

**REQUEST FOR PROPOSALS**

**FEASIBILITY STUDY FOR THE**

**MERALCO POWER DISTRIBUTION MODERNIZATION PILOT PROJECT**

Submission Deadline: **4:00PM**

**LOCAL TIME**

**TUESDAY, APRIL 8, 2014**

Submission Place: Mr. Joseph Allan C. Baltazar  
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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

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## Section 1: INTRODUCTION

The U.S. Trade and Development Agency (USTDA) has provided a grant in the amount of US\$442,940 to Manila Electric Company or MERALCO (the “Grantee”) in accordance with a grant agreement dated January 22, 2014 (the “Grant Agreement”); Feasibility Study for MERALCO Power Distribution Modernization Pilot Project in Manila, Philippines. The Grant Agreement is attached at Annex 4 for reference. The Grantee is soliciting technical proposals from qualified U.S. firms to provide expert consulting services to perform the Feasibility Study.

### 1.1 BACKGROUND SUMMARY

USTDA funded a feasibility to help MERALCO determine key components needed to complete a pilot project and advance its system-wide Smart Grid implementation efforts. MERALCO has approved a Smart Grid Roadmap and allocated \$10.5 million for the pilot project, targeting installation of smart metering equipment for 10,000 existing customers, to help manage peak demand and set incentives for various consumption levels based on detailed data collected by the smart meters. The pilot would also address demand response to reduce high energy costs, minimize power loss, and define procedures for system-wide implementation of smart grid technologies. The detailed customer information would help reduce non-payment for services rendered, while providing flexibility in billing and electricity consumption, and assisting in electricity generation optimization by incorporating renewable resources in the technology mix. Portions of a background Desk Study is provided for reference in Annex 2.

### 1.2 OBJECTIVE

The purpose of the Feasibility Study is to assist MERALCO to develop technical specifications and associated implementation plan for a power distribution modernization pilot project, with key components including Advanced Metering Infrastructure (AMI), Demand Response (DR) programs, smart grid-focused Distribution Management System (DMS), and system interoperability standards. The Terms of Reference (TOR) for this Feasibility Study are attached as Annex 5. The Grantee, MERALCO, has advised that there is no prohibition on a company undertaking the USTDA-funded feasibility study and participating in implementation. A contractor who conducts the study can still participate in the implementation as long as the procurement process and requirements of MERALCO are complied with.

### 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\$442,940. **The USTDA grant of \$US442, 940 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\$442,940 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 MERALCO POWER DISTRIBUTION MODERNIZATION PILOT PROJECT.

### **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 DESK STUDY REPORT**

USTDA sponsored a Desk Study to address technical, financial, sociopolitical, 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 Feasibility Study.

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 Feasibility Study.

## **2.5 PROJECT FUNDING SOURCE**

The Feasibility Study will be funded under a grant from USTDA. The total amount of the grant is not to exceed US\$442,940.

## **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.

## **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 tender. 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:

Joseph Allan C. Baltazar  
Senior Assistant Vice President and Head Network Technology Strategy and Execution  
MERALCO  
3/F Technical Services Building  
Meralco Center, Ortigas Avenue  
Pasig City 0300 Philippines  
Tel: +63 2 6312222 Ext. 6482  
Fax: +63 2 6328538  
Email: [jacbaltazar@meralco.com.ph](mailto:jacbaltazar@meralco.com.ph)

**An Original and eight (8) copies of your proposal must be received at the above address no later than 4:00PM, on Tuesday, April 8, 2014.**

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 one hundred (100) 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 if such support is not provided by the Grantee; (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\$442,940, which is a fixed amount.

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

Each proposal must include the following:

- Transmittal Letter,
- 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 with 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 Feasibility Study. 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 Feasibility Study.

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 Feasibility Study.

### **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 Feasibility Study. 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, email address),
- 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 Feasibility Study as described in this RFP.

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

Individual proposals will be initially evaluated by a Procurement Selection Committee of representatives from the Grantee. The Committee will then conduct a final evaluation and completion of ranking of 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:

**Professional Experience (30%)** – Each bidder shall propose a project team that will be fully qualified to execute the entire scope of work of the study. The proposed staff should have qualifications and experience in engineering, design, technical analysis, operations planning and modeling, environmental assessments, as well as in-depth technical knowledge of smart metering infrastructure, including software and hardware for integration into existing systems. Experience with electric utilities would be beneficial. Qualified bidders will be expected to provide evidence of satisfactorily executing at least three (3) similar projects, with one project currently on-going or completed in the last 3 years. The reference projects (except for current or recently completed) should exhibit similar or larger size and complexity as the proposed one.

**International Experience (30%)** – Each bidder shall exhibit international experience and the capability to perform similar international feasibility studies. Qualified bidders will be expected to provide evidence of satisfactorily executing at least two (2) international

projects in the last 5 years. Reference international projects should exhibit similar or larger size and complexity as the proposed project.

Proposed Work Plan (40%) – Each bidder shall demonstrate an understanding of all the project tasks. Proposal efforts should be responsive to the requirements outlined in the Terms of Reference. The proposed Work Plan should be detailed, realistic, and manageable. Clear objectives should be achieved at the end of each and all tasks.

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

Price will not be a factor in contractor selection.

## **ANNEX 1**

## GRANTEE CONTACT PERSON

Joseph Allan C. Baltazar  
Senior Assistant Vice President and Head Network Technology Strategy and Execution  
MERALCO  
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Pasig City 0300 Philippines  
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Email: [jacbaltazar@meralco.com.ph](mailto:jacbaltazar@meralco.com.ph)

MERALCO Power Distribution Modernization Pilot Project

USTDA Activity No.: 2014-31005A

POC: Jennifer Van Renterghem, USTDA, 1000 Wilson Boulevard, Suite 1600, Arlington, VA 22209-3901, Tel: (703) 875-4357, Fax: (703) 875-4009, Email: [RFPQuestions@ustda.gov](mailto:RFPQuestions@ustda.gov). MERALCO Power Distribution Modernization Pilot Project. 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 develop a feasibility study for a power distribution modernization pilot project and associated implementation plan for MERALCO in Manila, Philippines.

### BRIEF PROJECT BACKGROUND AND DESCRIPTION OF GRANTEE

MERALCO requested a USTDA-funded feasibility to determine key components needed to complete a pilot project and advance MERALCO system-wide Smart Grid implementation efforts. MERALCO has allocated \$10.5 million for the pilot project, targeting installation of smart metering equipment for 10,000 existing customers, to help manage peak demand and set incentives for various consumption levels based on detailed data collected by the smart meters. The pilot would also address demand response to reduce high energy costs, minimize power loss, and define procedures for system-wide implementation of smart grid technologies. The detailed customer information would help reduce non-payment for services rendered, while providing flexibility in billing and electricity consumption, and assisting in electricity generation optimization by incorporating renewable resources in the technology mix.

MERALCO is the largest distribution utility in the Philippines, covering a 3,605 square mile footprint, serving 25 percent of the population, and experiencing over seven percent growth in electricity sales and over three percent growth in customer base. MERALCO holds a 25-year congressional franchise license (*June 28, 2003 – June 28, 2028*) to construct, operate and maintain the electricity distribution system in 34 cities and 77 municipalities, generating 75 percent of Luzon's and 55 percent of the overall Philippines' electricity sales. MERALCO's distribution and sub-transmission network has a circuit length of approximately 1,060 miles, 115 substations, and 220 substation transformer banks. About 50

percent of Philippine Gross Domestic Product (GDP) and 60 percent of manufacturing output is generated within MERALCO franchise area to serve residential, commercial, industrial and street-lighting customers.

