW of new electricity capacity is set to come on line over the next 5 years, with 952 MW overseen by the VRA and the remainder by IPPs. The VRA is embarking on a \$40 million renewable energy project, some of which will be invested in solar energy plants. Another project, announced in January 2012, with investments provided by Hella Energy and Environment, a Korean firm that specializes in renewable energy and plans to construct a 300 MW solar power plant in the country.

The Bui Dam is a 400 MW hydropower project that began in 2009 and is expected to be completed in 2013. The project is a collaboration between the Government of Ghana and Sino Hydro, a Chinese construction company. Once fully completed, it will be the third

major dam in the country. In addition, independent power producers (IPPs) have been licensed to build, own and operate power plants. The IPP projects are at various stages of development.

**Energy Sector Policies in Ghana:** The electricity sector in Ghana faces many challenges including: (i) inadequate power supply infrastructure which requires huge investments, (ii) inadequate access to electricity, (iii) high cost of fuel for electricity generation, (iv) inadequate regulatory capacity and enforcement, and (v) operational and management difficulties in utility companies. The Government of Ghana has established and continues to implement key policies that allow the country's energy sector to progress.

One major policy driver is Ghana's "Vision 2020." The government set forth a development strategy aimed at creating a stable macroeconomic environment and implementing a decisive structural transformation to foster strong economic growth and a broad-based improvement of living standards. The strategy envisages steps to achieve balanced social and regional development, and encourage private sector activity and export orientation. The long-term vision for Ghana is to become a middle-income country by the year 2020 through economic growth and development of the country and its people.

In 2011, the Government of Ghana approved a Renewable Energy Law, which seeks to integrate renewable energy security in the country. The Law is to provide for the management, development and utilization of renewable energy (RE); to develop a sustainable and adequate supply of renewable energy; and to provide for related matters. The Renewable Energy Law also establishes a feed-in tariff (FIT) scheme with rates established by PURC, and requires utilities to purchase a specified percentage of its total electricity from renewable energy sources. The Law also established the Ghana Renewable Energy Fund (GREEN Fund), which will provide financial resources for the promotion, research, development and utilization of renewable energy resources.

The above policies are intended to help achieve the following goals: (i) Ensure adequate, reliable and improved supply of electricity, rehabilitation and expansion of electricity generation, transmission and distribution infrastructure; (ii) Increase access to electricity to at least 80% by 2015; (iii) Secure sources of cost-effective and sustainable fuel supply for electricity generation; (iv) Increase financing for electricity supply infrastructure development from Government sources, Development Partners and the private sector; (v) Strengthen institutional and management capacity as well as regulatory regime for the smooth development and operation of the power sub-sector; and (vi) Ensure cost-effective pricing regime for electricity services.<sup>1</sup>

In response to the inadequacies of the power supply infrastructure, the government has proposed increasing generation capacity, reinforcing and adding capacity to the transmission and distribution components, opening up the power sector to IPPs and private sector participation in generation, and strengthening the regulatory environment.

---

<sup>1</sup>Republic of Ghana Ministry of Energy, "Energy Sector Strategy and Development Plan," [http://ghanaoilwatch.org/images/laws/energy\\_strategy.pdf](http://ghanaoilwatch.org/images/laws/energy_strategy.pdf), 5.

To address the inadequate access to electricity by consumers, the power sector institutions have established policy responses to increase the momentum of the National Electrification Scheme to provide access to electricity progressively to all communities, upgrade and reinforce transmission and distribution network capacity, and open up the sub-sector to private sector participation in power distribution and sale.

### **Potential Opportunities for USTDA's Assistance**

The entire generation (Gx), transmission (Tx), and distribution (Dx) chain in the power supply sector in Ghana has been undergoing a reform. Ghana has unbundled the sector and is implementing reform under the major World Bank program. One of the key goals of the Government is to prepare the sector for private investment. There are numerous opportunities for USTDA to be involved in all aspects of Ghana's power sector ranging from generation to modernization of the country's transmission and distribution network and business processes.

{Redacted}

### **Project Sponsor's Capabilities and Commitment**

#### **TECHNICAL ASSISTANCE FOR THE DISTRIBUTION OPERATIONS IMPROVEMENT AND CAPACITY BUILDING OF NORTHERN ELECTRICITY DISTRIBUTION COMPANY (NEDCO) IN GHANA**

The proposed "Grantee" for this technical assistance grant is the Northern Electricity Distribution Company of Ghana (NEDCo). NEDCo is in charge of power distribution in the Northern parts of the country. Until May 2012, when NEDCo was established as an independent distribution company in Ghana, it was a department of the Volta River Authority (VRA). Currently, NEDCo operates as a subsidiary of the VRA. However, the plans are for NEDCo to become a fully financially and operationally independent electricity distribution company. It is undergoing a major transition and needs to build up its capacity to address the distribution challenges in the North. Given its new mandate, it is extremely committed to transition its operation to a business-like entity and improve its overall operations. NEDCo is capable of implementing the proposed technical assistance and has agreed to offer its full cooperation to ensuring that the technical assistance is implemented successfully.

### **Implementation Financing**

#### **U.S. SOURCES OF FINANCING**

A number of organizations within the U.S. Government provide financing for infrastructure projects to developing countries and emerging economies depending upon the components of the project and their respective criteria for funding. The following are some of the key sources for financing in the U.S:

#### **Millennium Challenge Corporation:**

The Millennium Challenge Corporation (MCC) is preparing a Compact to finance power sector distribution rehabilitation in Ghana. Currently, the MCC and the Government of Ghana are preparing a Concept Paper that would provide details on the contents of the actual

rehabilitation projects that would be financed by the MCC. The focus of the Compact is on power transmission and distribution projects, as these two areas have been identified by the Government of Ghana as the priorities in reforming its power sector. While the DM has no direct knowledge of the details of the Compact under preparation by MCC, it appears that the total amount of financing could be approximately \$250 million. For the projects proposed as part of this DM, MCC would be the key financing source.

It should be noted that the DM has no direct information either from the MCC or the MCA-Ghana regarding the total amount of the Compact and the projects that would be included in the Compact. Some time in the near future, MCC would publish a Concept Paper that would provide further details. Therefore, the information included here is based on discussions with various energy sector officials in Ghana.

#### **The U.S. Export-Import Bank:**

The Export-Import Bank of the United States (Ex-Im Bank) provides direct loans to foreign buyers with competitive, fixed-rate financing for their purchases from the United States. The Ex-Im Bank also provides working capital guarantees to cover 90% of the principal and interest on commercial loans to creditworthy small and medium-sized companies that need funds to buy or produce U.S. goods or services for export. For project financing, long-term Ex-Im Bank guarantees of commercial loans are available for major projects, large capital goods acquisitions, and project-related services. Given the competitiveness of U.S. industry in the power sector, U.S. Export-Import Bank financing will be another channel available to U.S. companies for financing projects in Ghana and Nigeria.

#### **The Overseas Private Investment Corporation (OPIC):**

OPIC, an agency of the U.S. Government, provides project financing through direct loans and loan guarantees that provide medium-to long term funding for ventures involving significant equity or management participation by U.S. businesses. Since project financing looks for repayment from cash flows generated by projects, OPIC carefully analyzes the economic, technical, marketing and financial soundness of each project. In addition, OPIC provides political risk insurance to U.S. companies for overseas projects. U.S. companies routinely use OPIC to provide insurance against risks in foreign investments. While OPIC would not be financing the infrastructure projects in Ghana and Nigeria, it would be a source for U.S. companies to seek risk insurance associated with investments in the two countries.

### **SOURCES OF INTERNATIONAL FINANCING**

The following are some of the international sources of concessional financing available to Ghana and Nigeria.

#### **Equity and Debt Financing from International Finance Institutions (IFIs):**

The World Bank and the African Development Bank are two of the most active IFIs in Ghana and Nigeria. Some of the infrastructure components of the proposed projects could be financed by these institutions.

**{Redacted}**

In addition, the International Finance Corporation (IFC), the private sector part of the World Bank Group, typically offers both equity investments and financial syndicating services for major energy projects. Specifically, the IFC is exploring opportunities for financing independent power projects (IPPs) in Ghana that would provide additional capacity to meet power demand in the Central and Northern parts of Ghana.

Both the World Bank and the African Development Bank are active in Nigeria as well.

### **Selected World Bank Projects in Ghana**

The World Bank's Ghana portfolio comprises US \$1.626 billion in 26 projects. The disbursed amount has been increasing since FY 2009. US \$386.2 million was disbursed in FY 2011, the sixth largest of the International Development Association (IDA), and reached US \$342.9 million in fiscal year 2012, a country record. Regional projects reflect Ghana's role as a hub in West Africa, with a regional portfolio of eight projects of nearly US \$752 million in transport, energy, trade facilitation and agriculture. An IDA guarantee helped the completion of the West Africa Gas Pipeline which connects Nigeria's gas resources to Benin, Togo and Ghana, lowering energy production costs in Ghana.

In the energy sector in Ghana, the World Bank has financed the following projects:

- Ghana Energy Development and Access Project (GEDAP) – improvement of the operation efficiency of power distribution and increase access of electricity. Additional financing in the amount of US \$90 million is being considered to expand and scale up the scope of the project. This project is being implemented by the ECG and new Phase III loan in the amount of \$90 million is being prepared by the Bank.
- Ghana Solar Energy Development Project (4.35 million)
- Ghana Rural Energy Access Project (\$5.5 million)
- Aboadze – Volta 330 kV Transmission Line Project – completed in 2010
- Aboadze – Prestea – Kumasi – Wa 330 kV Transmission Line Project (ongoing, completion expected in 2014).

### **Bilateral Donor Agencies:**

While most bilateral agencies do not finance major projects they can make an important difference at the early stages of the projects as well as during project implementation. Typically, bilateral agencies could provide funding for technical assistance and training that strengthen the project viability and also attract investors and lenders. A number of international bilateral donors are active in Ghana and Nigeria including GTZ (Germany), DfID (UK), USAID, and SIDA (Sweden) who could be approached for co-financing certain components of the proposed projects.

Both countries need considerable capacity building and skills development in the power sector. DfID is currently funding a large multi-year project in Nigeria that includes technical assistance and training activities in Nigeria's transmission and distribution sectors. USAID is contemplating a sizeable technical assistance project that would include training and capacity building in Ghana to facilitate the planned MCC Compact. In addition, the Government of Ghana is in discussions with JICA (Japan) and (SIDA (Sweden) for technical assistance in the power sector. No details are available, as these discussions are at an early stage.

### **The Multilateral Investment Guarantee Agency (MIGA):**

MIGA and OPIC both provide political risk insurance for U.S. exporters involved in international transactions. OPIC insurance is available for investments in new ventures or expansions of existing enterprises and can cover assigned inventory or equipment, exporters' and contractors' exposures, and advance payment and other guarantees posted in favor of foreign buyers. MIGA programs are designed to encourage foreign investment by filling gaps in investment insurance against non-commercial risks in developing countries.

### **Equity and Debt Financing from the Capital Markets:**

Depending upon how the proposed projects are structured and packaged certain components of the overall projects could be eligible for commercial financing, especially if other components of the projects are able to generate concessional financing and if the governments of Ghana and Nigeria are prepared to guarantee some parts of the project. Ghana and Nigeria enjoy a good reputation among the capital markets as a "destination of choice" for major investments in Africa. Both countries offer extensive opportunities for investments in the power sector. A large number of U.S. firms and firms from Europe, Australia, and Japan have presence in the countries because of an increasing investment opportunities in the power sector. Therefore, financing is not expected to be a constraint for the recommended projects.

### **{Redacted}**

Once the business plan for NEDCo is finalized, the company would need to start making investments in improving its distribution operations. The initial investment requirements would include the full suite of IT systems to control and operate the network and technologies to improve business processes, especially revenue generation through increased collections.

As mentioned earlier, regardless of the final make-up of the MCC Compact, it would most likely include a large component devoted to peri-urban and rural electrification in the North. Specifically, the projects in the Compact could include 33 kV, 11 kV, and 400 V distribution lines, distribution substations and transformers, and a large number of switches, IT systems, and network control and monitoring technologies. NEDCo estimates that in the near term, it would need approximately \$100-150 million.

The MCC Compact, because of its focus and Ghana's priority for increasing electricity access throughout the country and especially in the North would very likely include some

\$100 million. The remaining financing requirement would need support from the World Bank and African Development Bank. The DM does not envision any private sector financing for these projects and NEDCo concurs with this assessment by the DM. NEDCo is planning on presenting its business plan to both the World Bank and the African Development Bank after it is clearer as to the components that would be included in the MCC Compact. The Millennium Challenge Account – Ghana is currently preparing a list of projects to be included in the MCC Compact.

### **U. S. Export Potential**

**{Redacted}**

Exhibit 6 provides our best estimates of the likely investments based on discussions with NEDCo officials and our review of NEDCo’s Draft Business Plan completed in September 2012.

It is estimated that the total investment over the next five years could easily reach \$150 million. MCC may fund as much as \$100 million under the planned Compact. The remainder would very likely be funded by VRA as a loan to NEDCo. Except for a few low-end transformer and local labor virtually all of the assets would need to be imported from foreign suppliers. Accordingly, we have estimated that the total export potential could reach \$110 million. The local content of the projects would mostly be labor for construction works and system maintenance. It is anticipated that NEDCo may employ as many as 150-200 outside construction workers at various times during the next 5-10 years for implementing various projects.

#### **Exhibit 6: Potential Investment Requirements and Export Potential**

<b>CATEGORY</b>	<b>PROJECT COMPONENTS</b>	<b>TOTAL INVESTMENT (US\$ MM)</b>	<b>US EXPORTS (US\$ MM)</b>
Distribution Network Operation and maintenance	GIS, CIS, AMS, OMS and IT Integration Systems Hardware and Software	\$30	\$20
	Transformers, Switches, Breakers, and Ancillary Equipment	\$30	\$20
Business Process Improvement and Collections Enhancement	IT systems for Metering Smart Meters IT Systems for Billing and Collections	\$20	\$20
Improvement in Quality of Service and Supply	Power Flow Analysis Power Quality – voltage and frequency regulation and control Work Flow Management, Connections, and Service Quality	\$20	\$20
Additional Distribution Lines	Approximately 400 kms. Of line over the next five years and 20 sub-stations	\$50	\$30

CATEGORY	PROJECT COMPONENTS	TOTAL INVESTMENT (US\$ MM)	US EXPORTS (US\$ MM)
and Sub-Stations			
<b>TOTAL</b>		<b>\$150</b>	<b>\$110</b>

{Redacted}

## Foreign Competition and Market Entry Issues

### FOREIGN COMPETITION

In a number of sectors, both Ghana and Nigeria have developed initial national standards as the basis for their technical requirements, despite the existence of well-established international standards. Both the U.S. and the European Union (EU) have been working with the two governments to both influence its standards-setting procedures and promote U.S. and EU-compatible standards and regulations. Many EU standards differ from the market-driven standards developed by U.S. private sector institutions.

