REQUEST FOR PROPOSALS

FEASIBILITY STUDY
FOR
GITARU 10 MEGAWATT SOLAR POWER PLANT

Reference No.: KGN-BDD-13-2016
GRANT CODE ID NO.: 2016-11019A

Submission Deadline: 1400 Hours
East African Time
22 November 2016

Submission Place: Company Secretary and Legal Affairs Director
Kenya Electricity Generating Company Ltd
Stima Plaza Phase III, 7th Floor Kolobot Road, Parklands
P.O Box 47936- 00100
Nairobi, Kenya
Tel: +254 711 036 000, +254 711 036427
Attention: Elizabeth Njenga, Capital Planning & PPP Manager
Email: enjenga@kengen.co.ke
Website: www.kengen.co.ke

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.
N.B.: Any and all questions pertaining to the RFP should be sent to:
RFPQuestions@ustda.gov; cc: injeru@kengen.co.ke; mogonji@kengen.co.ke;
enjenga@kengen.co.ke; gogwang@kengen.co.ke
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SECTION 1: INTRODUCTION

The U.S. Trade and Development Agency (USTDA) has provided a grant in the amount of US$998,000 to the Kenya Electricity Generating Company, Ltd. (the “Grantee”) in accordance with a grant agreement dated September 21, 2016 (the “Grant Agreement”). The grant will fund a Feasibility Study on the development of a 10 megawatt solar photovoltaic power plant (“the Project”) in Gitaru, Kenya (“Host Country”). 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. It is expected that the first phase of the Project will be a 10MW Photovoltaic plant, but with a scope to scale up the Project to 40MW. The feasibility study should therefore include a scaled up approach of up to 40MW with clear implementation timelines and the associated project costs.

1.1 BACKGROUND SUMMARY

This grant will fund a Feasibility Study that will support the development of a 10 megawatt solar photovoltaic power plant in Gitaru, Kenya. The Feasibility Study will promote the U.S. Government’s Power Africa initiative by helping to catalyze investment in sub-Saharan Africa’s energy sector and increase access to power. Implementation of the Project would increase installed renewable energy generation capacity and electrify new households and businesses in Kenya. USTDA is funding this Feasibility Study due to its potential to generate opportunities for U.S. exports and support investment in clean energy development.

The Kenya Electricity Generating Company, Ltd (“KenGen”) produces approximately 72 percent of the electricity consumed in the country. KenGen plans to triple its power generation capacity in the next ten years and expects that 80 percent of its new capacity will come from renewable sources. While solar photovoltaic power generation has been slow to penetrate the market in Kenya, the enabling environment is changing. To address concerns about the reliability of hydroelectricity generation and the economic and environmental costs of diesel, the Government of Kenya has implemented a number of policies to encourage investment in solar. The Government of Kenya introduced a feed-in tariff of $0.12 per kilowatt hour (“kWh”) for grid-connected solar plants up to a capacity of 40 MW. The Government has also zero-rated the import duty and removed the value added tax on PV panels and equipment. The Kenyan solar industry is also receiving significant technical and financial support from international development and financial institutions, which play an important role in increasing access to financing and reducing risks for project development and implementation. These enabling policy and regulatory changes, combined with the falling capital costs of solar PV, have motivated a number of new solar IPP entrants to the market.

The Project will be implemented in Gitaru, Kenya, approximately 160 kilometers northeast of Nairobi, on land adjacent to the KenGen-owned 225 MW Gitaru Hydroelectric Power Station. The proposed Project site is on unoccupied land owned by KenGen that is near existing transmission and substation infrastructure, making power evacuation and access to water convenient. Given that the Project would only occupy a fraction of the available land, KenGen will be able to scale up the solar PV installation to add additional generation capacity if the initial Project is successful. KenGen’s long-term plans include upgrading the Project with additional solar generation capacity to operate in tandem with the adjacent hydropower plant,
which would allow the joint power generation sources to serve as a fully dispatchable energy source.

KenGen will seek to qualify for the established $0.12 per kWh solar feed-in tariff and enter into a power purchase agreement ("PPA") with Kenya Power and Lighting Company ("KPLC"), who serves as the sole power off-taker in the country.