### BRIEF DESCRIPTION OF STUDY COMPONENTS

The Feasibility Study will help MERALCO develop the technical specifications and associated implementation plan for a power distribution modernization pilot project, with key components including Advanced Metering Infrastructure (AMI), Demand Response (DR) programs, smart grid-focused Distribution Management Systems (DMS), and system interoperability standards. The pilot would address important system distribution issues related to demand response in order to reduce user demands, balance its grid, reduce high energy costs, develop and implement DR as a part of its DMS, settle contracts with participating customers, and upgrade and integrate control systems and communications infrastructure to DR operations. The Study would include a review of MERALCO's medium and long-term modernization objectives, preparation of pilot scope, cost estimate, and procurement documents and bid specifications, as well as assessment of environmental and development impact.

MERALCO notes the following with regard to the Feasibility Study:

- In the document, Embedded Generation, Renewable Generation, Microgrids and Distributed Energy Resources loosely refer to the same thing.
- As Demand Response will be utilized as a mechanism to reduce ultra-high Wholesale Electricity Spot Market (WESM) prices, the U.S. Firm will note:
  - The Integrated Demand Response (DR) and Embedded Generation system will have the capability to participate in the Energy and Reserve markets of WESM.
  - If applicable, the business case will include benefits from (a) reducing ultra-high WESM prices, (b) deferment of power generation, transmission & distribution facilities and c) Reduction of Ancillary & Congestion Cost.
- Demand Response will consider embedded generation and will employ the following:
  - Interruption of load or control of thermostats of customers.
  - Use of on-site generation (PV, Wind Turbine, Diesel, etc.)
  - Use of on-site energy storage (Battery, Electric Vehicle, etc.)
- The inverters will have the necessary features to mitigate the negative power quality impact of renewable generation and to provide support to the distribution grid.
- The Integrated Demand Response and Embedded Generation system may be a separate system but linked to the DMS. Part of the required technical specifications includes the necessary capabilities of the Fault Location Isolation & Restoration (FLIR) and Volt-VAR Optimization (VVO) of DMS to consider Demand Response and Embedded Generation.

The U.S. firm selected will be paid in U.S. dollars from a \$442,940 grant to the Grantee from the U.S. Trade and Development Agency (USTDA).

MERALCO has advised that there is no prohibition on a company undertaking the USTDA-funded feasibility study and participating in implementation. A contractor who conducts the study can still participate in the implementation as long as the procurement process and requirements of MERALCO are complied with.

A detailed Request for Proposals (RFP), which includes requirements for the Proposal, the Terms of Reference, and portions of a background desk study 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 4:00PM, Tuesday, April 8, 2014 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**

## **Desk Study Summary**

The U.S. Trade and Development Agency (USTDA) awarded Constant Group LLC (“CG” or “Consultant”) a contract for the Desk Study (DS) Review for Philippines – MERALCO Power Distribution Modernization. The Consultant was provided with the summary scope document for the distribution project.

According to the Desk Study Terms of Reference, the Consultant was required to prepare the review of project that is in initial development stage and could benefit from USTDA involvement.

The Consultant is of the opinion that the proposed project is consistent with the following specific USTDA considerations:

- Project meets national and local government development priority considerations for the host country;
- Project has adequate U.S. export potential;
- Project will likely be able to acquire financing;
- Project has some degree of foreign competitive element that is to be addressed by USTDA funding of the study; and
- Project sponsor is willing to allow U.S. companies to compete for contracts during project implementation.

The proposed project will have numerous benefits, including but not limited to: (a) reducing power prices; (b) reducing system peak demand; (c) decreasing harmful emissions; (d) increasing system reliability; (e) incorporate renewable resources in the technology mix; and (f) benefit customers by providing flexibility in billing and electricity consumption. The following sections describe this proposed project in more detail.

### **Sector and Host Country**

#### **Sector Summary<sup>1</sup>**

The Philippines has modest indigenous energy resources, accounting for the total production of 24 million tonnes of oil equivalent (Mtoe) in 2010 and projected to expand to 31.6 Mtoe in 2035. One-third of these resources are fossil fuels—3.5 Mtoe of coal (mainly lignite), 3 Mtoe of natural gas and 0.9 Mtoe of crude oil. The Philippines’ installed electricity generating capacity stood at 16 GW in 2010, and is projected to increase to over 58 GW by 2035. Fossil fuels will continue to dominate the economy’s total power generation; coal thermal alone is expected to provide almost 70% of its electricity generation by 2035, followed by natural gas with a 16% share.

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<sup>1</sup> Based on APEC Energy Demand and Supply Outlook – 5th Edition, 2012

In view of the economy's abundant renewable resources, by 2035 more than 50% of its indigenous energy resources are expected to come from renewable energy, such as hydro and geothermal as well as other new and renewable energy (RE) sources. Other RE sources include biomass (like fuelwood and bagasse, the fiber left after juice has been squeezed from sugarcane stalks, etc.), which is mainly used in household and commercial applications. The Philippines benefits from its tropical maritime climate with its wind and solar sources of energy, and the economy is looking at the possibility of its first ocean energy facility by 2018.

Among the renewable energy sources, geothermal energy is expected to provide the biggest contribution over the next 25 years. The country's installed geothermal generating capacity of 1,966 MW in 2010 placed it as the second-largest geothermal producer in the world behind the United States. The passage of the Renewable Energy Act of 2008 (RE Act) provides the direction to harness and utilize its renewable energy. A firm commitment from the private sector, particularly on funding, will likely provide the economy with an additional capacity of 9.2 GW from geothermal, hydro, biomass, wind, solar and ocean sources by 2035.

In 2010, the electrification level of the Philippines at a household connection level was 68%; by 2017 that figure is envisioned to rise to 90%. Due to its geography, the country has a complex energy system. Major power grids are separated according to its three major islands, Luzon, Visayas and Mindanao. In the Luzon grid, more than half of its capacity is coal-fired; Visayas is home to the economy's vast geothermal resources; while more than 50% of the Mindanao grid's energy requirement is sourced from hydro. The interconnection of the three major grids is not expected in the near future. Smaller islands are interconnected to the major island grids to provide service to remote areas. Where it is not economical to connect a small island to a major grid, separate local systems are being established around small generating plants.

As embodied in the Electricity Power Industry Reform Act (EPIRA), the country's electricity supply industry has been restructured paving the way for the privatization of the state-owned National Power Corporation (NPC). The restructuring calls for the separation of the different components of the power sector namely, generation, transmission, distribution and supply. Transmission and distribution exhibit natural monopoly characteristics which make the regulation of them appropriate. The generation and retail sale of electricity, on the other hand, can be efficient in the competitive environment as a result of the reforms introduced by the EPIRA. The privatization of NPC involves the sale of the state-owned power generation and transmission assets (e.g. power plants and transmission facilities) to private investors.

While oil pricing is deregulated, electricity pricing is a regulated energy commodity. The price for electricity is set by the Energy Regulatory Commission (ERC). Alongside the implementation of the EPIRA is the unbundling of electricity rates. The individual charges for providing specific electric services to any end-user, for generation, transmission, distribution and supply, are identified and separated. The ERC determines the rate-setting methodology taking into account the relevant considerations that will enable a specific entity to operate viably, with the end view of providing a reasonable price for electricity. Part of the

EPIRA law is the birth of the Wholesale Electricity Spot Market (WESM) which serves as a venue where electricity made by power-producing companies is centrally coordinated and traded like any other commodity in a market of goods. After several months of trial operations, in June 2006 the WESM started commercial operations in the Luzon grid. The Visayas grid was integrated into the WESM and it commenced commercial operations in that grid in December 2010. The establishment of the WESM creates a level playing field for the trading of electricity among WESM participants; hence third parties are granted access to the power system. Although prices are still governed by commercial and market forces, customers may have the option to buy energy at a price lower than the regulated rate.