While it has traditionally been difficult for foreign companies to compete with domestic firms in terms of cost of basic energy transmission infrastructure, the high-end smart-grid market remains relatively open to international companies because of their experience in this technically sophisticated field. In order to gain a foothold in the enormous market in Ghana and Nigeria, however, businesses will need to reevaluate how they plan to engage the smart grid/smart meter industry in the two countries. Even though the deployment of smart grid may be delayed, the basic IT systems for transmission and distribution systems will be needed in both countries in the near term.

Many foreign companies serious about participating in the growing power sector market in Ghana and Nigeria have already begun to invest in joint ventures with local companies in the two countries. Firms such as Germany's Siemens, Korea's LS Industrial Systems Co. and {Redacted} have actively pursued partnerships with local companies as a way to establish a foothold in the power transmission and distribution market in Ghana.

Discussions with a few companies in the U.S. confirm that U.S. companies face stiff competition from foreign firms in all of the smart transmission and distribution technology and systems that would be required for the implementation of the proposed project. Specifically, the toughest competition comes to the U.S. from European firms that are far ahead of the U.S. in a number of green technologies and modern city architecture and infrastructure design. Some of the major competitors include the following:

- ABB – A Variety of Power Equipment
- Siemens AG – A variety of Power Equipment and Technology Systems
- Areva (A Variety of Power Equipment)
- Angelique International Limited (UK) – Distribution Construction

- Siemens India - Distribution Construction and Equipment
- National Contracting Company, Saudi Arabia – Distribution Construction
- China Water and Electric Limited – Distribution Construction
- Jacobsen Electric of Norway – Distribution Construction
- El Sewedy Electric T&D Ltd, Egypt – Distribution Construction
- Mott MacDonald UK – Design and Project Management
- SNC Lavalin, Canada – Design and Project Management
- Fichtner, Austria – Design and Project Management
- La Roche, Canada – Design and Project Management
- NorConsult, Norway – Design and Project Management
- A variety of smaller transformation and conductor manufacturers

{Redacted}

### Market Entry Issues in Ghana

Ghana is a bit farther in the process in Nigeria. However, Nigeria has moved ahead with full privatization of its generation and distribution assets. More needs to be done specifically in the area of implementing cost-of-service provisions to ease the entry of IPPs into the generation market and T&D suppliers in the power Tx and Dx markets.

U.S. firms will face competition from a number of European firms on product supply and from Indian, Egyptian, Chinese, and Saudi firms in Tx/Dx construction projects. There are no unusual market entry issues other than severe competition. Ghana is considered as a country that is politically stable and is making substantial reforms. This has resulted in many firms interested in the power sector market in Ghana, thereby, increasing competition. Accordingly, the DM does not foresee any major hurdles to market entry other than those posed in African markets in general.

### Evaluation Strategy

{Redacted}

### Development Impacts

PROPOSED USTDA GRANT ACTIVITY	TYPE OF IMPACT	DESCRIPTION OF THE IMPACT
Technical Assistance for the Distribution Operations	<i>Infrastructure Related Impact</i>	This project will have considerable infrastructure impacts, as the project will result in the installation of a variety of IT systems, data collection devices, two-way communications



PROPOSED USTDA GRANT ACTIVITY	TYPE OF IMPACT	DESCRIPTION OF THE IMPACT
	<i>Other</i>	<p>deployed in the entire NEDCo distribution network and the control centers. All of these technologies and systems will be new to Ghana. As a result, this project will have sizable technology transfer impacts. The transfer of technology would also result in improved productivity as many manual functions will, over time, be transferred to technological solutions.</p> <p>No direct impacts are expected as a result of this project. Indirect impacts include new jobs and income generation in the various communities in the relatively rural and poor parts of Northern Ghana as a result of improved services and increased electricity access. The development of Northern Ghana is a major priority of the Government. This project would directly support that goal. Furthermore, reduction in losses will reduce utility bills to many consumers as these losses are currently passed on to the consumer through increased tariffs.</p>

### Impact on the Environment

Typical environmental impacts associated with this type of project includes the following:

- Resettlement and right-of-way issues associated with transmission lines related to project affected parties (PAPs) that must be compensated to clear areas for the high voltage transmission lines
- Ecological impacts associated with the routing of the lines through wooded areas and forests
- Oil spill related impacts with leakages around sub-stations and transformers.
- Disposal of batteries and used oil during transformer maintenance.

None of the traditional environmental impacts often associated with fossil power plants such as carbon and nitrogen oxides, wastewater, and waste disposal will be present as these are all network projects.

The TOR includes a specific task for assessing potential environmental impacts and recommending appropriate remedial actions.

### Impact on U. S. Labor

No U.S. jobs will be relocated as a result of USTDA providing any financial assistance to Ghana and Nigeria for the projects recommended in this DM. In fact, as the projects funded

by USTDA come to fruition, they will require potential imports of a wide variety of transmission and distribution smart systems, technology and equipment, most of which are manufactured by U.S. firms in facilities located in the U.S. Therefore, with this increase in demand for U.S. exports, this project is expected to have a net positive impact on U.S. employment. Also, no relocation of U.S. jobs is expected as a result of USTDA providing funding for the projects. Thus, the recommended projects will not displace any U.S. jobs.

#### **Qualifications**

{Redacted}

#### **Justification and Recommendation**

{Redacted}

#### **Detailed Terms of Reference**

{Redacted}

#### **Detailed Budget**

{Redacted}

#### **List of Contacts**

{Redacted}

## ANNEX 3



**U.S. TRADE AND DEVELOPMENT AGENCY  
Arlington, VA 22209-2131**

**NATIONALITY, SOURCE, AND ORIGIN REQUIREMENTS**

The purpose of USTDA's nationality, source, and origin requirements is to assure the maximum practicable participation of American contractors, technology, equipment and materials in the prefeasibility, feasibility, and implementation stages of a project.

**USTDA STANDARD RULE (GRANT AGREEMENT STANDARD LANGUAGE):**

Except as USTDA may otherwise agree, each of the following provisions shall apply to the delivery of goods and services funded by USTDA under this Grant Agreement: (a) for professional services, the Contractor must be either a U.S. firm or U.S. individual; (b) the Contractor may use U.S. subcontractors without limitation, but the use of subcontractors from host country may not exceed twenty percent (20%) of the USTDA Grant amount and may only be used for specific services from the Terms of Reference identified in the subcontract; (c) employees of U.S. Contractor or U.S. subcontractor firms responsible for professional services shall be U.S. citizens or non-U.S. citizens lawfully admitted for permanent residence in the U.S.; (d) goods purchased for implementation of the Study and associated delivery services (e.g., international transportation and insurance) must have their nationality, source and origin in the United States; and (e) goods and services incidental to Study support (e.g., local lodging, food, and transportation) in host country are not subject to the above restrictions. USTDA will make available further details concerning these standards of eligibility upon request.

**NATIONALITY:**

1) Rule

Except as USTDA may otherwise agree, the Contractor for USTDA funded activities must be either a U.S. firm or a U.S. individual. Prime contractors may utilize U.S.

subcontractors without limitation, but the use of host country subcontractors is limited to 20% of the USTDA grant amount.

## 2) Application

Accordingly, only a U.S. firm or U.S. individual may submit proposals on USTDA funded activities. Although those proposals may include subcontracting arrangements with host country firms or individuals for up to 20% of the USTDA grant amount, they may not include subcontracts with third country entities. U.S. firms submitting proposals must ensure that the professional services funded by the USTDA grant, to the extent not subcontracted to host country entities, are supplied by employees of the firm or employees of U.S. subcontractor firms who are U.S. individuals.

Interested U.S. firms and consultants who submit proposals must meet USTDA nationality requirements as of the due date for the submission of proposals and, if selected, must continue to meet such requirements throughout the duration of the USTDA-financed activity. These nationality provisions apply to whatever portion of the Terms of Reference is funded with the USTDA grant.

## 3) Definitions

A "U.S. individual" is (a) a U.S. citizen, or (b) a non-U.S. citizen lawfully admitted for permanent residence in the U.S. (a green card holder).

A "U.S. firm" is a privately owned firm which is incorporated in the U.S., with its principal place of business in the U.S., and which is either (a) more than 50% owned by U.S. individuals, or (b) has been incorporated in the U.S. for more than three (3) years prior to the issuance date of the request for proposals; has performed similar services in the U.S. for that three (3) year period; employs U.S. citizens in more than half of its permanent full-time positions in the U.S.; and has the existing capability in the U.S. to perform the work in question.

A partnership, organized in the U.S. with its principal place of business in the U.S., may also qualify as a "U.S. firm" as would a joint venture organized or incorporated in the United States consisting entirely of U.S. firms and/or U.S. individuals.

A nonprofit organization, such as an educational institution, foundation, or association may also qualify as a "U.S. firm" if it is incorporated in the United States and managed by a governing body, a majority of whose members are U.S. individuals.

## **SOURCE AND ORIGIN:**

### 1) Rule

In addition to the nationality requirement stated above, any goods (e.g., equipment and materials) and services related to their shipment (e.g., international transportation and insurance) funded under the USTDA Grant Agreement must have their source and origin in the United States, unless USTDA otherwise agrees. However, necessary purchases of goods and project support services which are unavailable from a U.S. source (e.g., local food, housing and transportation) are eligible without specific USTDA approval.

### 2) Application

Accordingly, the prime contractor must be able to demonstrate that all goods and services purchased in the host country to carry out the Terms of Reference for a USTDA Grant Agreement that were not of U.S. source and origin were unavailable in the United States.

### 3) Definitions

“Source” means the country from which shipment is made.

"Origin" means the place of production, through manufacturing, assembly or otherwise.

*Questions regarding these nationality, source and origin requirements may be addressed to the USTDA Office of General Counsel.*

## ANNEX 4



## GRANT AGREEMENT

This Grant Agreement is entered into between the Government of the United States of America, acting through the U.S. Trade and Development Agency ("USTDA"), and the Northern Electricity Distribution Company ("Grantee") of the Republic of Ghana ("Host Country"). USTDA agrees to provide the Grantee under the terms of this Grant Agreement US\$410,000 ("USTDA Grant") to fund the cost of goods and services required for technical assistance ("TA") on the proposed NEDCo Management and Investment Planning ("Project") in the Host Country.

### 1. USTDA Funding

The funding to be provided under this Grant Agreement shall be used to fund the costs of a contract between the Grantee and the U.S. firm selected by the Grantee ("Contractor") under which the Contractor will perform the TA ("Contract"). Payment to the Contractor will be made directly by USTDA on behalf of the Grantee with the USTDA Grant funds provided under this Grant Agreement.

### 2. Terms of Reference

The Terms of Reference for the TA ("Terms of Reference") are attached as Annex I and are hereby made a part of this Grant Agreement. The TA will examine the technical, financial, environmental, and other critical aspects of the proposed Project. The Terms of Reference for the TA shall also be included in the Contract.

### 3. Standards of Conduct

USTDA and the Grantee recognize the existence of standards of conduct for public officials and commercial entities in their respective countries. Therefore, USTDA, the Grantee, and the Contractor shall not directly or indirectly provide, offer or promise to provide money or anything of value to any public official in violation of any United States or Host Country laws relating to corruption or bribery.

### 4. Grantee Responsibilities

The Grantee shall undertake its best efforts to provide reasonable support for the Contractor, such as local transportation, office space, and secretarial support.

### 5. Contract Matters and USTDA's Rights as Financier

#### (A) Grantee Competitive Selection Procedures

Selection of the U.S. Contractor shall be carried out by the Grantee according to its established procedures for the competitive selection of contractors with advance notice of the procurement published online through *Federal Business Opportunities*

*Grant*

([www.fedbizopps.gov](http://www.fedbizopps.gov)). Upon request, the Grantee will submit these contracting procedures and related documents to USTDA for information and/or approval.

**(B) USTDA's Right to Approve Contractor Selection**

The Grantee shall notify USTDA at the address of record set forth in Article 16 below upon selection of the Contractor to perform the TA. USTDA then shall notify the Grantee whether or not USTDA approves the Grantee's Contractor selection. Upon USTDA approval of the Grantee's Contractor selection, the Grantee shall notify in writing the U.S. firms that submitted unsuccessful proposals to perform the TA that they were not selected. The Grantee and the Contractor then shall enter into a contract for performance of the TA.

**(C) USTDA's Right to Approve Contract Between Grantee and Contractor**

**(1) Contract**

The Grantee and the Contractor shall enter into a contract for performance of the TA. The Grantee (or the Contractor on the Grantee's behalf) shall transmit to USTDA, at the address set forth in Article 16 below, a photocopy of an English language version of the signed contract or a final negotiated draft version of the contract. USTDA then shall notify the Grantee and the Contractor whether or not USTDA approves the contract.

**(2) Amendments and Assignments**

The Grantee or the Contractor may submit any proposed amendment to the contract, including any proposed amendment to any annex thereto, or any proposed assignment of the contract, to USTDA at the address set forth in Article 16 below. USTDA then shall notify the Grantee and the Contractor whether or not USTDA approves the proposed amendment or assignment.

**(D) USTDA Not a Party to the Contract**

It is understood by the parties that USTDA has reserved certain rights such as, but not limited to, the right to approve the terms of the contract and any amendments thereto, including assignments, the selection of all contractors, the Terms of Reference, the Final Report, and any and all documents related to any contract funded under the Grant Agreement. The parties hereto further understand and agree that USTDA, in reserving any or all of the foregoing approval rights, has acted solely as a financing entity to assure the proper use of United States Government funds, and that any decision by USTDA to exercise or refrain from exercising these approval rights shall be made as a financier in the course of funding the TA and shall not be construed as making USTDA a party to the contract. The parties hereto understand and agree that USTDA may, from time to time, exercise the foregoing approval rights, or discuss matters related to these rights and the Project with the parties to the contract or any subcontract, jointly or separately, without thereby incurring any responsibility or liability to such parties. Any approval or failure to approve by USTDA shall not bar the Grantee or USTDA from asserting any right they might have against the Contractor, or

2  
K  
AAW

relieve the Contractor of any liability which the Contractor might otherwise have to the Grantee or USTDA.