In 2012, KenGen funded a preliminary feasibility study for the Project and later installed a weather station at the proposed Project site in 2014 to collect solar irradiation data. As a result, more than two years of Global Horizontal Irradiation (GHI) data are available for the proposed Project site with recorded annual average GHI value of 2,117 kilowatt hours per square meter ("kWh/m²"), which is well above the commercial threshold of 1,750 kWh/m² per year.

The Feasibility Study will evaluate the technical and economic viability of the proposed Project and provide the data and analysis required to advance the development and financing of the Project. The Feasibility Study will review all relevant prior assessments completed to date; verify and update the assumptions, data, and analysis of these prior assessments; develop the conceptual design, cost estimate, and implementation schedule for the Project; conduct economic, financial, and risk analysis to determine the viability of the Project; conduct a full Environmental and Social Impact Assessment (ESIA) and obtain the necessary approvals from the National Environmental Management Authority (NEMA); conduct detailed site investigations including geotechnical investigations and topographical survey; identify U.S. sources of supply; prepare documentation necessary for the procurement of an engineering, procurement, and construction ("EPC") contractor; and identify suitable sources of funding for the project, preferably concessionary funding sources.

Edited portions of a background Desk Study are provided for reference in Annex 2.

1.2 OBJECTIVE

The objective of this Feasibility Study is to evaluate the technical and economic viability of the 10 megawatt photovoltaic solar power plant proposed by the Grantee and provide the data and analysis required to advance the development and financing of the Project. The proposed 10MW plant would be the first phase of the project, and the successful Consultant should develop the feasibility study to scale up the project to 40MW.

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

1.3 PROPOSALS TO BE SUBMITTED

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

The amount for the contract has been established by a USTDA grant of US$998,000. The USTDA grant of US$998,000 is a fixed amount. Accordingly, COST will not be a factor in the
**evaluation and therefore, cost proposals should not be submitted.** Upon detailed evaluation of technical proposals, the Grantee shall select one firm for contract negotiations.

1.4 **CONTRACT FUNDED BY USTDA**

In accordance with the terms and conditions of the Grant Agreement, USTDA has provided a grant in the amount of US$998,000 to the Grantee. The funding provided under the Grant Agreement shall be used to fund the costs of the contract between the Grantee and the U.S. firm selected by the Grantee to perform the TOR. The contract must include certain USTDA Mandatory Contract Clauses relating to nationality, taxes, payment, reporting, and other matters. The USTDA nationality requirements and the USTDA Mandatory Contract Clauses are attached at Annexes 3 and 4, respectively, for reference.
SECTION 2: INSTRUCTIONS TO OFFERORS

2.1 PROJECT TITLE

The project is called the Gitaru 10 Megawatt Solar Power Plant.

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. Edited 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$998,000.

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

2.7 TAXES

Offerors should submit proposals that note that in accordance with the USTDA Mandatory Contract Clauses, USTDA grant funds shall not be used to pay any taxes, tariffs, duties, fees or other levies imposed under laws in effect in the Host Country.

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:

Company Secretary and Legal Affairs Director
Kenya Electricity Generating Company Ltd
Stima Plaza Phase III, 7th Floor Kolobot Road, Parklands
P.O Box 47936- 00100
Nairobi, Kenya
Tel: +254 711 036 000, +254 711 036427
Attention: Elizabeth Njenga, Capital Planning & PPP Manager
Email: enjenga@kengen.co.ke

An Original and four (4) copies of your proposal must be received at the above address no later than 1400, on 22nd November 2016.

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 four (4) copies should be collectively wrapped and sealed, and clearly labeled, including the contact name and the name of the project. Information on the outer envelope should also include: Confidential, Feasibility Study for Gitaru 10MW Power Plant.