By virtue also of EPIRA, the energy sector through the Department of Energy (DOE) is mandated to formulate the Power Development Plan (PDP). The PDP outlines a strategic roadmap for the power sector to ensure and secure the delivery of a reliable and quality electricity supply in the short-term, medium-term and long-term planning periods.

In view of the Philippines' wide-ranging geographical situation, to fully connect the entire population to the national grid is a significant hurdle. Servicing the most remote and difficult to electrify rural areas will require significant resources; hence achieving a 100% electrification level over the outlook period remains a challenge for the economy. The government, through DOE and other private and government agencies, spearheads the development of various innovative service delivery mechanisms designed to increase access to electricity services. One of its efforts is the Expanded Rural Electrification Program which aims to at least provide some access to electricity for the marginalized and other off-grid areas. This will be done through decentralized energy systems such as battery charging stations (BCS), individual solar home systems, micro-hydro systems, and wind turbine energy systems.

The National Electrification Administration (NEA), an attached agency of the DOE, is the economy's prime mover in rural electrification and the DOE's arm in the implementation of the decentralized energy systems. NEA currently supervises 96 electric cooperatives by providing quality financial, institutional and technical services to franchise areas not covered by the Manila Electric Company, the economy's biggest privately-owned utility. Meanwhile, NPC remains as an economy-wide government-owned and controlled corporation, which performs the missionary electrification function through the Small Power Utilities Group (SPUG). SPUG is responsible for providing power generation and its associated power delivery systems in areas not connected to the transmission system.

### **Distribution System Details<sup>2</sup>**

The franchise area of MERALCO is a total of 9,337 square kilometers, covering 34 cities and 77 municipalities. This includes Metro Manila, industrial estates, and suburban and urban areas of the adjacent provinces. MERALCO accounts for nearly 75% of Luzon's and 55% of Philippine energy sales. About 50% of Philippine Gross Domestic Product (GDP) and 60% of Philippine manufacturing output is generated within the MERALCO franchise area. In 2012, the Peak Demand was 5,633MW and the System Loss stood at 7.04%.

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<sup>2</sup> Based on MERALCO Annual Report and data provided.

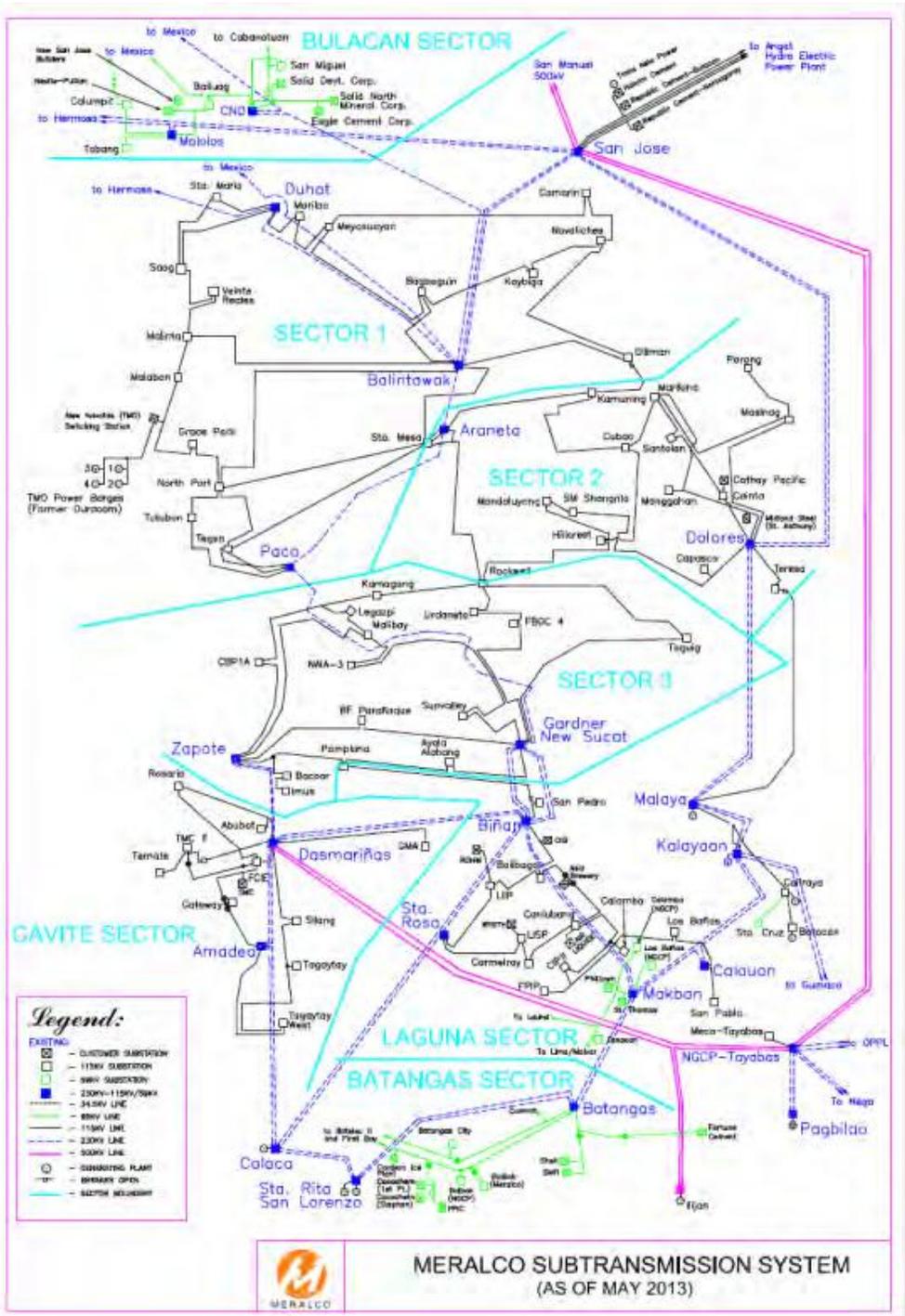
As of December 31, 2012, MERALCO's distribution and sub-transmission network had a circuit length totaling approximately 17,050 kilometers, with 115 substations. Total aggregate substation capacity of the sub-transmission and distribution network at that date was approximately 15,676 Mega-Volt-Ampere (MVA). MERALCO's primary distribution system consists of 850 circuits connected to the substations with transformers which convert electricity to the different voltage levels within the system. The Company's network carries electricity principally at 34.5 kV and 13.8 kV.

MERALCO owns 220 substation transformer banks with an aggregate capacity of approximately 15,676 MVA and 157,118 distribution transformers with an aggregate capacity of 12,907 MVA. High capacity power transformers are generally ground-mounted and are located at substations, while lower capacity distribution transformers are pole-mounted, pad-mounted or ground-mounted situated within customer-owned vaults or premises. Underground lines are sometimes used in commercial or exclusive residential areas, but represent less than 1% of the Company's primary distribution system.

Nearly all of MERALCO's power requirement is delivered to its franchise through National Grid Corporation of the Philippines (NGCP) facilities at various delivery points at voltages of 230 kV, 115 kV or 69 kV. From these delivery points, the electricity is further transmitted to MERALCO's sub-transmission system and converted down to primary distribution voltages of 34.5 kV and 13.8 kV through distribution substations. The secondary distribution system converts the power from the primary distribution voltages into 460 or 230 volts service voltages. Electricity is converted to lower voltages by means of transformers at different locations within the Company's sub-transmission and distribution systems.