**(E) Grant Agreement Controlling**

Regardless of USTDA approval, the rights and obligations of any party to the contract or any subcontract thereunder must be consistent with this Grant Agreement. In the event of any inconsistency between the Grant Agreement and the contract or any subcontract funded by the Grant Agreement, the Grant Agreement shall control.

**6. Disbursement Procedures**

**(A) USTDA Approval of Contract Required**

USTDA will make disbursements of Grant funds directly to the Contractor only after USTDA approves the Grantee's contract with the Contractor.

**(B) Contractor Invoice Requirements**

The Grantee should request disbursement of funds by USTDA to the Contractor for performance of the TA by submitting invoices in accordance with the procedures set forth in the USTDA Mandatory Clauses in Annex II.

**7. Effective Date**

The effective date of this Grant Agreement ("Effective Date") shall be the date of signature by both parties or, if the parties sign on different dates, the date of the last signature. In the event that only one signature is dated, such date shall constitute the Effective Date.

**8. TA Schedule**

**(A) TA Completion Date**

The completion date for the TA, which is August 1, 2013, is the date by which the parties estimate that the TA will have been completed.

**(B) Time Limitation on Disbursement of USTDA Grant Funds**

Except as USTDA may otherwise agree, (i) no USTDA funds may be disbursed under this Grant Agreement for goods and services which are provided prior to the Effective Date of the Grant Agreement; and (ii) no USTDA funds may be disbursed more than four (4) years after the Effective Date of the Grant Agreement.

3  
K on T  
PAM

## 9. USTDA Mandatory Contract Clauses

All contracts funded under this Grant Agreement shall include the USTDA Mandatory Contract Clauses set forth in Annex II to this Grant Agreement. All subcontracts funded or partially funded with USTDA Grant funds shall include the USTDA Mandatory Contract Clauses, except for clauses B(1), G, H, I, and J.

## 10. Use of U.S. Carriers

### (A) Air

Transportation by air of persons or property funded under this Grant Agreement shall be on U.S. flag carriers in accordance with the Fly America Act, 49 U.S.C. 40118, to the extent service by such carriers is available, as provided under applicable U.S. Government regulations.

### (B) Marine

Transportation by sea of property funded under this Grant Agreement shall be on U.S. carriers in accordance with U.S. cargo preference law.

## 11. Nationality, Source and Origin

Except as USTDA may otherwise agree, the following provisions shall govern the delivery of goods and professional services funded by USTDA under this Grant Agreement:

- (a) the Contractor must be a U.S. firm;
- (b) the Contractor may use U.S. subcontractors without limitation;
- (c) employees of U.S. Contractor or U.S. subcontractor firms shall be U.S. citizens or non-U.S. citizens lawfully admitted for permanent residence in the United States, except as provided pursuant to subpart (d) below;
- (d) up to twenty percent (20%) of the USTDA Grant amount may be used to pay for services performed by (i) Host Country subcontractors, and/or (ii) Host Country nationals who are employees of the Contractor;
- (e) a Host Country subcontractor may only be used for specific services from the Terms of Reference identified in the subcontract;
- (f) subcontractors from countries other than the United States or Host Country may not be used;
- (g) goods purchased for performance of the TA and associated delivery services (e.g., international transportation and insurance) must have their nationality, source and origin in the United States; and

(h) goods and services incidental to TA support (e.g., local lodging, food, and transportation) in Host Country are not subject to the above restrictions.

USTDA will make available further details concerning these provisions upon request.

## **12. Taxes**

USTDA funds provided under this Grant Agreement shall not be used to pay any taxes, tariffs, duties, fees or other levies imposed under laws in effect in Host Country, except for taxes of a de minimis nature imposed on local lodging, food, transportation, or airport arrivals or departures. Neither the Grantee nor the Contractor will seek reimbursement from USTDA for taxes, tariffs, duties, fees or other levies, except for taxes of a de minimis nature referenced above.

## **13. USTDA Project Evaluation**

The parties will cooperate to assure that the purposes of the Grant Agreement are accomplished. For five (5) years following receipt by USTDA of the Final Report, the Grantee agrees to respond to any reasonable inquiries from USTDA about the status of the Project. Inquiries will include, but not be limited to, whether the Final Report recommendations have been or will be used to implement the Project, anticipated Project implementation timeline, and likely source of financing. In addition, the Grantee agrees to notify USTDA any time the Grantee selects a new primary contact person for this Project during the five-year period referenced above.

## **14. Recordkeeping and Audit**

The Grantee agrees to maintain books, records, and other documents relating to the TA and this Grant Agreement adequate to demonstrate implementation of its responsibilities under this Grant Agreement, including the selection of contractors, receipt and approval of contract deliverables, and approval or disapproval of contractor invoices for payment by USTDA. Such books, records, and other documents shall be separately maintained for three (3) years after the date of the final disbursement by USTDA. The Grantee shall afford USTDA or its authorized representatives the opportunity at reasonable times to review books, records, and other documents relating to the TA and the Grant Agreement.

## **15. Representation of Parties**

For all purposes relevant to this Grant Agreement, the Government of the United States of America will be represented by the U. S. Ambassador to Host Country or USTDA and Grantee will be represented by its Managing Director. The parties hereto may, by written notice, designate additional representatives for all purposes under this Grant Agreement.

5  
K m T  
PAM

## 16. Addresses of Record for Parties

Any notice, request, document, or other communication submitted by either party to the other under the Grant Agreement shall be in writing or through an electronic medium that produces a tangible record of the transmission, such as a facsimile or e-mail message, and will be deemed duly given or sent when delivered to such party at the following:

To: Managing Director  
Northern Electricity Distribution Company (NEDCo)  
NORRIP Block  
P.O. Box TL 77  
Tamale, Ghana

Phone: +233 (037) 2022363  
Fax: +233 (037) 2022488  
E-mail: mdnedco@vra.com

To: U.S. Trade and Development Agency  
1000 Wilson Boulevard, Suite 1600  
Arlington, Virginia 22209-3901  
USA

Phone: (703) 875-4357  
Fax: (703) 875-4009  
E-Mail: grantnotices@ustda.gov and  
Africa@ustda.gov

All such communications shall be in English, unless the parties otherwise agree in writing. In addition, the Grantee shall provide the Commercial or Economic Section of the U.S. Embassy in Host Country with a copy of each communication sent to USTDA.

Any communication relating to this Grant Agreement shall include the following fiscal data:

Appropriation No.: 11 13/14 1001  
Activity No.: 2013-11001A  
Reservation No.: 2013043  
Grant No.: GH201311043

## 17. Implementation Letters

To assist the Grantee in the implementation of the TA, USTDA may, from time to time, issue implementation letters that will provide additional information about matters covered by this Grant Agreement. USTDA may also issue implementation letters to (i) extend the estimated completion date set forth in Article 8(A) above, or (ii) change the fiscal data set forth in Article 16 above. The parties may also use jointly agreed upon implementation letters to confirm and record their mutual understanding of matters covered by this Grant Agreement.

6  
PAM  
K m t

## **18. Grant Agreement Amendments**

Either party may submit to the other party at any time a proposed amendment to the Grant Agreement. A Grant Agreement amendment shall be effective only if it has been signed by both parties.

## **19. Termination Clause**

Either party may terminate this Grant Agreement by giving the other party written notice thereof. The termination of the Grant Agreement will end any obligations of the parties to provide financial or other resources for the TA, except for payments that may be made pursuant to Clause I of the USTDA Mandatory Contract Clauses set forth in Annex II to this Grant Agreement. This article and Articles 5, 12, 13, 14, and 21 of the Grant Agreement shall survive termination of the Grant Agreement.

## **20. Non-waiver of Rights and Remedies**

No delay in exercising any right or remedy accruing to either party in connection with the Grant Agreement shall be construed as a waiver of such right or remedy.

## **21. U.S. Technology and Equipment**

By funding this TA, USTDA seeks to promote the project objectives of the Host Country through the use of U.S. technology, goods, and services. In recognition of this purpose, the Grantee agrees that it will allow U.S. suppliers to compete in the procurement of technology, goods and services needed for Project implementation.

## **22. Governing Law**

This Grant Agreement shall be governed by, and construed in accordance with, the applicable laws of the United States of America. In the absence of federal law, the laws of the State of New York shall apply.

## **23. Counterparts**

This Grant Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same agreement. Counterparts may be delivered via electronic mail or other transmission method and any counterpart so delivered shall be deemed to be valid and effective for all purposes.

**[THE REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK]**

IN WITNESS WHEREOF, the Government of the United States of America and the Northern Electricity Distribution Company of the Republic of Ghana, each acting through its duly authorized representative, have caused this Grant Agreement to be signed in the English language in their names and delivered as of the day and year written below. In the event that this Grant Agreement is signed in more than one language, the English language version shall govern.

**For:**  
**The Government of the**  
**United States of America**

**For:**  
**The Northern Electricity Distribution Company**  
**of the Republic of Ghana**

By: Paul A. Mc

By: [Signature]

Date: 05 DEC 2012

Date: 05-12-2012

Witnessed:

Witnessed:

By: [Signature]  
Kurt Hoviusse

By: [Signature]  
Kwame Amankwah-Twum  
Ag. Secy SECRETARY

**Annex I -- Terms of Reference**

**Annex II -- USTDA Mandatory Clauses**

## Annex I

### Terms of Reference

#### Project Background

The Grantee supplies electricity in the northern part of Ghana, including Brong-Ahafo, Northern, Upper East, Upper West, and the northern parts of the Ashanti and Volta regions. In addition, the Grantee supplies electricity to a few border towns of Burkina Faso and Togo. The operations of the company cover approximately 64% of the geographical areas of Ghana and the company distributes 10.2% of the total energy consumed in Ghana to approximately 380,000 customers. The Grantee, until May 2012, was a department of the Volta River Authority (VRA); the Grantee is now corporatized and established as a subsidiary company with VRA as the sole shareholder. The Grantee seeks to become operationally independent and is exploring how to develop and sustain its own capacity in various areas including, legal, regulatory, accounting, engineering, procurement, construction management, finance, information technology (IT) systems, customer service, and commercial operations, among others..

The Grantee faces the following challenges as it transitions into a fully functioning distribution company:

- Inadequate tariffs
- Limited commercial customers and high dispersion of domestic customers
- National shortfall in power generation capacity to service existing demand
- High technical and commercial losses (close to 25%)
- Another 10-14% losses in collections
- Lack of trained work force and outdated technology and IT systems needed for effective distribution management, collections, and customer service

In order to address these challenges, the objectives of this TA are to:

- Conduct a review of the Grantee's current Business Plan and provide specific recommendations for improving its business operations, including investment in technologies and systems
- Develop requirements for hardware, software, and implementation steps including outsourcing of certain functions
- Conduct a capacity building and training needs assessment and develop a capacity building and training plan for the Grantee to accelerate its transition to a well-managed distribution company
- Develop cost estimates, and an investment program for the identified technology, systems, and capacity building requirements
- Conduct an economic and financial analysis of the investment requirements
- Develop a financing and implementation roadmap
- Prepare and submit specific recommendations for the next steps toward Project implementation.

*Handwritten signature*  
Kant

The scope of the TA shall include the Grantee's entire distribution business, including all of its operations – human resource management (including staffing levels and skill sets), financial management, network management, network operations, asset management, operations and maintenance, and customer relations management.

**Task 1: Technical Assessment: Conduct a Review of the Existing Management and Operations, Develop a Work Plan, and Submit Inception Report**

*Subtask 1.1: Conduct a Kick-Off Meeting:* The Contractor shall organize a kickoff meeting with the Grantee and other relevant stakeholders. The Grantee shall coordinate with the Contractor to identify appropriate personnel and other relevant stakeholders to participate in the kickoff meeting. During the kickoff meeting, the Contractor shall introduce the Contractor's team; review the tasks to be performed under these Terms of Reference; review the Contractor's work plan (Work Plan); and gather input from the Grantee regarding the Grantee's goals for the TA, salient issues surrounding the Grantee's plans for the Project, and Grantee requests for changes in the Work Plan, if any.

For the kickoff meeting, the Contractor shall coordinate with the Grantee on appropriate meeting content; prepare an agenda, handouts, and presentation materials, as needed, for all meeting attendees; conduct the meeting and facilitate discussion; draft a report of the meeting and distribute the meeting report to meeting attendees and other relevant stakeholders identified by the Grantee; and maintain meeting records, including the agenda, any handouts and presentation materials, a list of all meeting participants, and the meeting report.

*Subtask 1.2: Conduct a Thorough Review of the Current Distribution System Management and Operations Practices:* As part of this subtask, the Contractor shall visit the Grantee and hold discussions and conduct a high-level review of the existing management and operations of the company's distribution business. The Contractor's review shall include the Grantee's following systems and processes, as well as overall operations:

- Organization, lines of communications, patterns of information flow among business units, decision-making process, external relations, and compliance with government policy and regulations
- Current performance indicators and performance monitoring practices, including areas lacking in performance
- Demand forecasting and cost-of-service assessment
- Demand side management (DSM) and load management practices
- Financial management and revenue collections (metering, billing, and collections and debt management)
- Challenges faced by the Grantee in pre-paid metering programs



- Network operations, control, and management, including Geographic Information Systems (GIS) Planning and Design, Enterprise Resource Program (ERP), Customer Information System (CIS), Outage Management Systems (OMS), Asset Management Systems (AMS), Customer Relations Management (CRM) and Customer Database, Supervisory Control and Data Acquisition (SCADA) Transmission/Distribution Management and AutoCad for Design of SCADA Data, Mobile Communications Inter-link
- Regulatory Compliance
- Human Resource Management

In addition, the Contractor shall review the following operations at the Grantee's facility:

The Contractor shall meet with the transmission staff of the Ghana Grid Company Limited (GRIDCo), Ghana's national electricity transmission company, to better understand how the Grantee interacts with GRIDCo at the transmission level. The Contractor shall also assess the future needs and integration requirements that will allow for better management of the Grantee's distribution system and link to the national transmission system.

The Contractor shall also hold discussions with the two regulators – Energy Commission of Ghana on technical regulations, and Public Utility Regulatory Commission (PURC) on economic regulations to assess the regulatory requirements and the areas where the Grantee may need to enhance its regulatory compliance.