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

2.15 OFFEROR’S AUTHORIZED NEGOTIATOR

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

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

2.17 EFFECTIVE PERIOD OF PROPOSAL

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

2.18 EXCEPTIONS

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

2.19 OFFEROR QUALIFICATIONS

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

2.20 RIGHT TO REJECT PROPOSALS

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

2.21 PRIME CONTRACTOR RESPONSIBILITY

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

2.22 AWARD

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

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

2.24 INVOICING AND PAYMENT

Deliverables under the contract shall be delivered on a schedule to be agreed upon in a contract with the Grantee. The Contractor may submit invoices to the designated Grantee Project Director in accordance with a schedule to be negotiated and included in the contract. After the Grantee’s approval of each invoice, the Grantee will forward the invoice to USTDA. If all of the requirements of USTDA’s Mandatory Contract Clauses are met, USTDA shall make its respective disbursement of the grant funds directly to the U.S. firm in the United States. All payments by USTDA under the Grant Agreement will be made in U.S. currency. Detailed provisions with respect to invoicing and disbursement of grant funds are set forth in the USTDA Mandatory Contract Clauses attached in Annex 4.
SECTION 3: PROPOSAL FORMAT AND CONTENT

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

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

The proposal shall consist of a technical proposal only. A cost proposal is NOT required because the amount for the contract has been established by a USTDA grant of US$998,000, which is a fixed amount.

Offerors shall submit one (1) original and four (4) 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 of the proposed staff.

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

The transmittal letter should be prepared using the format shown here below:
TRANSmittAL LETTER

[Location, Date]

To: [Name and address of Grantee]

Ladies/Gentlemen:

We, the undersigned, offer to provide the Consultancy services for [Title of Consultancy services] in accordance with your Request for Proposal dated [Date] and our Proposal. We are hereby submitting our Technical Proposal.

If negotiations are held during the period of validity of the Proposal, i.e., before [Date] we undertake to negotiate on the basis of the proposed staff. Our Proposal is binding upon us and subject to the modifications resulting from Contract negotiations.

We understand you are not bound to accept any Proposal you receive.

We remain,

Yours sincerely,

Authorized Signature:
Name and Title of Signatory:
Name of Firm:
Address:

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.

The information on team organization shall be submitted using the format in the table below:

<table>
<thead>
<tr>
<th>1. Technical/Professional Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Support Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

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. The manpower schedule shall be submitted using the format below:

**TIME SCHEDULE FOR PROFESSIONAL PERSONNEL**

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Reports Due/Activities</th>
<th>Months (in the Form of a Bar Chart)</th>
<th>Number of Months</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 2 3 4 5 6 7 8 9 10 11 (36)</td>
<td>Subtotal (1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Subtotal (2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Subtotal (3)</td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td>Subtotal (4)</td>
</tr>
</tbody>
</table>

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. The Offeror may also give their comments or suggestions on the Terms of Reference. 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; and on the data, a list of services, and facilities to be provided by the Client.
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, as specified in the ToR. The Offeror shall include letters of commitment from the individuals proposed confirming their availability for contract performance.

The minimum required experience for firms to qualify is 10 years consulting for solar PV plants and the Offeror should have carried out a minimum of one feasibility study for solar PV in the last five years. 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 and they should include the following information:

- Project name,
- Name and address of client (indicate if joint venture),
- Client contact person (name/ position/ current phone and fax numbers),
- Period of Contract,
- Description of services provided,
- Dollar amount of Contract,
- Capacity/Size of the Project in MW,
- 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. The format for submitting project references and Curriculum Vitae for Professional staff shall be done using the format below:

**FIRM’S REFERENCES**

**Relevant Services Carried Out in the Last eight Years**
**That Best Illustrate Qualifications**

Using the format below, provide information on each assignment for which your firm/entity, either individually as a corporate entity or as one of the major companies within an association, was legally contracted.

<table>
<thead>
<tr>
<th>Assignment Name:</th>
<th>Country:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location within Country:</td>
<td>Professional Staff Provided by Your Firm/Entity(profiles):</td>
</tr>
<tr>
<td>Name of Client:</td>
<td>No. of Staff:</td>
</tr>
<tr>
<td>Address:</td>
<td>Nº of Staff-Months; Duration of Assignment:</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>Start Date (Month/Year):</td>
<td>Completion Date (Month/Year):</td>
</tr>
<tr>
<td>Name of Associated Consultant,</td>
<td>Nº of Months of Professional Staff Provided</td>
</tr>
<tr>
<td></td>
<td>by Associated Consultant:</td>
</tr>
<tr>
<td>Name of Senior Staff (Project</td>
<td>Name of Senior Staff (Project Director/</td>
</tr>
<tr>
<td>Director/Coordinator, Team</td>
<td>Coordinator, Team Leader) Involved and</td>
</tr>
<tr>
<td>Leader) Involved and Functions</td>
<td>Functions Performed:</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Narrative Description of Project:</td>
<td></td>
</tr>
</tbody>
</table>
| Description of Actual Services Provided by Your Staff: |}