Exhibit 1-1 below provides a layout of the MERALCO distribution network.

### Exhibit 1-1 – MERALCO Distribution Network



Source: MERALCO, 2013

MERALCO’s distribution substations are configured for a breaker-and-a-half scheme for the 115kV and 69kV systems. Each substation is initially developed as a ring bus scheme until a fifth termination, either a line or a bank, is added. The breaker-and-a-half configuration is implemented as the substation is fully developed in keeping with the increase in the load at risk.

A single bus scheme is adapted for the 34.5kV or 13.8kV busses with normally-open tie breakers between busses to allow load transfer during power transformer outage. At normal conditions, the loading of power transformers should not exceed 70% of its maximum rating to provide spare capacity for contingency purposes. Bus voltages are maintained within +- 5% of nominal voltage during normal condition and +- 10% during emergency condition.

MERALCO's customer base is divided into four categories: residential customers, commercial customers, industrial customers and street lighting customers. Residential customers are customers using electricity for all domestic and household purposes in a single family dwelling served under a single meter. Commercial customers are service establishments wherein the main economic activity is agriculture, construction, trading, transportation operation and administration, communication services, storage and warehousing, waterworks and supply, financial services, real estate, restaurants and hotel services, and other community social and personal services. Commercial customers also include parks, registered charitable institutions, government-owned hospitals, government-owned meter streetlight services for public streets and government-owned traffic lights. Industrial customers are establishments wherein the main economic activity is manufacturing and processing, mining and quarrying, electricity generation and distribution as well as gas and steam manufacturing. Streetlight customers are those with streetlight service consisting of company-owned luminaries mounted on existing distribution poles and billed under a flat rate schedule approved by the ERC.

No single customer group or industry dominates the Company's sales. Based on standard industry classifications and as measured by GWh sales, MERALCO's four largest customer groups are: electrical machinery, food and beverage manufacturing, rubber and plastics and non-metallic manufacturing. For the year ending December 31, 2012, these groups purchased 2,784 GWh, 1,787 GWh, 1,273 GWh and 770 GWh, respectively, out of total electricity sales of 32,771 GWh.

The following Exhibit 1-2 summarizes the customer count as of December 31, 2011 and 2012 and the corresponding electricity consumption per customer class for the years ended December 31, 2011 and 2012:

**Exhibit 1-2:**

<b>Customer Data Customer Class</b>	<b>No. of Customers (in thousands)</b>		<b>Electricity Sales (in GWh)</b>	
	<b>2011</b>	<b>2012</b>	<b>2011</b>	<b>2012</b>
Residential	4,580	4,735	9,344	9,779
Commercial	433	440	12,027	12,749
Industrial	10	10	9,080	10,111
Streetlights	4	4	141	132
<b>Total</b>	<b>5,027</b>	<b>5,189</b>	<b>30,592</b>	<b>32,771</b>

One of the major reasons this pilot project is requested by MERALCO is the extraordinary growth of electricity sales. This growth is primarily due to economic growth in business and increased use of home appliances (air conditioners, electric stoves, electric water heaters, and television sets) and a current electrification effort. The proposed pilot project is viewed as a tool for MERALCO to be more flexible in managing the peak and setting incentives for various consumption levels. This task is not achievable or enforceable without detailed customer information that can be collected with the proposed DR and smart meter system.

### **MERALCO's Capabilities**<sup>3</sup>

MERALCO is the largest distribution utility in the Philippines. It serves 25% of the Philippine population and has 9,337 km<sup>2</sup> footprint. The footprint:

- Accounts for 50% of Philippine Gross Domestic Product (GDP);
- Covers 60% of Philippine manufacturing output generated within the franchise area;
- Generates 75% of Luzon's and 55% of Philippine electricity sales; and,
- Spans the social, political, economic center of the Philippines.

The territory has very strong organic growth. The total population of Manila, as of August 1, 2007 (last official census), was 1,660,714 persons. This represents an increase of 79,632 persons over the total population of 1,581,082 persons in 2000. This increase translated to an annual population growth rate of 0.68 percent for the period 2000 to 2007.<sup>4</sup>

In 2012, electricity sales revenues were Php285.3 billion, equivalent to US\$6.8 billion. The market capitalization was Php293.7 billion, equivalent to US\$7.2 billion at the end of 2012. Some of the key distribution data is presented in the Exhibit 1-3 below.

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<sup>3</sup> Based on MERALCO 2012 Annual Report

<sup>4</sup> <http://www.census.gov.ph/content/positive-population-growth-rate-manila-results-2007-census-population>

### Exhibit 1-3 – Key Distribution Data

Meralco Electric Distribution Data	2012
<b>Count of Substations</b>	115
Delivery Point (230 kV)	8
Major (115 kV and 69 kV)	80
Distribution (34.5 kV Below)	27
<b>Substation Aggregate Capacity (MVA)</b>	15,676
<b>Circuit Length (km.)</b>	17,050
Distribution	16,213
Sub-transmission	837
<b>Count of Circuits</b>	850
Distribution	750
Sub-transmission	100
<b>Distribution Transformers in Service</b>	157,118
<b>Distribution Transformer Capacity (MVA)</b>	12,907
<b>Poles in Service</b>	723,239
<b>Meralco Peak Demand (MW)</b>	5,633

Source: MERALCO Annual Report 2012

At the end of 2012, MERALCO's distribution area had 115 installed substations with a combined capacity of 15,676 MVA.

MERALCO holds a congressional franchise under Republic Act or RA No. 9209 effective June 28, 2003. It grants MERALCO a 25-year franchise valid through June 28, 2028 to construct, operate, and maintain the electric distribution system in the cities and municipalities of Bulacan, Cavite, Metro Manila, and Rizal and certain cities, municipalities, and barangays in the provinces of Batangas, Laguna, Pampanga, and Quezon.

On October 20, 2008, the Energy Regulatory Commission (ERC) granted MERALCO a consolidated Certificate of Public Convenience and Necessity for the operation of electric service within its franchise coverage, effective until the end of MERALCO's congressional franchise. MERALCO is the largest power distribution utility (DU) in the Philippines.

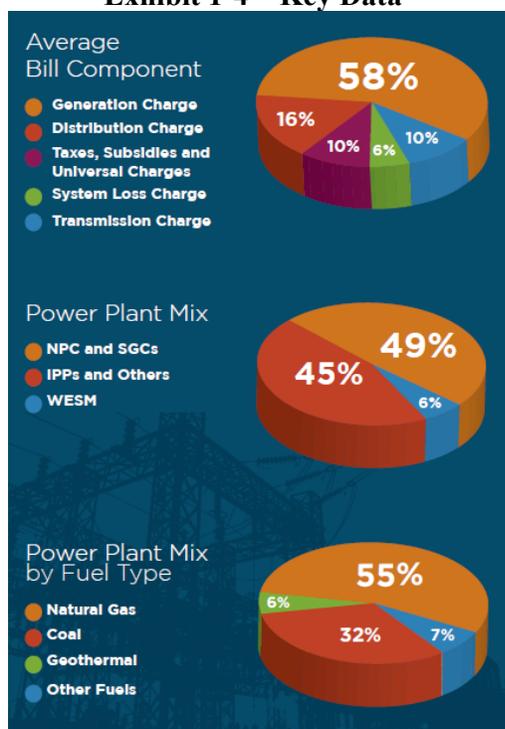
The power segment, primarily power distribution, consists of operations of MERALCO and its subsidiary, Clark Electric Distribution Corporation (CEDC). CEDC is registered with Clark Development Corporation (CDC) under RA No. 9400, Bases Conversion Development Act of 1992, as a Clark Special Economic Zone (CSEZ) enterprise, primarily engaged in owning, operating, and maintaining a power distribution system within CSEZ.