The Contractor shall review currently available data and assess future needs under an integrated distribution system. The Contractor shall review all databases and data collection systems currently in use at the Grantee's facilities and identify any redundant processes.

*Subtask 1.3: Conduct a Training Needs Assessment:* As part of this subtask, the Contractor shall conduct a training needs assessment (TNA) of training and capacity building needs at all levels of the Grantee's operations. These levels shall include from upper management all the way to linemen and customer service personnel. In addition, the TNA shall focus on all business processes including the current human resource management at the Grantee's facilities and document the full range of training and capacity building requirements in various functional areas of the Grantee's operations. Based on this assessment the Contractor shall develop specific recommendations for the type of training needed to improve the Grantee's management and operations. The list of training activities documented by the Contractor shall include training activities that could be continued by the Grantee beyond this TA and the specific training to be provided as part of this TA under Task 2.

Handwritten signature and initials, possibly 'P. A. M.' and 'K. M. T.', located at the bottom right of the page.

*Subtask 1.4: Develop and Finalize the Inception Report and Work Plan:* As part of this subtask and based on the previous subtasks, the Contractor shall develop an Inception Report for completing the Terms of Reference, incorporate any comments from the Grantee, and finalize the Work Plan. Specifically, the Inception Report shall include, any clarifications agreed to during the meetings, a list of the sites visited and key findings, a list of meetings held and summary of discussions, a detailed schedule of activities under the remainder of the TA, a list of data requirements, and a finalized Work Plan including proposed field trips under the various tasks. This Work Plan shall be the guiding document for the completion of the TA and submission of all deliverables.

*Task 1 Deliverable:* The Contractor shall prepare a report including all work performed under Task 1. The Task 1 Deliverable shall be included in the Final Report.

**Task 2: Technical Assessment: Conduct a High Level Assessment of the Grantee's Distribution Management and Business Plan and Identify Gaps and Requirements**

*Subtask 2.1: Conduct a High Level Assessment of the Grantee's Business Management and Operations:* The Contractor shall closely work with the Grantee's senior managers to conduct an analysis of the business operations and business processes currently in use at the Grantee's facilities. This review shall include an assessment of business functions, information transfer and communication, decision-making process, human resource management, business planning, and investment programming. This review shall also include a review of the business plan completed by the Grantee in September 2012. The Contractor shall identify key performance indicators (KPIs), identify their baselines, and document the findings and gaps as compared to international best practices for distribution business management.

*Subtask 2.2: Conduct a Gap Analysis:* Building on the work conducted under Task 1 and Subtask 2.1, the Contractor shall define and describe the gaps in the current distribution management systems at the Grantee's facilities. These gaps shall include all factors and issues that stand between the present state of the Grantee's distribution management and operations and a technologically mature distribution operating company. The factors and issues covered in the Contractor's gap analysis shall include, but not be limited to, the following:

- Gaps in management functions and processes
- Gaps in current operational process and work flows
- Gaps in data availability and data quality
- Gaps in quality performance data that can be used to manage business processes
- Gaps assessment in all technical and IT systems for network management; asset management; metering, billing, and collections; customer relations management; outage management; and quality of supply and service
- Gaps in human resource management, capacity building, and function training and skills development

PAM  
Kant

In addition, the Contractor shall compile quantitative data and potential KPIs to document the Grantee's current performance in the key operational areas reviewed by the Contractor. The Contractor shall also establish performance targets for the Grantee for a five-year period.

Based on the activities conducted above, the Contractor shall prepare a gap analysis for each of the distribution management functions and processes. In addition, the Contractor shall advise the Grantee on improvements to the Grantee's Business Plan and on the optimum balance between in-house functions and functions that can be outsourced in order to improve the efficiency of the Grantee's operations.

*Subtask 2.3: Develop Recommendations to Address the Identified Gaps:* Based on the gap analysis, the Contractor shall develop a set of detailed written recommendations for the Grantee that adhere to industry proven practices and that would enhance the Grantee's distribution system management and operations. Specifically, the Contractor shall provide detailed recommendations to the Grantee in the following areas:

- Specific recommendations to revise the Grantee's recently completed Business Plan
- Strengthening internal business processes and outsourcing certain business functions
- Strengthening collections while reducing losses in order to improve the financial performance of the Grantee
- Implementation of IT systems to improve information management, network control, and operations and quality of supply and service to consumers
- Improving regulatory compliance and ability to develop tariffs reflective of cost of service
- Improving human resource management, including a capacity building and training program for all levels of the Grantee's operations

The Contractor shall identify KPIs for the operational areas under review, identify the baselines, and propose annual performance targets for the timeframe of the business plan. If there are data gaps or significant problems with data quality, the Contractor shall develop recommendations on ways to improve data quality and availability in order to ensure accountability for results and objective monitoring of the Grantee's performance.

*Subtask 2.4: Provide Training to Grantee Managers and Technical Personnel:* Based on the training needs identified in Task 1 and gaps identified under Task 2, the Contractor, in consultation with the Grantee, shall select two high priority capacity building and training subjects from the TNA developed under Task 1. The Contractor shall develop and deliver two one-week training programs to Grantee personnel in these two priority areas selected by the Grantee. Potential areas of training may include methods to

PAU  
Kant

mitigate high distribution losses and poor collections. The training program shall include the following:

- A detailed definition of the subject areas and training contents
- A detailed training book with a day-by-day agenda for in-class course delivery
- Lab exercises and site visits developed in consultation with the Grantee to integrate field work with in-class training
- At least two case studies of other utilities in the United States to demonstrate the applicability of the recommended technologies and systems to the Grantee's distribution operations
- Frequent "Question and Answer " sessions to ensure comprehension of the subject matter by the participants
- A training course evaluation survey at the end of each five-day course

In addition to the two five-day courses, the Contractor shall provide on-the-job training to Grantee managers and engineers during all field missions, by working side-by-side with them and involving them in all site visits and simulation exercises. This on-the-job training shall include work sessions with the Grantee personnel on the specific analyses included in the remainder of the tasks in the Study.

*Task 2 Deliverable:* The Contractor shall prepare a report including all work performed under Task 2. The Task 2 Deliverable shall be included in the Final Report.

### **Task 3: Develop a Five-Year Business Plan and an Investment Program for the Grantee**

Based on the requirements developed under Task 2 to address the gaps in the Grantee's distribution system and management practices and the overall goals and objectives of the Grantee, the Contractor shall develop a five-year business plan for the Grantee (Business Plan). The Business Plan shall include a discussion of the overall goals and objectives of the Grantee and the activities required to achieve those goals. In addition, the Contractor shall develop detailed cost estimates for various equipment, hardware, software, licenses, and training needed for the next stage program implementation. These cost estimates will be at the planning level rather than at the feasibility or design level.

Once all of the cost estimates have been developed, the Contractor shall develop a draft Five-Year Investment Plan (Investment Plan) for the Grantee which shall be included as part of the Business Plan. The Investment Plan shall include the following:

- Specific requirements and costs of systems, technology, and equipment needed for implementing the recommendations developed in Task 2
- Capital cost estimates, operations and maintenance costs, and capacity building and training costs
- A five-year schedule of investments

RAM  
K

Based on comments from the Grantee and discussions with various donors, especially the African Development Bank, Millennium Challenge Corporation (MCC), the World Bank and other bilateral donors active in Ghana, the Contractor shall finalize the Business Plan. The Contractor shall prepare an actionable Investment Plan that will include a detailed strategy for the implementation of the plan. In consultation with the Grantee and key donors, the Contractor shall organize the investments into two phases. Phase I shall focus on the highest priority investments (two years), and Phase II shall include investment requirements for the following three years. This approach will help the Grantee in the internal budgeting process and seeking financing for the needed investments.

This report shall include the following:

- A Five-Year Investment Plan
- Prioritization of the investment in Phase I and Phase II with implementation procedures
- KPIs, their baseline, and annual targets aligned with the Business Plan, approaches to addressing data gaps and data quality, and annual performance monitoring of the Grantee

*Task 3 Deliverable:* The Contractor shall prepare a report including all work performed under Task 3. The Task 3 Deliverable shall be included in the Final Report.

#### **Task 4: Conduct a Financial and Economic Analysis of the Investments Proposed in the Five Year Investment Plan**

Based on the total investment requirements for Phase I and Phase II and life-cycle cost analysis of equipment and systems, the Contractor shall conduct detailed economic and financial analyses of the proposed investments using an internationally acceptable methodology for such analyses. The Contractor's financial analyses of the projects shall be based on a standard methodology used by donors, such as the World Bank, African Development Bank, MCC, and investors for appraising investment projects. The Contractor shall calculate both the economic and financial internal rates of return (EIRR and FIRR) for the recommended investments under a variety of different assumptions such as different interest rates, depreciation, licensing fees, import duties, etc.

In addition, the Contractor shall conduct a sensitivity analysis of the return on investment (ROI) for two-to-three practical financial packages for financing the investments. The Contractor's sensitivity analysis shall account for the cost recovery indicators based on different assumptions for key project variables, such as electricity tariffs, sales volumes, capital and operating cost estimates, and interest rates and investment requirements.

In addition to the capital costs, the Contractor shall provide an estimate of projected operating expenses, including a detailed breakdown of the general, administrative, operating, and maintenance costs for the Project. As part of the financial and economic

analysis, the Contractor shall take into consideration the escalation of the costs over a two-to-five year period.

The Contractor shall estimate the projected savings in Ghana's distribution sector resulting from the implementation of the projects included in the Investment Plan. In addition, The Contractor shall develop a cash balance *pro forma* that presents the net cash savings from the proposed investments determined by netting revenue against costs.

The Contractor shall prepare a financial analysis and model of the Project, considering alternative methods and sources of financing, including grants and concessionary financing, and debt. The financial model shall be a tool for defining the terms and conditions of the financing structure and testing the volatility of the Project's ability to service its debt.

Following discussion with the Grantee, the Contractor shall develop an "optimum," "minimum," and "most likely" economic/financial scenario to develop financial documentation that may be used by the Grantee for presentation to its financial officials. This documentation shall be included in the Final Report.

The Contractor shall rank the investments in terms of their financial viability and likely investor interest.

*Task 4 Deliverable:* The Contractor shall prepare a report including all work performed under Task 4. The Task 4 Deliverable shall be included in the Final Report.

#### **Task 5: Develop a Blue Print for Financing the Investments Needed in Phase I and Phase II**

The Contractor shall develop a blue print for financing the investments required under the Five-Year Investment Plan. Specifically, the Contractor shall identify and analyze the following potential funding sources for financing the investments recommended in both Phase I and Phase II:

- Internal funds from the Grantee's resources or government budget
- Combination of internal budget funds and development financing from International Financial Institutions
- Combination of the above and export credit financing from the U.S. Export-Import Bank
- Blended financing from debt and equity, from a variety of donors
- Potential grant funding from MCC and other U.S. government donor agencies

*Task 5 Deliverable:* The Contractor shall prepare a report including all work performed under Task 5. The Task 5 Deliverable shall be included in the Final Report.

## **Task 6: Conduct a Review of Regulatory Issues Related to the Investment Plan**

The Contractor shall conduct an analysis of the anticipated Ghanaian laws, standards, and institutions, which could impact the Project's implementation. In addition, the Contractor shall identify and assess any regulatory barriers that may impede the development, financing, and implementation of the projects recommended in the Investment Plan in the Grantee's distribution operations in Ghana.

Specifically, the Contractor shall analyze all regulatory issues that will impact the implementation of the proposed projects in the Investment Plan. The Contractor's analysis shall include all pertinent documents that deal with import taxes, duties and fees, corporate and personal income taxes, and property and other taxes related to the implementation of the Project. The Contractor's analysis shall also include all permitting requirements, foreign participation regulations, regulations that impact environmental requirements, and any other regulatory issues that will have a significant impact on the Project, as well as reporting on the quality of service and supply standards required by the regulator.

The Contractor shall recommend remedial actions to mitigate any regulatory barriers. In addition, the Contractor shall recommend actions to comply with all regulatory requirements.

The Contractor shall deliver a stand-alone report on the regulatory assessment related to implementing the recommended distribution projects both in the immediate time frame (Phase I) and in the medium- to long-term projects (Phase II). The Contractor shall share these findings of this task with all relevant Ghanaian stakeholders including the Energy Commission of Ghana and the Electricity Company of Ghana (ECG).

*Task 6 Deliverable:* The Contractor shall prepare a report including all work performed under Task 6. The Task 6 Deliverable shall be included in the Final Report.

## **Task 7: Conduct Preliminary Environmental and Social Impact Assessments**

The Contractor shall evaluate and report on the expected environmental impacts of the proposed Project with reference to local, national and international laws and regulations, including those of international finance institutions, such as the World Bank, the African Development Bank, the International Finance Corporation (IFC), MCC (MCC uses IFC standards), and private banks. The Contractor shall factor the results of this analysis in Task 1 and Task 2, so that any cost impacts can be captured for the economic and financial analysis.

The Contractor's review shall identify potential negative impacts, discuss the extent to which they can be mitigated, and develop plans for a full environmental impact assessment if and when the Project moves forward to the implementation stage. The Contractor's review shall include the identification of the steps that will need to be



undertaken by the project sponsor subsequent to the TA's completion and prior to project implementation.

In addition, the Contractor shall conduct an analysis of the likely social impacts of the proposed distribution projects. Specifically, the Contractor shall estimate the following types of impacts:

- Impact on social changes as a result of electricity access such as rural-urban trade and integration, impact on the quality of education and health services, etc.
- Impact on any local economic activity, such as the creation of local small businesses and income generation
- Any other impacts in social behavior and social discourse
- Impact on safety and security

*Task 7 Deliverable:* The Contractor shall prepare a report including all work performed under Task 7. The Task 7 Deliverable shall be included in the Final Report.

### **Task 8: Conduct an Analysis of the Key Host Country Development Impacts**

The Contractor shall conduct a development impact assessment of the Project. The purpose of the development impact assessment is to provide the Project's decision makers and interested parties with a broader view of the Project's potential effects on Ghana. The development impact assessment shall identify the anticipated impacts of the Project in the following categories:

Infrastructure: The Contractor shall identify the anticipated infrastructure impacts of the Project, giving a brief synopsis and concrete examples of infrastructure impacts. Examples of infrastructure impacts related to implementation of the Project may include the installation of smart meters, as well as associated communication infrastructure and other related hardware and software systems. The Contractor shall provide specific information about the anticipated infrastructure impacts of the Project, such as the anticipated number of equipment to be installed, details regarding anticipated improvements in the Grantee's communication infrastructure and other related hardware and software systems, and the impact of the Project on the Grantee's existing and planned electricity distribution systems.