Firm’s Name: ________________________________

**Format of Curriculum Vitae (CV) for Proposed Professional Staff**

Proposed Position: ________________________________

Name of Firm: ________________________________

Name of Staff: ________________________________

Profession: ________________________________

Date of Birth: ________________________________

Years with Firm/Entity: ____________________ Nationality: ____________

Membership in Professional Societies: __________________________
Detailed Tasks Assigned: ____________________________________________

Key Qualifications:

[Give an outline of staff member’s experience and training most pertinent to tasks on assignment. Describe degree of responsibility held by staff member on relevant previous assignments and give dates and locations. Use about half a page.]

Education:

[Summarize college/university and other specialized education of staff member, giving names of schools, dates attended, and degrees obtained. Use about one quarter of a page.]

Employment Record:

[Starting with present position, list in reverse order every employment held. List all positions held by staff member since graduation, giving dates, names of employing organizations, titles of positions held, and locations of assignments. For experience in last ten years, also give types of activities performed and client references, where appropriate. Use about two pages.]

Languages:

[For each language indicate proficiency: excellent, good, fair, or poor in speaking, reading, and writing.]

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe me, my qualifications, and my experience.

_________________________________________________________ Date: ____________
[Signature of staff member and authorized representative of the firm] Day/Month/Year

Full name of staff member: _________________________________
Full name of authorized representative: __________________________
SECTION 4: AWARD CRITERIA

Individual proposals will be initially evaluated by a Procurement Selection Committee of representatives from the Grantee on the basis of their responsiveness to the RFP and the Terms of Reference in particular. A proposal shall be rejected at this stage if it does not respond to important aspects of the Terms of Reference. The Committee will then conduct a final evaluation based on the evaluation criteria, sub-criteria and point system specified in the Evaluation Table below, and each responsive proposal will be given a technical score. Firms will be required to attain a minimum of score of 80 Points to qualify. The qualified Offerors will then be ranked based on the technical score and the Technically Qualified firm with the highest Technical score will be selected as the best qualified Offeror. 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:

The number of points to be given under each of the evaluation criteria are:

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Contractor’s demonstrated expertise and past performance relevant to the Project</td>
<td>10</td>
</tr>
<tr>
<td>(ii) Adequacy of the Contractor’s proposed work plan and methodology in responding to the TOR</td>
<td>30</td>
</tr>
<tr>
<td>(iii) Quality and suitability of the Contractor’s proposed training / knowledge transfer program</td>
<td>15</td>
</tr>
<tr>
<td>(iv) Qualifications and experience of the Contractor’s proposed team to perform the Feasibility Study</td>
<td>40</td>
</tr>
</tbody>
</table>

- Solar photovoltaic power plant design, engineering, performance modelling, costing, implementation, operation, and maintenance;
- Feasibility analysis and project development support;
- Document preparation and transaction advisory for energy projects;
- Familiarity with Kenyan legislation and regulation of the independent power producer sector; and
- Developing and conducting technical trainings.

- Technical approach and methodology, including a detailed description of the software to be used;
- Quality of work plan; and
- Organization and staffing.

- Project Manager
- Mechanical Engineer / Solar PV Specialist
- Power Systems Engineer
- Civil/Geotechnical Engineer
- Topographical Surveyor
- Environmental and Social Scientist
- Energy Economist / Financial Specialist

**(v) Participation by Kenyan subcontractors and/or nationals among the Contractor’s proposed team to perform the Feasibility Study**
- Relevant experience and qualifications; and
- Adequacy for the Project.

| Total Points | 100 |

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

Price will not be a factor in contractor selection.
ANNEX 1: FEDERAL BUSINESS OPPORTUNITIES (FEDBIZOPPS)
ANNOUNCEMENT

ANNOUNCEMENT
Grantee Point of Contact (POC):

Company Secretary and Legal Affairs Director
Kenya Electricity Generating Company Ltd
Stima Plaza Phase III, 7th Floor Kolobot Road, Parklands
P.O Box 47936- 00100
Nairobi, Kenya
Website: www.kengen.co.ke
Attention: Elizabeth Njenga, Capital Planning & PPP Manager
Email: enjenga@kengen.co.ke
Tel: +254 711 036 000, +254 711 036427

CODE IDENTIFICATION AND PROJECT TITLE: 2016-11019A: Gitaru 10 Megawatt Solar Power Plant

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.