Separately, MERALCO organized a subsidiary for its re-entry into power generation through its wholly-owned subsidiary, MERALCO PowerGen Corporation (MGen), and another unit for its entry into retail electricity supply (RES). The MERALCO local RES, otherwise known as MPower, is a business unit within MERALCO.

Through several other subsidiaries, its other business segments provide engineering, construction and consulting services, bill collection services, energy management services and information systems and technology services. MERALCO is owned by three major shareholder groups and the public. As of December 31, 2012, Beacon Electric Asset Holdings, Inc. (Beacon Electric) owns 48.30% of the common shares. Beacon Electric is jointly owned by Metro Pacific Investments Corporation (Metro Pacific) and PLDT Communications and Energy Ventures, Inc. (PCEV), both of which are domestic corporations and are affiliates of First Pacific Company Limited, a Hong Kong based investment and management company. San Miguel Corporation (SMC), together with its subsidiaries, San Miguel Purefoods Company Inc. and San Miguel Global Power Holdings, owns 32.83% of the outstanding shares of MERALCO. First Philippine Holdings Corporation (First Holdings) and First Philippine Utilities Corporation collectively own 3.94%. The balance of MERALCO's common shares is held by the public. The common shares of MERALCO are listed on and traded in the Philippine Stock Exchange or PSE, with security symbol MER.

MERALCO is a private company, whose mission is to plan and operate the electricity system to meet the increasing demand for electric energy, provide consumers with electric service of high reliability and supply this service with the optimal degrees of efficiency and quality for the most suitable price. Exhibit 1-4 below provides the bill breakdown for MERALCO customers as well as its portfolio breakdown.

**Exhibit 1-4 – Key Data**



Source: MERALCO Annual Report 2012

## **Implementation Financing**

MERALCO can fund projects by either utilizing its own operating budget or by borrowing money. MERALCO has a track record of utilizing both funding mechanisms. Smaller projects, which can be considered operational improvements (e.g., replacement of equipment or minor system modifications), are generally funded internally.

MERALCO's loan agreements require compliance with certain financial ratios such as debt service coverage of 1.2 times calculated at specific measurement dates. The agreements also contain restrictions with respect to the creation of liens on assets, issuance of guarantees, mergers or consolidations, disposition of a significant portion of its assets and related party transactions. As of December 31, 2012, MERALCO is in compliance with all covenants of the loan agreements.

## **Developmental Impact**

This project is supportive of national government objectives to improve grid stability and reliability and minimize electricity costs. According to USTDA criteria, the project's potential development impacts include the following:

Infrastructure -- The Project will develop a pilot for the implementation of an advanced metering system in Philippines. Among potential infrastructure improvements are meter replacements, reinforcement of the existing communication infrastructure, construction of new data terminals for storage and processing of load data, and implementation of advanced software systems.

Human Capacity Building -- The proposed metering improvements will create new jobs in installation, maintenance, data collection and integration, analysis, billing, and other areas. At the same time, the project will optimize the meter reading process and may lead to a reduction in the number of manual meter readers. The proposed project will emphasize re-training of meter readers currently serving older meters. Employment opportunities will be available for technical, analytical, construction, and administrative people during the installation and commercial operation phases of the project.

Other - The new meters and metering infrastructure should have some positive environmental benefits including recycling of older meters and reduction of emissions from meter reading operations.

## **Environmental Impact**

The project is expected to have a positive effect on the environment. Among the anticipated positive impacts are the following:

- Air emission reductions due to less meter reading;
- Ability to implement time-of-use tariffs leads to more efficient power generation;

- Ability to implement time-of-use tariffs leads to more efficient water consumption;
- Training on environmental issues will be provided to locals;
- Life quality improvement for local communities due to new income; and
- Social commitment regarding education, health and production of goods.

Potential negative impacts could include the following:

- Potential environmental issues with old meter removal;
- Old meter disposal;
- Sound pollution during construction; and
- Equipment transit during construction.

### **Impact on U.S. Labor**

CG anticipates no negative impacts on U.S. employment due to this project. The project would provide a pilot smart metering system, not products that could be imported into the U.S. On the other hand, positive impacts will result in the event that U.S. exporters succeed in obtaining contracts to provide equipment and services when the project goes forward, and conceivably serve as a catalyst for further projects in the region.

No adverse impact is expected from the execution of the proposed project. Its significant export potential would assure the bulk of the production of major goods in the U.S. and their export to the host country. No significant permanent new job creation impacting U.S. jobs is expected outside the U.S.

## 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 Manila Electric Company (“Grantee”). USTDA agrees to provide the Grantee under the terms of this Grant Agreement US\$442,940 (“USTDA Grant”) to fund the cost of goods and services required for a feasibility study (“Study”) on the proposed Power Distribution Modernization Pilot Project (“Project”) within the franchise area of the Grantee in the Philippines (“Host Country”).

### 1. USTDA Funding

The USTDA Grant 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 Study (“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 Study (“Terms of Reference”) are attached as Annex I and are hereby incorporated by reference into this Grant Agreement. The Study will examine the technical, financial, environmental, and other critical aspects of the proposed Project. The Terms of Reference for the Study 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*

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([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 Study. 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 Study that they were not selected. The Grantee and the Contractor then shall enter into a Contract for performance of the Study.

**(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 Study. 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 U.S. 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 Study 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 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 USTDA 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 Study by submitting invoices in accordance with the procedures set forth in the USTDA Mandatory Contract 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. Study Schedule**

**(A) Study Completion Date**

The completion date for the Study, which is November 30, 2014 is the date by which the parties estimate that the Study 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.

**9. USTDA Mandatory Contract Clauses**

3  
JH  
MDD

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 S.

## **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 Study and associated delivery services (e.g., international transportation and insurance) must have their nationality, source and origin in the United States; and

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(h) 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 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 Study 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 Study 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 Senior Assistant Vice President and Head, Network Technology Strategy and Execution. The parties hereto may, by written notice, designate additional representatives for all purposes under this Grant Agreement.

## **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: Joseph Allan C. Baltazar  
Senior Assistant Vice President and Head  
Network Technology Strategy and Execution

Address: 3/F Technical Services Building  
Meralco Center, Ortigas Avenue  
Pasig City, 0300 Philippines

Phone: +63 2 631 2222 local 6482

Fax: +63 2 632 8437

E-Mail: jacbaltazar@meralco.com.ph

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  
south\_southeast\_asia@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 14/15 1001

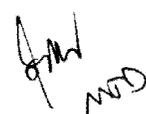
Activity No.: 2014-31005A

Reservation No.: 2014044

Grant No.: GH201431044

## 17. Implementation Letters

To assist the Grantee in the implementation of the Study, 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.



**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 Study, except for payments that may be made pursuant to Clause H 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 Study, 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.