Human Capacity Building: The Contractor shall identify the anticipated number and types of local jobs that would be created or retained as a result of the Project. The Contractor shall also identify the number of local people who would receive training and the types of training programs required to implement and sustain the Project. The Contractor shall not include training performed under these Terms of Reference in the development impact assessment.

Technology Transfer and Productivity Enhancement: The Contractor shall identify the anticipated advanced technologies that would be utilized for the Project. The Contractor



shall also identify anticipated efficiencies that would be gained as a result of the Project. Examples of efficiencies related to implementation of the Project may include higher output per resource use, lower costs, or other common measures of efficiency used in the electricity distribution industry.

Market Oriented Reforms: The Contractor shall provide a description of any regulations, laws, standards, or institutional changes that are recommended pursuant to these Terms of Reference and the effect they would have if implemented.

Other: The Contractor shall identify any other anticipated development impacts or benefits that would result from the Project, such as improved financial revenue flows to the Grantee and other stakeholders, improvements in Ghana's energy security, reduced emissions of greenhouse gases and other harmful pollutants, positive spin-off effects on other economic sectors, etc.

*Task 8 Deliverable*: The Contractor shall prepare a report including all work performed under Task 8. The Task 8 Deliverable shall be included in the Final Report.

### **Task 9: Develop an Implementation Plan for the Investment Plan**

Based on the activities conducted under Tasks 1 through 8 and specifically the gaps identified in the Grantee's distribution system and management practices, the Contractor shall develop a detailed five-year implementation plan and budget (Implementation Plan) for the projects included in the Investment Plan, based on the final agreed-upon distribution projects and capacity building and training requirements as recommended by the Contractor and adopted by the Grantee. The Contractor's Implementation Plan shall provide the Grantee with a detailed description of the gaps and the options to mitigate each of them, coupled with a cost/benefit breakdown for each option. The Implementation Plan shall also identify key performance indicators, identify their baselines, and propose annual targets that align with regulatory and business plan targets. If there are data gaps or significant problems with data quality, the Contractor shall identify recommendations on how to improve data quality and availability in order to ensure accountability for results and objective monitoring of performance at the Grantee.

The five-year planning horizon is recommended because it is customary in Ghana for all government departments and state enterprises to develop five-year plans for budgeting purposes. The Contractor shall make a clear distinction for the high priority investments planned during Phase I (two-to-three years) and those in Phase II (medium-to-long term).

The Contractor shall provide the Grantee with the following items which are relevant to the Implementation Plan:

- A recommended schedule for Project implementation, including recommendations for phasing, milestones, and prioritization of investments

- An outline of all the steps the Grantee will need to take subsequent to the TA's completion and prior to project implementation, such as:
  - Environmental and social impact assessments that comply with local environmental and social requirements and those of multilateral lending agencies such as the World Bank and the African Development Bank
  - Licensing, permitting, and other relevant legal and regulatory requirements
  - Financial arrangements
  - Procurements of goods and services
  - Systems integration
  - Operations and maintenance
  - Short- and long-term training requirements
  - An assessment of how the implementation of the Project will impact the Grantee's operations
  - Scope of work including training requirements
  - Annual budget requirement
  - Cost/benefit analysis
  - Technical and training needs to implement each change
  - An overall change management plan to implement the system upgrades

*Task 9 Deliverable:* The Contractor shall prepare a report including all work performed under Task 9. The Task 9 Deliverable shall be included in the Final Report.

#### **Task 10: Conduct an Assessment of U.S. Sources of Supply**

While aiming at the optimum specifications and characteristics of the Project, the Contractor shall conduct an assessment of the availability of potential U.S. sources of supply of equipment, systems, and services required for the implementation of the Project, as recommended in the TA. For each source identified, the Contractor shall provide the contact name and titles and all contact information including telephone number, fax number, physical address, and e-mail address.

*Task 10 Deliverable:* The Contractor shall prepare a report including all work performed under Task 10. The Task 10 Deliverable shall be included in the Final Report.

#### **Task 11: Final Report**

The Contractor shall prepare and deliver to the Grantee and USTDA a substantive and comprehensive final report of all work performed under these Terms of Reference ("Final Report"). The Final Report shall be organized according to the above tasks, and shall include all deliverables and documents that have been provided to the Grantee. The Final Report shall be prepared in accordance with Clause J of Annex II of the Grant Agreement.

*AM*  
*h m j*

## Annex II

### USTDA Mandatory Contract Clauses

#### A. USTDA Mandatory Clauses Controlling

The parties to this Contract acknowledge that this Contract is funded in whole or in part by the U.S. Trade and Development Agency ("USTDA") under the Grant Agreement between the Government of the United States of America, acting through USTDA, and the Northern Electricity Distribution Company ("Client") of the Republic of Ghana ("Host Country"), dated \_\_\_\_\_ ("Grant Agreement"). The Client has selected \_\_\_\_\_ ("Contractor") to perform the TA ("TA") for the NEDCo Management and Investment Planning project ("Project") in the Host Country. The Client and the Contractor are the parties to this Contract, and they hereinafter are referred to collectively as the "Contract Parties." Notwithstanding any other provisions of this Contract, the following USTDA Mandatory Contract Clauses shall govern. All subcontracts entered into by Contractor funded or partially funded with USTDA Grant funds shall include these USTDA Mandatory Contract Clauses, except for clauses B(1), G, H, I, and J. In addition, in the event of any inconsistency between the Grant Agreement and the Contract or any subcontract thereunder, the Grant Agreement shall be controlling.

#### B. USTDA as Financier

##### (1) USTDA Approval of Contract

This Contract, and any amendment thereto, including any amendment to any annex thereto, and any proposed assignment of this Contract, must be approved by USTDA in writing in order to be effective with respect to the expenditure of USTDA Grant funds. USTDA will not authorize the disbursement of USTDA Grant funds until the Contract conforms to modifications required by USTDA during the Contract review process and the Contract has been formally approved by USTDA. To make this review in a timely fashion, USTDA must receive from either the Client or the Contractor an English language version of a final negotiated draft Contract or a signed Contract to the attention of the General Counsel's office at USTDA's address listed in Clause N below.

##### (2) USTDA Not a Party to the Contract

It is understood by the Contract Parties that USTDA has reserved certain rights such as, but not limited to, the right to approve the terms of this Contract and amendments thereto, including assignments, the selection of all contractors, the Terms of Reference, the Final Report, and any and all documents related to any contract funded under the Grant Agreement. The Contract Parties hereto further understand and agree that USTDA, in reserving any or all of the foregoing approval rights, has acted solely as a financing entity to assure the proper use of United States Government funds, and

that any decision by USTDA to exercise or refrain from exercising these approval rights shall be made as a financier in the course of financing the TA and shall not be construed as making USTDA a party to the Contract. The Contract Parties hereto understand and agree that USTDA may, from time to time, exercise the foregoing approval rights, or discuss matters related to these rights and the Project with the Contract Parties or the parties to any subcontract, jointly or separately; and in consideration of USTDA's role as financier, the Contract Parties further agree that USTDA's rights may be exercised without thereby incurring any responsibility or liability, in contract, tort, or otherwise, to the Contract Parties or the parties to any subcontract. Any approval or failure to approve by USTDA shall not bar the Client or USTDA from asserting any right they might have against the Contractor, or relieve the Contractor of any liability which the Contractor might otherwise have to the Client or USTDA.

### **C. Nationality, Source and Origin**

Except as USTDA may otherwise agree, the following provisions shall govern the delivery of goods and professional services funded by USTDA under the Grant Agreement:

- (a) the Contractor must be a U.S. firm;
- (b) the Contractor may use U.S. subcontractors without limitation;
- (c) employees of U.S. Contractor or U.S. subcontractor firms shall be U.S. citizens or non-U.S. citizens lawfully admitted for permanent residence in the United States, except as provided pursuant to subpart (d) below;
- (d) up to twenty percent (20%) of the USTDA Grant amount may be used to pay for services performed by (i) Host Country subcontractors, and/or (ii) Host Country nationals who are employees of the Contractor;
- (e) a Host Country subcontractor may only be used for specific services from the Terms of Reference identified in the subcontract;
- (f) subcontractors from countries other than the United States or Host Country may not be used;
- (g) goods purchased for performance of the TA and associated delivery services (e.g., international transportation and insurance) must have their nationality, source and origin in the United States; and
- (h) goods and services incidental to TA support (e.g., local lodging, food, and transportation) in Host Country are not subject to the above restrictions.

USTDA will make available further details concerning these provisions upon request.

#### **D. Recordkeeping and Audit**

The Contractor and subcontractors funded under the Grant Agreement shall maintain, in accordance with generally accepted accounting procedures, books, records, and other documents, sufficient to reflect properly all transactions under or in connection with the Contract. These books, records, and other documents shall clearly identify and track the use and expenditure of USTDA funds, separately from other funding sources. Such books, records, and documents shall be maintained during the period of performance of work provided for by this Contract, and for a period of three (3) years after final disbursement by USTDA. The Contractor and subcontractors shall afford USTDA, or its authorized representatives, the opportunity at reasonable times for inspection and audit of such books, records, and other documentation.

#### **E. U.S. Carriers**

##### **(1) Air**

Transportation by air of persons or property funded under the Grant Agreement shall be on U.S. flag carriers in accordance with the Fly America Act, 49 U.S.C. 40118, to the extent service by such carriers is available, as provided under applicable U.S. Government regulations.

##### **(2) Marine**

Transportation by sea of property funded under the Grant Agreement shall be on U.S. carriers in accordance with U.S. cargo preference law.

#### **F. Workman's Compensation Insurance**

The Contractor shall provide adequate Workman's Compensation Insurance coverage for work performed under this Contract.

#### **G. Reporting Requirements**

The Contractor shall advise USTDA by letter as to the status of the Project on March 1st annually for a period of two (2) years after completion of the TA. In addition, if at any time the Contractor receives follow-on work from the Client, the Contractor shall so notify USTDA and designate the Contractor's contact point including name, telephone, fax number, and e-mail address. Since this information may be made publicly available by USTDA, any information which is confidential shall be designated as such by the Contractor and provided separately to USTDA. USTDA will maintain the confidentiality of such information in accordance with applicable law.



## **H. Disbursement Procedures**

### **(1) USTDA Approval of Contract**

Disbursement of Grant funds will be made only after USTDA approval of this Contract.

### **(2) Payment Schedule Requirements**

A payment schedule for disbursement of Grant funds to the Contractor shall be included in this Contract. Such payment schedule must conform to the following USTDA requirements: (1) up to twenty percent (20%) of the total USTDA Grant amount may be used as a mobilization payment; (2) all other payments, with the exception of the final payment, shall be based upon Contract performance milestones; and (3) the final payment may be no less than fifteen percent (15%) of the total USTDA Grant amount, payable upon approval by USTDA of a Final Report that has been (i) prepared and submitted in accordance with the requirements set forth in Clause I below, and (ii) approved in writing by the Client in the manner provided for by Clause H(3)(b)(iii) below. Invoicing procedures for all payments are described below.

### **(3) Contractor Invoice Requirements**

USTDA will make all disbursements of USTDA Grant funds directly to the Contractor. The Contractor must provide USTDA with an ACH Vendor Enrollment Form (available from USTDA) with the first invoice. The Client shall request disbursement of funds by USTDA to the Contractor for performance of the Contract by submitting the following to USTDA:

#### **(a) Contractor's Invoice**

The Contractor's invoice shall include reference to an item listed in the Contract payment schedule, the requested payment amount, and an appropriate certification by the Contractor, as follows:

##### **(i) For a mobilization payment (if any):**

"As a condition for this mobilization payment, the Contractor certifies that it will perform all work in accordance with the terms of its Contract with the Client. To the extent that the Contractor does not comply with the terms and conditions of the Contract, including the USTDA Mandatory Contract Clauses contained therein, it will, upon USTDA's request, make an appropriate refund to USTDA. "

##### **(ii) For Contract performance milestone payments:**

"The Contractor has performed the work described in this invoice in accordance with the terms of its Contract with the Client and is entitled to payment thereunder. To the extent the Contractor has not complied with the terms and conditions of the Contract, including the USTDA Mandatory Contract Clauses contained therein, it will, upon USTDA's request, make an appropriate refund to USTDA."

(iii) For final payment:

"The Contractor has performed the work described in this invoice in accordance with the terms of its Contract with the Client and is entitled to payment thereunder. Specifically, the Contractor has submitted the Final Report to the Client, as required by the Contract, and received the Client's approval of the Final Report. To the extent the Contractor has not complied with the terms and conditions of the Contract, including the USTDA Mandatory Contract Clauses contained therein, it will, upon USTDA's request, make an appropriate refund to USTDA."

**(b) Client's Approval of the Contractor's Invoice**

(i) The invoice for a mobilization payment must be approved in writing by the Client.

(ii) For Contract performance milestone payments, the following certification by the Client must be provided on the invoice or separately:

"The services for which disbursement is requested by the Contractor have been performed satisfactorily, in accordance with applicable Contract provisions and the terms and conditions of the USTDA Grant Agreement."

(iii) For final payment, the following certification by the Client must be provided on the invoice or separately:

"The services for which disbursement is requested by the Contractor have been performed satisfactorily, in accordance with applicable Contract provisions and the terms and conditions of the USTDA Grant Agreement. The Final Report submitted by the Contractor has been reviewed and approved by the Client. "

**(c) USTDA Address for Disbursement Requests**

Requests for disbursement shall be submitted to the attention of the Finance Department at USTDA's address listed in Clause N below, or by e-mail to [invoices@ustda.gov](mailto:invoices@ustda.gov).

Handwritten signature and initials in the bottom right corner of the page.

## **I. Termination**

### **(1) Method of Termination**

Either Contract Party may terminate this Contract upon giving written notice to the other party and USTDA. This notice shall be effective after either 30 days, or any other period set forth elsewhere in this Contract. Furthermore, this Contract shall terminate immediately upon notification of USTDA's termination of the Grant Agreement or the term of availability of any funds thereunder.