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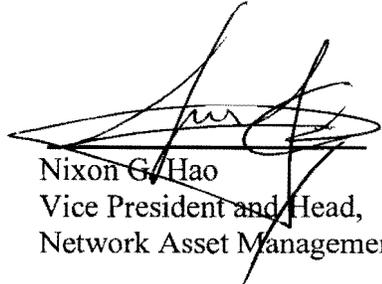
**IN WITNESS WHEREOF, the Government of the United States of America and the Manila Electric Company, each acting through its duly authorized representative, have caused this Grant Agreement to be signed in the English language in their names and delivered as of the day and year written below. In the 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**

By:   
James McCarthy  
Commercial Counselor  
U.S. Embassy, Manila

**For the Manila Electric Company**

By:   
Ronnie L. Aperoch  
Vice President and Head,  
South Distribution Services

  
Nixon G. Hao  
Vice President and Head,  
Network Asset Management

Date: January 22, 2014

Date: January 22, 2014

Witnessed:

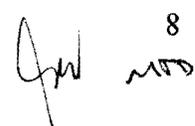
By:   
Mark J. Dunn  
Regional Manager for Asia  
U.S Trade and Development Agency

Witnessed:

By:   
Joseph Allan C. Baltazar  
Sr. Asst. Vice President and Head,  
Network Technology Strategy and Execution

**Annex I -- Terms of Reference**

**Annex II -- USTDA Mandatory Contract Clauses**



## Annex I

### **Terms of Reference**

The purpose of this Study is to assist the Grantee, MERALCO, in developing the technical specifications and associated implementation plan for a power distribution modernization pilot project, with key components including Advanced Metering Infrastructure (AMI), Demand Response (DR) programs, smart grid-focused Distribution Management Systems (DMS), and system interoperability standards. The Study will include a pilot project design for a DR system that would reduce user demands, balance the grid, reduce high energy costs, and upgrade and integrate voltage and communications infrastructure.

#### **Task 1: Distribution Modernization Business Case Review and Update**

The Contractor shall review MERALCO's medium and long-term modernization objectives related to smart grid, DR, and integration of renewable energy (RE) sources. In conducting this review, the Contractor shall take into account the following documents:

- MERALCO's 10-year Smart Grid strategy and technology development roadmap;
- MERALCO's rate structure;
- Energy Regulatory Commission of Philippines' (ERC's) Rules for Setting Distribution Wheeling Rates (RDWR);
- ERC's Latest Available Private Utility Rates;
- The Philippine Renewable Energy Act of 2008;
- ERC's Feed-in Tariff Rules;
- Philippine Electricity Market Corporation (PEMC) Wholesale Electricity Spot Market (WESM) Rules;
- Philippine Department of Energy (DOE) policy directions relating to smart grid, such as Department Circular No. DC 2013-03-0003;
- The Philippine Electric Power Industry Reform Act of 2001; and,
- ERC's Rules on Net Metering.

The Contractor shall also review MERALCO's existing and/or in-construction automation systems that may require upgrades or enhancements to support the development of AMI, DR programs, smart grid-focused DMS, and system interoperability standards. Such systems include, but are not limited to:

- Geographic Information System (GIS);
- Work Management System (including the Work Order Management System, WOMS, and the Maintenance Work Management System, MWMS) and its ongoing replacement, the Enterprise Asset Management (EAM) system;

- Operating Troubles Management System (OTMS) and the future Outage Management System;
- Customer Management System (CMS)/Call Center System;
- The Energy Management System (EMS) and Supervisory Control and Data Acquisition (SCADA) systems; and,
- Distribution Automation System (DAS) Master Station.

The Contractor, in consultation with the Grantee, shall review MERALCO's existing business case, concentrating on its smart grid, DR, and renewables sections, to determine whether changes are required to the following business case components:

- Base business case assumptions;
- Regulatory framework;
- MERALCO philosophy and approaches;
- Economic/financial approaches and capital allocation; and
- Supply/demand in service territory.

Once the aforementioned review is complete, the Contractor, in consultation with the Grantee, shall propose updates to MERALCO's 10 year Smart Grid strategy and technology roadmap taking into account the above issues related to smart grid, DR, and RE integration.

**Deliverable:** The Contractor shall provide the Grantee with a Task 1 Summary Report that contains the information collected, work performed, and analyses completed.

## **Task 2: Pilot Project Scope Preparation**

The Contractor shall determine the Pilot Project scope for MERALCO based on the Distribution Modernization Business Case reviewed in Task 1 and general MERALCO objectives. The Pilot Project shall concentrate on:

- Advanced Metering Infrastructure (AMI);
- DR programs;
- Autonomous and centralized management of embedded generation;
- Smart grid-focused DMS, including Volt/Volt-Ampere Reactive (VAR) optimization applications with integration of RE generation and DR; and,
- System interoperability standards.

The Pilot shall be designed to accomplish the following MERALCO distribution objectives:

- Reduce ultra-high energy peak costs through mechanisms such as, but not limited to, establishment of a DR program. The Contractor shall evaluate the most

efficient locations for DR based on customer willingness to participate in a DR program, the cost effectiveness of a DR program (as measured by maximum kW and kWh reduction per dollar invested) and the technical feasibility of a DR program (as measured by impact on critical voltages, and local distribution facilities unloading);

- Develop a set of DR programs to accommodate a greater base of customers;
- Develop and implement the Demand Response/Load Management system as a part of DMS;
- Set, monitor, and settle contracts with existing customers that would be interested to participate in a DR program;
- Upgrade the Voltage and VAR Optimization (VVO) applications to integrate the DR program; and,
- Implement the communications and the physical setups for the DR installations.

The Pilot Project shall be located in a metropolitan area served by MERALCO and shall include, at a minimum, the following elements:

- One substation with significant penetration of high-demand customers;
- Two adjacent substations with normally open ties between their feeders that would support a demo of RE generation and DR under feeder reconfiguration conditions;
- Four to six feeders;
- Sufficient amount of customers; comprised of industrial, commercial and/or residential; that would enable a load elasticity required for DR to function (about 3-4 MW per substation);
- AMI infrastructure with remotely controlled Load Tap Changers (LTCs) and/or voltage regulators and switched feeder capacitors;
- RE generation concentrated on one to two feeders such that approximately 20% of RE generation at these feeders (2-4 MW); and
- Inverters of RE generators having reactive power control capabilities.

The Contractor shall develop at least three (3) alternative Pilot Project designs. The Contractor shall also propose mechanisms to minimize the demonstration project cost without sacrificing the demonstration objectives. The Contractor shall then demonstrate that the recommended Pilot Project design is the most cost-efficient solution from among the three technically feasible designs to accomplish the identified distribution objectives.

The Contractor shall also have at least two (2) working meetings with the Grantee to discuss the deliverable and shall incorporate any comments the Grantee may have on the proposed Pilot setup into the Task deliverable.

The Grantee's approval of the Contractor's invoice for Task 2 (which may also invoice for other tasks), pursuant to Mandatory Contract Clause G(3)(b)(ii), shall reflect the Grantee's approval of the Contractor's recommended Pilot Project design.

**Deliverable:** The Contractor shall provide the Grantee with a Task 2 Summary Report that contains the proposed optimal Pilot Project Layout and details and which incorporates any Grantee comments.

### **Task 3: Pilot Project Cost Estimate**

The Contractor shall estimate the all-in lifecycle cost for the proposed Pilot Project system based on the project plan developed in Task 2. The Contractor shall be responsible for recommending the least-cost capital investment plan associated with the Pilot Project.

The estimate shall include the cost of materials, labor, logistics, contingencies for implementation, design, engineering, and construction costs and identify the foreign and local cost components. The Grantee may provide supporting cost estimates based on prior pilot projects. The Contractor will independently assess and verify any supporting cost estimates provided by the Grantee. The major equipment detail shall cover at a minimum the following systems:

- DR Systems
- AMI/Smart Meters
- DMS
- Communications
- Renewable Power Integration Systems

The estimate precision is expected to be at least in the 75th percentile.

**Deliverable:** The Contractor shall provide the Grantee with a detailed least-cost investment plan for the Pilot Project's implementation.

### **Task 4: Preparation of Procurement Documents and Bid Specifications**

Once the Pilot Project design and cost have been approved by the Grantee, pursuant to Task 2 and Mandatory Contract Clause G(3)(b)(ii), the Contractor shall provide a procurement package, including all documents, descriptions, performance criteria, terms of reference (ToR) and similar materials necessary and appropriate to support the procurement of the integrated IT system described in these ToR. The exact list of documents will depend on the final design of the Pilot Project. This may include, but not be limited to, ToR, technical specifications and budgets for:

- Automation and communications equipment as well as specialized implementation and design support;

- DR infrastructure;
- RE integration infrastructure;
- Smart grid-focused DMS (including VVO applications with integration of RE generation and DR) and the following situational awareness requirements:
  - a. Analysis of the distribution system’s adequacy
  - b. Analysis of reliability – contingency planning
  - c. Analysis of power quality
  - d. Analysis of efficiency
- Other supporting distribution equipment upgrade requirements; and
- IT equipment, software, and specialized implementation and design support, and integration requirements to existing systems.

**Deliverable:** The Contractor shall provide the Grantee with a procurement package for all major equipment and services required for Pilot Project implementation.

**Task 5: Environmental and Social/Development Impact Assessment**

The Contractor shall conduct an environmental and social/development impact assessment of the Pilot Project. The environmental impact assessment shall include but not be limited to an assessment of the Pilot Project’s potential impacts on the following:

- Existing equipment disposition and recycling;
- Air quality and noise;
- Socio-economic/human resources; and,
- Occupational health and safety.

The Contractor shall also provide a report on the potential social and development impacts of the Pilot Project in the Host Country. The Contractor shall focus on the economic development outcomes of the Project, if implemented according to the Study’s recommendations. While the report should specifically address the immediate impact of the Project, the Contractor shall also discuss, where appropriate, any additional developmental impacts of the Projects, including spin-off and demonstration effects. Analysis of the Study’s potential impacts should be as concrete and detailed as possible. The Contractor shall provide estimates of the Project’s potential impacts in the following areas:

- Infrastructure: impacts on infrastructure, such as the construction of new automation and the supply of additional electricity.
- Market-Oriented Reform: impacts on the regulatory regime, including recommendations for new regulations, laws, or institutional changes and their potential impacts, if implemented.
- Human Capacity Building: the number and type of staff positions that would be needed to construct and operate the Project, the number of people that would be required to process construction materials, and the number of people who would receive training as well as a brief description of the training program.

  
Annex I- 5

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- Technology Transfer and Productivity Enhancement: advanced technologies that would be implemented as a result of the Project, and a description of any efficiencies that would be gained.
- Other: other developmental impacts of the Project, including spin-off or demonstration effects.

**Deliverable:** The Contractor shall provide the Grantee with an environmental, social and developmental impact assessment.

**Task 6: 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 I of Annex II of the Grant Agreement.

The Contractor shall also identify prospective U.S. Sources of Supply for the Project in the Final Report. The U.S. Suppliers list shall identify the capabilities, addresses, and principal points of contact for each of the suppliers.

## 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 Manila Electric Company ("Client"), dated \_\_\_\_\_ ("Grant Agreement"). The Client has selected \_\_\_\_\_ ("Contractor") to perform the feasibility study ("Study") for the Power Distribution Modernization Pilot Project ("Project") in the Philippines ("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 S. 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 M 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 Study 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 Study 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 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 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. 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 G(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 M below, or by e-mail to [invoices@ustda.gov](mailto:invoices@ustda.gov).

**H. 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, N and S of the USTDA Mandatory Contract Clauses shall survive the termination of this Contract.

**I. 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.

## **J. 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.

## **K. Study Schedule**

### **(1) Study Completion Date**

The completion date for the Study, which is November 30, 2014, is the date by which the Contract Parties estimate that the Study 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.

## **L. 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 Study 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.

**M. 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 14/15 1001  
Activity No.: 2014-31005A  
Reservation No.: 2014044  
Grant No.: GH201431044

**N. 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.

**O. 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.

**P. Contact Persons**

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

Name: Joseph Allan C. Baltazar  
Title: Senior Assistant Vice President and Head

## Network Technology Strategy and Execution

Phone: +63 2 631 2222 local 6482  
Fax: +63 2 632 8437  
E-Mail: jacbaltazar@meralco.com.ph

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.

### **Q. 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.

### **R. 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.

### **S. 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 Study. 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.

## ANNEX 5

## Annex I

### **Terms of Reference**

The purpose of this Study is to assist the Grantee, MERALCO, in developing the technical specifications and associated implementation plan for a power distribution modernization pilot project, with key components including Advanced Metering Infrastructure (AMI), Demand Response (DR) programs, smart grid-focused Distribution Management Systems (DMS), and system interoperability standards. The Study will include a pilot project design for a DR system that would reduce user demands, balance the grid, reduce high energy costs, and upgrade and integrate voltage and communications infrastructure.

#### **Task 1: Distribution Modernization Business Case Review and Update**

The Contractor shall review MERALCO's medium and long-term modernization objectives related to smart grid, DR, and integration of renewable energy (RE) sources. In conducting this review, the Contractor shall take into account the following documents:

- MERALCO's 10-year Smart Grid strategy and technology development roadmap;
- MERALCO's rate structure;
- Energy Regulatory Commission of Philippines' (ERC's) Rules for Setting Distribution Wheeling Rates (RDWR);
- ERC's Latest Available Private Utility Rates;
- The Philippine Renewable Energy Act of 2008;
- ERC's Feed-in Tariff Rules;
- Philippine Electricity Market Corporation (PEMC) Wholesale Electricity Spot Market (WESM) Rules;
- Philippine Department of Energy (DOE) policy directions relating to smart grid, such as Department Circular No. DC 2013-03-0003;
- The Philippine Electric Power Industry Reform Act of 2001; and,
- ERC's Rules on Net Metering.

The Contractor shall also review MERALCO's existing and/or in-construction automation systems that may require upgrades or enhancements to support the development of AMI, DR programs, smart grid-focused DMS, and system interoperability standards. Such systems include, but are not limited to:

- Geographic Information System (GIS);
- Work Management System (including the Work Order Management System, WOMS, and the Maintenance Work Management System, MWMS) and its ongoing replacement, the Enterprise Asset Management (EAM) system;

- Operating Troubles Management System (OTMS) and the future Outage Management System;
- Customer Management System (CMS)/Call Center System;
- The Energy Management System (EMS) and Supervisory Control and Data Acquisition (SCADA) systems; and,
- Distribution Automation System (DAS) Master Station.

The Contractor, in consultation with the Grantee, shall review MERALCO's existing business case, concentrating on its smart grid, DR, and renewables sections, to determine whether changes are required to the following business case components:

- Base business case assumptions;
- Regulatory framework;
- MERALCO philosophy and approaches;
- Economic/financial approaches and capital allocation; and
- Supply/demand in service territory.

Once the aforementioned review is complete, the Contractor, in consultation with the Grantee, shall propose updates to MERALCO's 10 year Smart Grid strategy and technology roadmap taking into account the above issues related to smart grid, DR, and RE integration.

**Deliverable:** The Contractor shall provide the Grantee with a Task 1 Summary Report that contains the information collected, work performed, and analyses completed.

## **Task 2: Pilot Project Scope Preparation**

The Contractor shall determine the Pilot Project scope for MERALCO based on the Distribution Modernization Business Case reviewed in Task 1 and general MERALCO objectives. The Pilot Project shall concentrate on:

- Advanced Metering Infrastructure (AMI);
- DR programs;
- Autonomous and centralized management of embedded generation;
- Smart grid-focused DMS, including Volt/Volt-Ampere Reactive (VAR) optimization applications with integration of RE generation and DR; and,
- System interoperability standards.