### **(2) Ramifications of Termination**

In the event that this Contract is terminated prior to completion, the Contractor will be eligible, subject to USTDA approval, for payment for the value of the work performed pursuant to the terms of this Contract. Likewise, in the event of such termination, USTDA is entitled to receive from the Contractor all USTDA Grant funds previously disbursed to the Contractor (including but not limited to mobilization payments) which exceed the value of the work performed pursuant to the terms of this Contract.

### **(3) Survivability**

Clauses B, D, G, H, I, and O of the USTDA Mandatory Contract Clauses shall survive the termination of this Contract.

## **J. USTDA Final Report**

### **(1) Definition**

"Final Report" shall mean the Final Report described in the attached Annex I Terms of Reference or, if no such "Final Report" is described therein, "Final Report" shall mean a substantive and comprehensive report of work performed in accordance with the attached Annex I Terms of Reference, including any documents delivered to the Client.

### **(2) Final Report Submission Requirements**

The Contractor shall provide the following to USTDA:

- (a)** One (1) complete hard copy of the Final Report for USTDA's records. This version shall have been approved by the Client in writing and must be in the English language. It is the responsibility of the Contractor to ensure that confidential information, if any, contained in this version be clearly marked. USTDA will maintain the confidentiality of such information in accordance with applicable law.

and

(b) One (1) hard copy of the Final Report suitable for public distribution ("Public Version"). The Public Version shall have been approved by the Client in writing and must be in the English language. As this version will be available for public distribution, it must not contain any confidential information. If the report in (a) above contains no confidential information, it may be used as the Public Version. In any event, the Public Version must be informative and contain sufficient Project detail to be useful to prospective equipment and service providers.

and

(c) Two (2) CD-ROMs, each containing a complete copy of the Public Version of the Final Report. The electronic files on the CD-ROMs shall be submitted in a commonly accessible read-only format. As these CD-ROMs will be available for public distribution, they must not contain any confidential information. It is the responsibility of the Contractor to ensure that no confidential information is contained on the CD-ROMs.

The Contractor shall also provide one (1) hard copy of the Public Version of the Final Report to the Commercial or Economic Section of the U.S. Embassy in Host Country for informational purposes.

### **(3) Final Report Presentation**

All Final Reports submitted to USTDA must be paginated and include the following:

(a) The front cover of every Final Report shall contain the name of the Client, the name of the Contractor who prepared the report, a report title, USTDA's logo, and USTDA's address. If the complete version of the Final Report contains confidential information, the Contractor shall be responsible for labeling the front cover of that version of the Final Report with the term "Confidential Version." The Contractor shall be responsible for labeling the front cover of the Public Version of the Final Report with the term "Public Version." The front cover of every Final Report shall also contain the following disclaimer:

"This report was funded by the U.S. Trade and Development Agency (USTDA), an agency of the U.S. Government. The opinions, findings, conclusions or recommendations expressed in this document are those of the author(s) and do not necessarily represent the official position or policies of USTDA. USTDA makes no representation about, nor does it accept responsibility for, the accuracy or completeness of the information contained in this report."

(b) The inside front cover of every Final Report shall contain USTDA's logo, USTDA's address, and USTDA's mission statement. Camera-ready copy of USTDA Final Report specifications will be available from USTDA upon request.

(c) The Contractor shall affix to the front of the CD-ROM a label identifying the Host Country, USTDA Activity Number, the name of the Client, the name of the Contractor who prepared the report, a report title, and the following language:

“The Contractor certifies that this CD-ROM contains the Public Version of the Final Report and that all contents are suitable for public distribution.”

(d) The Contractor and any subcontractors that perform work pursuant to the Grant Agreement must be clearly identified in the Final Report. Business name, point of contact, address, telephone and fax numbers, and e-mail address shall be included for Contractor and each subcontractor.

(e) The Final Report, while aiming at optimum specifications and characteristics for the Project, shall identify the availability of prospective U.S. sources of supply. Business name, point of contact, address, telephone and fax numbers, and e-mail address shall be included for each commercial source.

(f) The Final Report shall be accompanied by a letter or other notation by the Client which states that the Client approves the Final Report. A certification by the Client to this effect provided on or with the invoice for final payment will meet this requirement.

(g) The Client, USTDA, and the Commercial and/or Economic Section(s) of the U.S. Embassy in Host Country shall have irrevocable, worldwide, royalty-free, non-exclusive rights to use and distribute the Final Report.

## **K. Modifications**

All changes, modifications, assignments or amendments to this Contract, including the appendices, shall be made only by written agreement by the Contract Parties hereto, subject to written USTDA approval.

## **L. TA Schedule**

### **(1) TA Completion Date**

The completion date for the TA, which is August 1, 2013, is the date by which the Contract Parties estimate that the TA will have been completed.

## **(2) Time Limitation on Disbursement of USTDA Grant Funds**

Except as USTDA may otherwise agree, (a) no USTDA funds may be disbursed under this Contract for goods and services which are provided prior to the Effective Date of the Grant Agreement; and (b) no USTDA funds may be disbursed more than four (4) years after the Effective Date of the Grant Agreement.

### **M. Business Practices**

The Contract Parties recognize the existence of standards of conduct for public officials and commercial entities in their respective countries. Therefore, the Contract Parties shall fully comply with all United States and Host Country laws relating to corruption or bribery. For example, the Contractor and its subcontractors shall fully comply with the requirements of the Foreign Corrupt Practices Act, as amended (15 U.S.C. §§ 78dd-1 et seq.). Each Contract Party agrees that it shall require that any agent or representative hired to represent it in connection with the TA will comply with this paragraph and all laws which apply to activities and obligations of that Contract Party, including, but not limited to, those laws and obligations referenced above.

### **N. USTDA Address and Fiscal Data**

Any communication with USTDA regarding this Contract shall be sent to the following address and include the fiscal data listed below:

U.S. Trade and Development Agency  
1000 Wilson Boulevard, Suite 1600  
Arlington, Virginia 22209-3901  
USA

Phone: (703) 875-4357  
Fax: (703) 875-4009

#### Fiscal Data:

Appropriation No.:	11 13/14 1001
Activity No.:	2013-11001A
Reservation No.:	2013043
Grant No.:	GH201311043

*AWM*  
*Kant*

**O. Taxes**

USTDA funds provided under the Grant Agreement shall not be used to pay any taxes, tariffs, duties, fees or other levies imposed under laws in effect in Host Country, except for taxes of a de minimis nature imposed on local lodging, food, transportation, or airport arrivals or departures. Neither the Client nor the Contractor will seek reimbursement from USTDA for taxes, tariffs, duties, fees or other levies, except for taxes of a de minimis nature referenced above.

**P. Export Licensing**

The Contractor and all subcontractors are responsible for compliance with U.S. export licensing requirements, if applicable, in the performance of the Terms of Reference.

**Q. Contact Persons**

The Client designates the following person as the contact person for matters concerning this Contract:

- Name:
- Title:
- Phone:
- Fax:
- E-Mail:

The Contractor designates the following person as the contact person for matters concerning this Contract:

- Name:
- Title:
- Phone:
- Fax:
- E-Mail:

If anyone designated by a Contract Party as a contact person ceases service as a contact person at any point during the ten-year period following the date of signing of this Contract, the Contract Party that had designated that contact person shall provide USTDA and the other Contract Party with the name and contact information of a replacement contact person.

**R. Liability**

This Contract may include a clause that limits the liability of the Contract Parties, provided that such a clause does not (i) disclaim liability for special, incidental, general, or punitive damages, or (ii) limit the total amount of damages recoverable to an amount less than the total amount disbursed to the Contractor pursuant to this Contract.

Handwritten signature and initials in the bottom right corner, including a large stylized signature and the letters 'AAM' and 'T'.

## **S. Arbitration**

If the Contract Parties submit any dispute arising under this Contract for arbitration, the scope of any such arbitration shall be limited to the Contract Parties' rights and/or obligations under this Contract and may not extend to any right or obligation of USTDA. The arbitrator(s) shall not arbitrate issues directly affecting the rights or obligations of USTDA.

## ANNEX 5

## Terms of Reference

### Project Background

The Grantee supplies electricity in the northern part of Ghana, including Brong-Ahafo, Northern, Upper East, Upper West, and the northern parts of the Ashanti and Volta regions. In addition, the Grantee supplies electricity to a few border towns of Burkina Faso and Togo. The operations of the company cover approximately 64% of the geographical areas of Ghana and the company distributes 10.2% of the total energy consumed in Ghana to approximately 380,000 customers. The Grantee, until May 2012, was a department of the Volta River Authority (VRA); the Grantee is now corporatized and established as a subsidiary company with VRA as the sole shareholder. The Grantee seeks to become operationally independent and is exploring how to develop and sustain its own capacity in various areas including, legal, regulatory, accounting, engineering, procurement, construction management, finance, information technology (IT) systems, customer service, and commercial operations, among others..

The Grantee faces the following challenges as it transitions into a fully functioning distribution company:

- Inadequate tariffs
- Limited commercial customers and high dispersion of domestic customers
- National shortfall in power generation capacity to service existing demand
- High technical and commercial losses (close to 25%)
- Another 10-14% losses in collections
- Lack of trained work force and outdated technology and IT systems needed for effective distribution management, collections, and customer service

In order to address these challenges, the objectives of this TA are to:

- Conduct a review of the Grantee's current Business Plan and provide specific recommendations for improving its business operations, including investment in technologies and systems
- Develop requirements for hardware, software, and implementation steps including outsourcing of certain functions
- Conduct a capacity building and training needs assessment and develop a capacity building and training plan for the Grantee to accelerate its transition to a well-managed distribution company
- Develop cost estimates, and an investment program for the identified technology, systems, and capacity building requirements
- Conduct an economic and financial analysis of the investment requirements
- Develop a financing and implementation roadmap
- Prepare and submit specific recommendations for the next steps toward Project implementation.

The scope of the TA shall include the Grantee's entire distribution business, including all of its operations – human resource management (including staffing levels and skill sets), financial management, network management, network operations, asset management, operations and maintenance, and customer relations management.

### **Task 1: Technical Assessment: Conduct a Review of the Existing Management and Operations, Develop a Work Plan, and Submit Inception Report**

*Subtask 1.1: Conduct a Kick-Off Meeting:* The Contractor shall organize a kickoff meeting with the Grantee and other relevant stakeholders. The Grantee shall coordinate with the Contractor to identify appropriate personnel and other relevant stakeholders to participate in the kickoff meeting. During the kickoff meeting, the Contractor shall introduce the Contractor's team; review the tasks to be performed under these Terms of Reference; review the Contractor's work plan (Work Plan); and gather input from the Grantee regarding the Grantee's goals for the TA, salient issues surrounding the Grantee's plans for the Project, and Grantee requests for changes in the Work Plan, if any.

For the kickoff meeting, the Contractor shall coordinate with the Grantee on appropriate meeting content; prepare an agenda, handouts, and presentation materials, as needed, for all meeting attendees; conduct the meeting and facilitate discussion; draft a report of the meeting and distribute the meeting report to meeting attendees and other relevant stakeholders identified by the Grantee; and maintain meeting records, including the agenda, any handouts and presentation materials, a list of all meeting participants, and the meeting report.

*Subtask 1.2: Conduct a Thorough Review of the Current Distribution System Management and Operations Practices:* As part of this subtask, the Contractor shall visit the Grantee and hold discussions and conduct a high-level review of the existing management and operations of the company's distribution business. The Contractor's review shall include the Grantee's following systems and processes, as well as overall operations:

- Organization, lines of communications, patterns of information flow among business units, decision-making process, external relations, and compliance with government policy and regulations
- Current performance indicators and performance monitoring practices, including areas lacking in performance
- Demand forecasting and cost-of-service assessment
- Demand side management (DSM) and load management practices
- Financial management and revenue collections (metering, billing, and collections and debt management)
- Challenges faced by the Grantee in pre-paid metering programs
- Network operations, control, and management, including Geographic Information Systems (GIS) Planning and Design, Enterprise Resource Program (ERP), Customer Information System (CIS), Outage Management Systems (OMS), Asset Management Systems (AMS), Customer Relations Management (CRM) and Customer Database, Supervisory Control and Data Acquisition (SCADA) Transmission/Distribution

Management and AutoCad for Design of SCADA Data, Mobile Communications Inter-link

- Regulatory Compliance
- Human Resource Management

In addition, the Contractor” shall review the following operations at the Grantee’s facility:

The Contractor shall meet with the transmission staff of the Ghana Grid Company Limited (GRIDCo), Ghana's national electricity transmission company, to better understand how the Grantee interacts with GRIDCo at the transmission level. The Contractor shall also assess the future needs and integration requirements that will allow for better management of the Grantee’s distribution system and link to the national transmission system.

The Contractor shall also hold discussions with the two regulators – Energy Commission of Ghana on technical regulations, and Public Utility Regulatory Commission (PURC) on economic regulations to assess the regulatory requirements and the areas where the Grantee may need to enhance its regulatory compliance.

The Contractor shall review currently available data and assess future needs under an integrated distribution system. The Contractor shall review all databases and data collection systems currently in use at the Grantee's facilities and identify any redundant processes.

*Subtask 1.3: Conduct a Training Needs Assessment:* As part of this subtask, the Contractor shall conduct a training needs assessment (TNA) of training and capacity building needs at all levels of the Grantee's operations. These levels shall include from upper management all the way to linemen and customer service personnel. In addition, the TNA shall focus on all business processes including the current human resource management at the Grantee's facilities and document the full range of training and capacity building requirements in various functional areas of the Grantee’s operations. Based on this assessment the Contractor shall develop specific recommendations for the type of training needed to improve the Grantee's management and operations. The list of training activities documented by the Contractor shall include training activities that could be continued by the Grantee beyond this TA and the specific training to be provided as part of this TA under Task 2.

*Subtask 1.4: Develop and Finalize the Inception Report and Work Plan:* As part of this subtask and based on the previous subtasks, the Contractor shall develop an Inception Report for completing the Terms of Reference, incorporate any comments from the Grantee, and finalize the Work Plan. Specifically, the Inception Report shall include, any clarifications agreed to during the meetings, a list of the sites visited and key findings, a list of meetings held and summary of discussions, a detailed schedule of activities under the remainder of the TA, a list of data requirements, and a finalized Work Plan including proposed field trips under the various tasks. This Work Plan shall be the guiding document for the completion of the TA and submission of all deliverables.