The Pilot shall be designed to accomplish the following MERALCO distribution objectives:

- Reduce ultra-high energy peak costs through mechanisms such as, but not limited to, establishment of a DR program. The Contractor shall evaluate the most

efficient locations for DR based on customer willingness to participate in a DR program, the cost effectiveness of a DR program (as measured by maximum kW and kWh reduction per dollar invested) and the technical feasibility of a DR program (as measured by impact on critical voltages, and local distribution facilities unloading);

- Develop a set of DR programs to accommodate a greater base of customers;
- Develop and implement the Demand Response/Load Management system as a part of DMS;
- Set, monitor, and settle contracts with existing customers that would be interested to participate in a DR program;
- Upgrade the Voltage and VAR Optimization (VVO) applications to integrate the DR program; and,
- Implement the communications and the physical setups for the DR installations.

The Pilot Project shall be located in a metropolitan area served by MERALCO and shall include, at a minimum, the following elements:

- One substation with significant penetration of high-demand customers;
- Two adjacent substations with normally open ties between their feeders that would support a demo of RE generation and DR under feeder reconfiguration conditions;
- Four to six feeders;
- Sufficient amount of customers; comprised of industrial, commercial and/or residential; that would enable a load elasticity required for DR to function (about 3-4 MW per substation);
- AMI infrastructure with remotely controlled Load Tap Changers (LTCs) and/or voltage regulators and switched feeder capacitors;
- RE generation concentrated on one to two feeders such that approximately 20% of RE generation at these feeders (2-4 MW); and
- Inverters of RE generators having reactive power control capabilities.

The Contractor shall develop at least three (3) alternative Pilot Project designs. The Contractor shall also propose mechanisms to minimize the demonstration project cost without sacrificing the demonstration objectives. The Contractor shall then demonstrate that the recommended Pilot Project design is the most cost-efficient solution from among the three technically feasible designs to accomplish the identified distribution objectives.

The Contractor shall also have at least two (2) working meetings with the Grantee to discuss the deliverable and shall incorporate any comments the Grantee may have on the proposed Pilot setup into the Task deliverable.

The Grantee's approval of the Contractor's invoice for Task 2 (which may also invoice for other tasks), pursuant to Mandatory Contract Clause G(3)(b)(ii), shall reflect the Grantee's approval of the Contractor's recommended Pilot Project design.

**Deliverable:** The Contractor shall provide the Grantee with a Task 2 Summary Report that contains the proposed optimal Pilot Project Layout and details and which incorporates any Grantee comments.

### **Task 3: Pilot Project Cost Estimate**

The Contractor shall estimate the all-in lifecycle cost for the proposed Pilot Project system based on the project plan developed in Task 2. The Contractor shall be responsible for recommending the least-cost capital investment plan associated with the Pilot Project.

The estimate shall include the cost of materials, labor, logistics, contingencies for implementation, design, engineering, and construction costs and identify the foreign and local cost components. The Grantee may provide supporting cost estimates based on prior pilot projects. The Contractor will independently assess and verify any supporting cost estimates provided by the Grantee. The major equipment detail shall cover at a minimum the following systems:

- DR Systems
- AMI/Smart Meters
- DMS
- Communications
- Renewable Power Integration Systems

The estimate precision is expected to be at least in the 75th percentile.

**Deliverable:** The Contractor shall provide the Grantee with a detailed least-cost investment plan for the Pilot Project's implementation.

### **Task 4: Preparation of Procurement Documents and Bid Specifications**

Once the Pilot Project design and cost have been approved by the Grantee, pursuant to Task 2 and Mandatory Contract Clause G(3)(b)(ii), the Contractor shall provide a procurement package, including all documents, descriptions, performance criteria, terms of reference (ToR) and similar materials necessary and appropriate to support the procurement of the integrated IT system described in these ToR. The exact list of documents will depend on the final design of the Pilot Project. This may include, but not be limited to, ToR, technical specifications and budgets for:

- Automation and communications equipment as well as specialized implementation and design support;

- DR infrastructure;
- RE integration infrastructure;
- Smart grid-focused DMS (including VVO applications with integration of RE generation and DR) and the following situational awareness requirements:
  - a. Analysis of the distribution system's adequacy
  - b. Analysis of reliability – contingency planning
  - c. Analysis of power quality
  - d. Analysis of efficiency
- Other supporting distribution equipment upgrade requirements; and
- IT equipment, software, and specialized implementation and design support, and integration requirements to existing systems.

**Deliverable:** The Contractor shall provide the Grantee with a procurement package for all major equipment and services required for Pilot Project implementation.

### **Task 5: Environmental and Social/Development Impact Assessment**

The Contractor shall conduct an environmental and social/development impact assessment of the Pilot Project. The environmental impact assessment shall include but not be limited to an assessment of the Pilot Project's potential impacts on the following:

- Existing equipment disposition and recycling;
- Air quality and noise;
- Socio-economic/human resources; and,
- Occupational health and safety.

The Contractor shall also provide a report on the potential social and development impacts of the Pilot Project in the Host Country. The Contractor shall focus on the economic development outcomes of the Project, if implemented according to the Study's recommendations. While the report should specifically address the immediate impact of the Project, the Contractor shall also discuss, where appropriate, any additional developmental impacts of the Projects, including spin-off and demonstration effects. Analysis of the Study's potential impacts should be as concrete and detailed as possible. The Contractor shall provide estimates of the Project's potential impacts in the following areas:

- Infrastructure: impacts on infrastructure, such as the construction of new automation and the supply of additional electricity.
- Market-Oriented Reform: impacts on the regulatory regime, including recommendations for new regulations, laws, or institutional changes and their potential impacts, if implemented.
- Human Capacity Building: the number and type of staff positions that would be needed to construct and operate the Project, the number of people that would be required to process construction materials, and the number of people who would receive training as well as a brief description of the training program.

  
Annex I- 5

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- Technology Transfer and Productivity Enhancement: advanced technologies that would be implemented as a result of the Project, and a description of any efficiencies that would be gained.
- Other: other developmental impacts of the Project, including spin-off or demonstration effects.

**Deliverable:** The Contractor shall provide the Grantee with an environmental, social and developmental impact assessment.

**Task 6: 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 I of Annex II of the Grant Agreement.

The Contractor shall also identify prospective U.S. Sources of Supply for the Project in the Final Report. The U.S. Suppliers list shall identify the capabilities, addresses, and principal points of contact for each of the suppliers.

## **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 [To be completed by USTDA]	Feasibility Study	Technical Assistance	Other (specify)
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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.

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

Please provide a list of directors and principal officers as detailed in Attachment A. Attached? (Not Applicable for U.S. Publicly Traded Company)	Yes
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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
	No

If so, please provide the name of the U.S. Firm's parent company(ies). 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
	No

If yes, U.S. Firm shall complete Attachment C for each subcontractor. Attached?	Yes
	Not applicable

#### 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 an 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. **(U.S. publicly traded companies need not include Articles of Incorporation or Good Standing Certificate)**
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		Signature	
Title			
Organization		Date	





**ATTACHMENT B**

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

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

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 [To be completed by USTDA]	
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Activity Title [To be completed by USTDA]	
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Full Legal Name of U.S. Firm	
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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	Publicly Traded Company
	Private Company
	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?	Yes
	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 [*To be completed by USTDA*]

Activity Title [*To be completed by USTDA*]

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

2. 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.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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	<input type="text"/>	Signature	<input type="text"/>
Title	<input type="text"/>		
Organization	<input type="text"/>	Date	<input type="text"/>