*Task 1 Deliverable:* The Contractor shall prepare a report including all work performed under Task 1. The Task 1 Deliverable shall be included in the Final Report.

**Task 2: Technical Assessment: Conduct a High Level Assessment of the Grantee's Distribution Management and Business Plan and Identify Gaps and Requirements**

*Subtask 2.1: Conduct a High Level Assessment of the Grantee's Business Management and Operations:* The Contractor shall closely work with the Grantee's senior managers to conduct an analysis of the business operations and business processes currently in use at the Grantee's facilities. This review shall include an assessment of business functions, information transfer and communication, decision-making process, human resource management, business planning, and investment programming. This review shall also include a review of the business plan completed by the Grantee in September 2012. The Contractor shall identify key performance indicators (KPIs), identify their baselines, and document the findings and gaps as compared to international best practices for distribution business management.

*Subtask 2.2: Conduct a Gap Analysis:* Building on the work conducted under Task 1 and Subtask 2.1, the Contractor shall define and describe the gaps in the current distribution management systems at the Grantee's facilities. These gaps shall include all factors and issues that stand between the present state of the Grantee's distribution management and operations and a technologically mature distribution operating company. The factors and issues covered in the Contractor's gap analysis shall include, but not be limited to, the following:

- Gaps in management functions and processes
- Gaps in current operational process and work flows
- Gaps in data availability and data quality
- Gaps in quality performance data that can be used to manage business processes
- Gaps assessment in all technical and IT systems for network management; asset management; metering, billing, and collections; customer relations management; outage management; and quality of supply and service
- Gaps in human resource management, capacity building, and function training and skills development

In addition, the Contractor shall compile quantitative data and potential KPIs to document the Grantee's current performance in the key operational areas reviewed by the Contractor. The Contractor shall also establish performance targets for the Grantee for a five-year period.

Based on the activities conducted above, the Contractor shall prepare a gap analysis for each of the distribution management functions and processes. In addition, the Contractor shall advise the Grantee on improvements to the Grantee's Business Plan and on the optimum balance between in-house functions and functions that can be outsourced in order to improve the efficiency of the Grantee's operations.

*Subtask 2.3: Develop Recommendations to Address the Identified Gaps:* Based on the gap analysis, the Contractor shall develop a set of detailed written recommendations for the Grantee that adhere to industry proven practices and that would enhance the Grantee's distribution system management and operations. Specifically, the Contractor shall provide detailed recommendations to the Grantee in the following areas:

- Specific recommendations to revise the Grantee's recently completed Business Plan
- Strengthening internal business processes and outsourcing certain business functions
- Strengthening collections while reducing losses in order to improve the financial performance of the Grantee
- Implementation of IT systems to improve information management, network control, and operations and quality of supply and service to consumers
- Improving regulatory compliance and ability to develop tariffs reflective of cost of service
- Improving human resource management, including a capacity building and training program for all levels of the Grantee's operations

The Contractor shall identify KPIs for the operational areas under review, identify the baselines, and propose annual performance targets for the timeframe of the business plan. If there are data gaps or significant problems with data quality, the Contractor shall develop recommendations on ways to improve data quality and availability in order to ensure accountability for results and objective monitoring of the Grantee's performance.

*Subtask 2.4: Provide Training to Grantee Managers and Technical Personnel:* Based on the training needs identified in Task 1 and gaps identified under Task 2, the Contractor, in consultation with the Grantee, shall select two high priority capacity building and training subjects from the TNA developed under Task 1. The Contractor shall develop and deliver two one-week training programs to Grantee personnel in these two priority areas selected by the Grantee. Potential areas of training may include methods to mitigate high distribution losses and poor collections. The training program shall include the following:

- A detailed definition of the subject areas and training contents
- A detailed training book with a day-by-day agenda for in-class course delivery
- Lab exercises and site visits developed in consultation with the Grantee to integrate field work with in-class training
- At least two case studies of other utilities in the United States to demonstrate the applicability of the recommended technologies and systems to the Grantee's distribution operations
- Frequent "Question and Answer " sessions to ensure comprehension of the subject matter by the participants
- A training course evaluation survey at the end of each five-day course

In addition to the two five-day courses, the Contractor shall provide on-the-job training to Grantee managers and engineers during all field missions, by working side-by-side with them and involving them in all site visits and simulation exercises. This on-the-job training shall

include work sessions with the Grantee personnel on the specific analyses included in the remainder of the tasks in the Study.

*Task 2 Deliverable:* The Contractor shall prepare a report including all work performed under Task 2. The Task 2 Deliverable shall be included in the Final Report.

### **Task 3: Develop a Five-Year Business Plan and an Investment Program for the Grantee**

Based on the requirements developed under Task 2 to address the gaps in the Grantee's distribution system and management practices and the overall goals and objectives of the Grantee, the Contractor shall develop a five-year business plan for the Grantee (Business Plan). The Business Plan shall include a discussion of the overall goals and objectives of the Grantee and the activities required to achieve those goals. In addition, the Contractor shall develop detailed cost estimates for various equipment, hardware, software, licenses, and training needed for the next stage program implementation. These cost estimates will be at the planning level rather than at the feasibility or design level.

Once all of the cost estimates have been developed, the Contractor shall develop a draft Five-Year Investment Plan (Investment Plan) for the Grantee which shall be included as part of the Business Plan. The Investment Plan shall include the following:

- Specific requirements and costs of systems, technology, and equipment needed for implementing the recommendations developed in Task 2
- Capital cost estimates, operations and maintenance costs, and capacity building and training costs
- A five-year schedule of investments

Based on comments from the Grantee and discussions with various donors, especially the African Development Bank, Millennium Challenge Corporation (MCC), the World Bank and other bilateral donors active in Ghana, the Contractor shall finalize the Business Plan. The Contractor shall prepare an actionable Investment Plan that will include a detailed strategy for the implementation of the plan. In consultation with the Grantee and key donors, the Contractor shall organize the investments into two phases. Phase I shall focus on the highest priority investments (two years), and Phase II shall include investment requirements for the following three years. This approach will help the Grantee in the internal budgeting process and seeking financing for the needed investments.

This report shall include the following:

- A Five-Year Investment Plan
- Prioritization of the investment in Phase I and Phase II with implementation procedures
- KPIs, their baseline, and annual targets aligned with the Business Plan, approaches to addressing data gaps and data quality, and annual performance monitoring of the Grantee

*Task 3 Deliverable:* The Contractor shall prepare a report including all work performed under Task 3. The Task 3 Deliverable shall be included in the Final Report.

#### **Task 4: Conduct a Financial and Economic Analysis of the Investments Proposed in the Five Year Investment Plan**

Based on the total investment requirements for Phase I and Phase II and life-cycle cost analysis of equipment and systems, the Contractor shall conduct detailed economic and financial analyses of the proposed investments using an internationally acceptable methodology for such analyses. The Contractor's financial analyses of the projects shall be based on a standard methodology used by donors, such as the World Bank, African Development Bank, MCC, and investors for appraising investment projects. The Contractor shall calculate both the economic and financial internal rates of return (EIRR and FIRR) for the recommended investments under a variety of different assumptions such as different interest rates, depreciation, licensing fees, import duties, etc.

In addition, the Contractor shall conduct a sensitivity analysis of the return on investment (ROI) for two-to-three practical financial packages for financing the investments. The Contractor's sensitivity analysis shall account for the cost recovery indicators based on different assumptions for key project variables, such as electricity tariffs, sales volumes, capital and operating cost estimates, and interest rates and investment requirements.

In addition to the capital costs, the Contractor shall provide an estimate of projected operating expenses, including a detailed breakdown of the general, administrative, operating, and maintenance costs for the Project. As part of the financial and economic analysis, the Contractor shall take into consideration the escalation of the costs over a two-to-five year period.

The Contractor shall estimate the projected savings in Ghana's distribution sector resulting from the implementation of the projects included in the Investment Plan. In addition, The Contractor shall develop a cash balance *pro forma* that presents the net cash savings from the proposed investments determined by netting revenue against costs.

The Contractor shall prepare a financial analysis and model of the Project, considering alternative methods and sources of financing, including grants and concessionary financing, and debt. The financial model shall be a tool for defining the terms and conditions of the financing structure and testing the volatility of the Project's ability to service its debt.

Following discussion with the Grantee, the Contractor shall develop an "optimum," "minimum," and "most likely" economic/financial scenario to develop financial documentation that may be used by the Grantee for presentation to its financial officials. This documentation shall be included in the Final Report.

The Contractor shall rank the investments in terms of their financial viability and likely investor interest.

*Task 4 Deliverable:* The Contractor shall prepare a report including all work performed under Task 4. The Task 4 Deliverable shall be included in the Final Report.

### **Task 5: Develop a Blue Print for Financing the Investments Needed in Phase I and Phase II**

The Contractor shall develop a blue print for financing the investments required under the Five-Year Investment Plan. Specifically, the Contractor shall identify and analyze the following potential funding sources for financing the investments recommended in both Phase I and Phase II:

- Internal funds from the Grantee's resources or government budget
- Combination of internal budget funds and development financing from International Financial Institutions
- Combination of the above and export credit financing from the U.S. Export-Import Bank
- Blended financing from debt and equity, from a variety of donors
- Potential grant funding from MCC and other U.S. government donor agencies

*Task 5 Deliverable:* The Contractor shall prepare a report including all work performed under Task 5. The Task 5 Deliverable shall be included in the Final Report.

### **Task 6: Conduct a Review of Regulatory Issues Related to the Investment Plan**

The Contractor shall conduct an analysis of the anticipated Ghanaian laws, standards, and institutions, which could impact the Project's implementation. In addition, the Contractor shall identify and assess any regulatory barriers that may impede the development, financing, and implementation of the projects recommended in the Investment Plan in the Grantee's distribution operations in Ghana.

Specifically, the Contractor shall analyze all regulatory issues that will impact the implementation of the proposed projects in the Investment Plan. The Contractor's analysis shall include all pertinent documents that deal with import taxes, duties and fees, corporate and personal income taxes, and property and other taxes related to the implementation of the Project. The Contractor's analysis shall also include all permitting requirements, foreign participation regulations, regulations that impact environmental requirements, and any other regulatory issues that will have a significant impact on the Project, as well as reporting on the quality of service and supply standards required by the regulator.

The Contractor shall recommend remedial actions to mitigate any regulatory barriers. In addition, the Contractor shall recommend actions to comply with all regulatory requirements.

The Contractor shall deliver a stand-alone report on the regulatory assessment related to implementing the recommended distribution projects both in the immediate time frame (Phase I) and in the medium- to long-term projects (Phase II). The Contractor shall share

these findings of this task with all relevant Ghanaian stakeholders including the Energy Commission of Ghana and the Electricity Company of Ghana (ECG).

*Task 6 Deliverable:* The Contractor shall prepare a report including all work performed under Task 6. The Task 6 Deliverable shall be included in the Final Report.

### **Task 7: Conduct Preliminary Environmental and Social Impact Assessments**

The Contractor shall evaluate and report on the expected environmental impacts of the proposed Project with reference to local, national and international laws and regulations, including those of international finance institutions, such as the World Bank, the African Development Bank, the International Finance Corporation (IFC), MCC (MCC uses IFC standards), and private banks. The Contractor shall factor the results of this analysis in Task 1 and Task 2, so that any cost impacts can be captured for the economic and financial analysis.

The Contractor's review shall identify potential negative impacts, discuss the extent to which they can be mitigated, and develop plans for a full environmental impact assessment if and when the Project moves forward to the implementation stage. The Contractor's review shall include the identification of the steps that will need to be undertaken by the project sponsor subsequent to the TA's completion and prior to project implementation.

In addition, the Contractor shall conduct an analysis of the likely social impacts of the proposed distribution projects. Specifically, the Contractor shall estimate the following types of impacts:

- Impact on social changes as a result of electricity access such as rural-urban trade and integration, impact on the quality of education and health services, etc.
- Impact on any local economic activity, such as the creation of local small businesses and income generation
- Any other impacts in social behavior and social discourse
- Impact on safety and security

*Task 7 Deliverable:* The Contractor shall prepare a report including all work performed under Task 7. The Task 7 Deliverable shall be included in the Final Report.

### **Task 8: Conduct an Analysis of the Key Host Country Development Impacts**

The Contractor shall conduct a development impact assessment of the Project. The purpose of the development impact assessment is to provide the Project's decision makers and interested parties with a broader view of the Project's potential effects on Ghana. The development impact assessment shall identify the anticipated impacts of the Project in the following categories:

Infrastructure: The Contractor shall identify the anticipated infrastructure impacts of the Project, giving a brief synopsis and concrete examples of infrastructure impacts. Examples of infrastructure impacts related to implementation of the Project may include the installation of smart meters, as well as associated communication infrastructure and other related hardware and software systems. The Contractor shall provide specific information about the anticipated infrastructure impacts of the Project, such as the anticipated number of equipment to be installed, details regarding anticipated improvements in the Grantee's communication infrastructure and other related hardware and software systems, and the impact of the Project on the Grantee's existing and planned electricity distribution systems.

Human Capacity Building: The Contractor shall identify the anticipated number and types of local jobs that would be created or retained as a result of the Project. The Contractor shall also identify the number of local people who would receive training and the types of training programs required to implement and sustain the Project. The Contractor shall not include training performed under these Terms of Reference in the development impact assessment.

Technology Transfer and Productivity Enhancement: The Contractor shall identify the anticipated advanced technologies that would be utilized for the Project. The Contractor shall also identify anticipated efficiencies that would be gained as a result of the Project. Examples of efficiencies related to implementation of the Project may include higher output per resource use, lower costs, or other common measures of efficiency used in the electricity distribution industry.

Market Oriented Reforms: The Contractor shall provide a description of any regulations, laws, standards, or institutional changes that are recommended pursuant to these Terms of Reference and the effect they would have if implemented.

Other: The Contractor shall identify any other anticipated development impacts or benefits that would result from the Project, such as improved financial revenue flows to the Grantee and other stakeholders, improvements in Ghana's energy security, reduced emissions of greenhouse gases and other harmful pollutants, positive spin-off effects on other economic sectors, etc.

*Task 8 Deliverable*: The Contractor shall prepare a report including all work performed under Task 8. The Task 8 Deliverable shall be included in the Final Report.

## **Task 9: Develop an Implementation Plan for the Investment Plan**

Based on the activities conducted under Tasks 1 through 8 and specifically the gaps identified in the Grantee's distribution system and management practices, the Contractor shall develop a detailed five-year implementation plan and budget (Implementation Plan) for the projects included in the Investment Plan, based on the final agreed-upon distribution projects and capacity building and training requirements as recommended by the Contractor and adopted by the Grantee. The Contractor's Implementation Plan shall provide the Grantee with a detailed description of the gaps and the options to mitigate each of them, coupled with a cost/benefit breakdown for each option. The Implementation Plan shall also identify key

performance indicators, identify their baselines, and propose annual targets that align with regulatory and business plan targets. If there are data gaps or significant problems with data quality, the Contractor shall identify recommendations on how to improve data quality and availability in order to ensure accountability for results and objective monitoring of performance at the Grantee.

The five-year planning horizon is recommended because it is customary in Ghana for all government departments and state enterprises to develop five-year plans for budgeting purposes. The Contractor shall make a clear distinction for the high priority investments planned during Phase I (two-to-three years) and those in Phase II (medium-to-long term).

The Contractor shall provide the Grantee with the following items which are relevant to the Implementation Plan:

- A recommended schedule for Project implementation, including recommendations for phasing, milestones, and prioritization of investments
- An outline of all the steps the Grantee will need to take subsequent to the TA's completion and prior to project implementation, such as:
  - Environmental and social impact assessments that comply with local environmental and social requirements and those of multilateral lending agencies such as the World Bank and the African Development Bank
  - Licensing, permitting, and other relevant legal and regulatory requirements
  - Financial arrangements
  - Procurements of goods and services
  - Systems integration
  - Operations and maintenance
  - Short- and long-term training requirements
  - An assessment of how the implementation of the Project will impact the Grantee's operations
  - Scope of work including training requirements
  - Annual budget requirement
  - Cost/benefit analysis
  - Technical and training needs to implement each change
  - An overall change management plan to implement the system upgrades

*Task 9 Deliverable:* The Contractor shall prepare a report including all work performed under Task 9. The Task 9 Deliverable shall be included in the Final Report.

### **Task 10: Conduct an Assessment of U.S. Sources of Supply**

While aiming at the optimum specifications and characteristics of the Project, the Contractor shall conduct an assessment of the availability of potential U.S. sources of supply of equipment, systems, and services required for the implementation of the Project, as recommended in the TA. For each source identified, the Contractor shall provide the contact

name and titles and all contact information including telephone number, fax number, physical address, and e-mail address.

*Task 10 Deliverable:* The Contractor shall prepare a report including all work performed under Task 10. The Task 10 Deliverable shall be included in the Final Report.

### **Task 11: Final Report**

The Contractor shall prepare and deliver to the Grantee and USTDA a substantive and comprehensive final report of all work performed under these Terms of Reference (“Final Report”). The Final Report shall be organized according to the above tasks, and shall include all deliverables and documents that have been provided to the Grantee. The Final Report shall be prepared in accordance with Clause J of Annex II of the Grant Agreement.

## **ANNEX 6**



## USTDA-Funded Feasibility Study, Technical Assistance, or Training Grant

### U.S. Firm Information Form

This form is designed to enable the U.S. Trade and Development Agency ("USTDA") to obtain information about entities and individuals proposed for participation in USTDA-funded activities. Information in this form is used to conduct screening of entities and individuals to ensure compliance with legislative and executive branch prohibitions on providing support or resources to, or engaging in transactions with, certain individuals or entities with which USTDA must comply.

USTDA Activity Number *[To be completed by USTDA]*

Activity Type <i>[To be completed by USTDA]</i>	Feasibility Study	Technical Assistance	Other (specify)
---	-------------------	----------------------	-----------------

Activity Title *[To be completed by USTDA]*

Full Legal Name of U.S. Firm

Business Address (street address only)

Telephone	Fax	Website
-----------	-----	---------

Year Established (include any predecessor company(s) and year(s) established, if appropriate).  
Please attach additional pages as necessary.

Please provide a list of directors and principal officers as detailed in Attachment A. Attached?  Yes  No

Type of Ownership	Publicly Traded Company
	Private Company
	Other (please specify)

If Private Company or Other (if applicable), provide a list of shareholders and the percentage of their ownership. In addition, for each shareholder that owns 15% or more shares in U.S. Firm, please complete Attachment B.

Is the U.S. Firm a wholly-owned or partially owned subsidiary?	Yes <input type="checkbox"/> No <input type="checkbox"/>
--	--

If so, please provide the name of the U.S. Firm's parent company(s). In addition, for any parent identified, please complete Attachment B.

Is the U.S. Firm proposing to subcontract some of the proposed work to another firm?	Yes <input type="checkbox"/> No <input type="checkbox"/>
--	--

If yes, U.S. Firm shall complete Attachment C for each subcontractor. Attached?	Yes <input type="checkbox"/> Not applicable <input type="checkbox"/>
---	--

#### Project Manager

Name	Surname	
	Given Name	
Address		
Telephone		
Fax		
Email		

#### Negotiation Prerequisites

Discuss any current or anticipated commitments which may impact the ability of the U.S. Firm or its subcontractors to complete the Activity as proposed and reflect such impact within the project schedule.	
--	--

Identify any specific information which is needed from the Grantee before commencing negotiations.	
--	--

*U.S. Firm may attach additional sheets, as necessary.*

**U.S. Firm's Representations**

U.S. Firm shall certify to the following (or provide any explanation as to why any representation cannot be made):

1. U.S. Firm is a [check one]  Corporation  LLC  Partnership  Sole Proprietor  Other:   
 duly organized, validly existing and in good standing under the laws of the State of:   
 The U.S. Firm has all the requisite corporate power and authority to conduct its business as presently conducted, to submit this proposal, and if selected, to execute and deliver a contract to the Grantee for the performance of the USTDA Activity. The U.S. Firm is not debarred, suspended, or to the best of its knowledge or belief, proposed for debarment or ineligible for the award of contracts by any federal or state governmental agency or authority.
2. The U.S. Firm has included herewith, a copy of its Articles of Incorporation (or equivalent charter or document issued by a designated authority in accordance with applicable laws that provides information and authentication regarding the legal status of an entity) and a Certificate of Good Standing (or equivalent document) issued within 1 month of the date of signature below by the State of:   
 The U.S. Firm commits to notify USTDA and the Grantee if it becomes aware of any change in its status in the state in which it is incorporated. USTDA retains the right to request an updated certificate of good standing.
3. Neither the U.S. Firm nor any of its principal officers have, within the ten-year period preceding the submission of this proposal, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a federal, state or local government contract or subcontract; violation of federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, violating federal or state criminal tax laws, or receiving stolen property.
4. Neither the U.S. Firm, nor any of its principal officers, is presently indicted for, or otherwise criminally or civilly charged with, commission of any of the offenses enumerated in paragraph 3 above.
5. There are no federal or state tax liens pending against the assets, property or business of the U.S. Firm. The U.S. Firm, has not, within the three-year period preceding the submission of this proposal, been notified of any delinquent federal or state taxes in an amount that exceeds US\$3,000 for which the liability remains unsatisfied. Taxes are considered delinquent if (a) the tax liability has been fully determined, with no pending administrative or judicial appeals; and (b) a taxpayer has failed to pay the tax liability when full payment is due and required.
6. The U.S. Firm has not commenced a voluntary case or other proceeding seeking liquidation, reorganization or other relief with respect to itself of its debts under any bankruptcy, insolvency or other similar law. The U.S. Firm has not had filed against it an involuntary petition under any bankruptcy, insolvency or similar law.
7. The U.S. Firm certifies that it complies with USTDA Nationality, Source, and Origin Requirements and shall continue to comply with such requirements throughout the duration of the USTDA-funded activity. The U.S. Firm commits to notify USTDA and the Grantee if it becomes aware of any change which might affect U.S. Firm's ability to meet the USTDA Nationality, Source, and Origin Requirements.

*The U.S. Firm shall notify USTDA if any of the representations are no longer true and correct.*

U.S. Firm certifies that the information provided in this form is true and correct. U.S. Firm understands and agrees that the U.S. Government may rely on the accuracy of this information in processing a request to participate in a USTDA-funded activity. If at any time USTDA has reason to believe that any person or entity has willfully and knowingly provided incorrect information or made false statements, USTDA may take action under applicable law. The undersigned represents and warrants that he/she has the requisite power and authority to sign on behalf of the U.S. Firm.

Name	<input type="text"/>	Signature	<input type="text"/>
Title	<input type="text"/>		
Organization	<input type="text"/>	Date	<input type="text"/>





**ATTACHMENT B**

**USTDA-Funded Feasibility Study, Technical Assistance, or Training Grant**

**U.S. Firm Information Form – Shareholder(s) and Parent Company(s)**

If applicable, U.S. Firm provided a list of shareholders and the percentage of their ownership. This form shall be completed for each shareholder that owns 15% or more shares in U.S. Firm, as well as any parent corporation of the U.S. Firm ("Shareholder"). In addition, this form shall be completed for each shareholder identified in Attachment B that owns 15% or more shares in any Shareholder, as well as any parent identified in Attachment B.

USTDA Activity Number <i>[To be completed by USTDA]</i>	
---	--

Activity Title <i>[To be completed by USTDA]</i>	
--	--

Full Legal Name of U.S. Firm	
------------------------------	--

Full Legal Name of Shareholder	
--------------------------------	--

Business Address of Shareholder (street address only)	
---	--

Telephone number		Fax Number	
------------------	--	------------	--

Year Established (include any predecessor company(s) and year(s) established, if appropriate). Please attach additional pages as necessary.	
---	--

Country of Shareholder's Principal Place of Business	
--	--

Please provide a list of directors and principal officers as detailed in Attachment A. Attached?	Yes
--	-----

Type of Ownership	<input type="checkbox"/> Publicly Traded Company
	<input type="checkbox"/> Private Company
	<input type="checkbox"/> Other

If applicable, provide a list of shareholders and the percentage of their ownership. In addition, for each shareholder that owns 15% or more shares in Shareholder, please complete Attachment B.	
---	--

Is the Shareholder a wholly-owned or partially owned subsidiary?	<input type="checkbox"/> Yes
	<input type="checkbox"/> No

If so, please provide the name of the Shareholder's parent(s). In addition, for any parent identified, please complete Attachment B.	
--	--

*Shareholder may attach additional sheets, as necessary.*



**ATTACHMENT C**

**USTDA-Funded Feasibility Study, Technical Assistance, or Training Grant**

**Subcontractor Information Form**

This form is designed to enable the U.S. Trade and Development Agency ("USTDA") to obtain information about entities and individuals proposed for participation in USTDA-funded activities. Information in this form is used to conduct screening of entities and individuals to ensure compliance with legislative and executive branch prohibitions on providing support or resources to, or engaging in transactions with, certain individuals or entities with which USTDA must comply.

USTDA Activity Number <i>[To be completed by USTDA]</i>	
---	--

Activity Title <i>[To be completed by USTDA]</i>	
--	--

Full Legal Name of Prime Contractor U.S. Firm ("U.S. Firm")	
---	--

Full Legal Name of Subcontractor	
----------------------------------	--

Business Address of Subcontractor (street address only)	
---	--

Telephone Number	
------------------	--

Fax Number	
------------	--

Year Established (include any predecessor company(s) and year(s) established, if appropriate). Please attach additional pages as necessary.	
---	--

**Subcontractor Point of Contact**

Name	Surname	
	Given Name	

Address	
---------	--

Telephone	
-----------	--

Fax	
-----	--

Email	
-------	--

**Subcontractor's Representations**

Subcontractor shall provide the following (or any explanation as to why any representation cannot be made), made as of the date of the proposal:

1. Subcontractor is a <i>[check one]</i>	<input type="checkbox"/> Corporation	<input type="checkbox"/> LLC	<input type="checkbox"/> Partnership	<input type="checkbox"/> Sole Proprietor	<input type="checkbox"/> Other
--	--------------------------------------	------------------------------	--------------------------------------	--	--------------------------------

duly organized, validly existing and in good standing under the laws of: \_\_\_\_\_ .

The subcontractor has all the requisite corporate power and authority to conduct its business as presently conducted, to participate in this proposal, and if the U.S. Firm is selected, to execute and deliver a subcontract to the U.S. Firm for the performance of the USTDA Activity and to perform the USTDA Activity. The subcontractor is not debarred, suspended, or to the best of its knowledge or belief, proposed for debarment or ineligible for the award of contracts by any federal or state governmental agency or authority.

2. Neither the subcontractor nor any of its principal officers have, within the ten-year period preceding the submission of the Offeror's proposal, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a federal, state or local government contract or subcontract; violation of federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, violating federal or state criminal tax laws, or receiving stolen property.

3. Neither the subcontractor, nor any of its principal officers, is presently indicted for, or otherwise criminally or civilly charged with, commission of any of the offenses enumerated in paragraph 2 above.

4. There are no federal or state tax liens pending against the assets, property or business of the subcontractor. The subcontractor, has not, within the three-year period preceding this RFP, been notified of any delinquent federal or state taxes in an amount that exceeds \$3,000 for which the liability remains unsatisfied. Taxes are considered delinquent if (a) the tax liability has been fully determined, with no pending administrative or judicial appeals; and (b) a taxpayer has failed to pay the tax liability when full payment is due and required.

5. The subcontractor has not commenced a voluntary case or other proceeding seeking liquidation, reorganization or other relief with respect to itself or its debts under any bankruptcy, insolvency or other similar law. The subcontractor has not had filed against it an involuntary petition under any bankruptcy, insolvency or similar law.

6. The Subcontractor certifies that it complies with the USTDA Nationality, Source, and Origin Requirements and shall continue to comply with such requirements throughout the duration of the USTDA-funded activity. The Subcontractor commits to notify USTDA, the Contractor, and the Grantee if it becomes aware of any change which might affect U.S. Firm's ability to meet the USTDA Nationality, Source, and Origin Requirements.

*The selected Subcontractor shall notify the U.S. Firm, Grantee and USTDA if any of the representations included in its proposal are no longer true and correct.*

Subcontractor certifies that the information provided in this form is true and correct. Subcontractor understands and agrees that the U.S. Government may rely on the accuracy of this information in processing a request to participate in a USTDA-funded activity. If at any time USTDA has reason to believe that any person or entity has willfully and knowingly provided incorrect information or made false statements, USTDA may take action under applicable law. The undersigned represents and warrants that he/she has the requisite power and authority to sign on behalf of the Subcontractor.

Name		Signature	
Title			
Organization		Date	