PROJECT TITLE: Gitaru 10 Megawatt Solar Power Plant.

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 on the development of a 10 megawatt solar photovoltaic power plant in Gitaru, Kenya.

BRIEF PROJECT BACKGROUND AND DESCRIPTION OF GRANTEE
USTDA is providing a grant to Kenya Electricity Generating Company, Ltd (the “Grantee”) to fund a Feasibility Study for a 10 megawatt solar photovoltaic power plant (the “Project”) that would be implemented in Gitaru, Kenya. The Project site is located approximately 160 kilometers northeast of Nairobi, on land adjacent to the KenGen-owned 225 MW Gitaru Hydroelectric Power Station. The proposed Project site is on unoccupied land owned by KenGen that is near existing transmission and substation infrastructure, making power evacuation and access to water convenient.

The Kenya Electricity Generating Company, Ltd. is a parastatal company with a Government of Kenya shareholding of 70% and 30% by private shareholders. The Company is listed on the Nairobi Securities Exchange. The Kenya Electricity Generating Company produces approximately 72 percent of the electricity consumed in the country and plans to triple its power generation capacity in the next ten years.

BRIEF DESCRIPTION OF STUDY COMPONENTS
The Feasibility Study will evaluate the technical and economic viability of the proposed Project and provide the data and analysis required to advance the development and financing of the Project. The Feasibility Study will review all relevant prior assessments completed to date; verify and update the assumptions, data, and analysis of these prior assessments; develop the conceptual design, cost estimate, and implementation schedule for the Project; conduct economic, financial, and risk analysis to determine the viability of the Project; conduct a full Environmental and Social Impact Assessment (ESIA) and obtain the necessary approvals from the National Environmental Management Authority (NEMA); conduct detailed site investigations including geotechnical investigations and topographical survey; identify U.S. sources of supply; and prepare documentation necessary for the procurement of an engineering, procurement, and construction (“EPC”) contractor; and identify suitable sources of funding for the project, preferably concessionary funding sources.

The U.S. firm selected will be paid in U.S. dollars from a $998,000 grant to the Grantee from the U.S. Trade and Development Agency (USTDA).

A detailed Request for Proposals (RFP), which includes requirements for the Proposal, the Terms of Reference, and portions of a background 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: http://www.ustda.gov/business-opportunities/request-proposal-form. 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 1400 East Africa Standard Time, 22 November 2016 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: USTDA BACKGROUND STUDY REPORT ON THE PROJECT
10-Megawatt Pilot Solar Photovoltaic Project at Gitaru, Kenya
Desk Study Report [Redacted]

Prepared by:
Green Powered Technology LLC
1220 North Powhatan Street
Arlington, VA  22205

Date Submitted:
July 14, 2016

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.
The U.S. Trade and Development Agency

The U.S. Trade and Development Agency (USTDA) helps companies create U.S. jobs through the export of U.S. goods and services for priority development projects in emerging economies. The USTDA links U.S. businesses to export opportunities by funding project planning activities, pilot projects, and reverse trade missions while creating sustainable infrastructure and economic growth in partner countries.
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<td>ANNEXII-ERROR! BOOKMARK NOT DEFINED.</td>
</tr>
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EXECUTIVE SUMMARY
Kenya Electricity Generating Company, Ltd. (KenGen), is the leading power-generation company in Kenya, producing 70 percent of electricity consumed in the country. KenGen’s core business is to develop, manage, and operate power-generation plants to supply bulk electric energy to the Kenyan market and the East African region. In 2012, KenGen engaged a consultant to conduct a feasibility study on grid connected solar PV plants. KenGen is seeking a technical assistance grant in the amount of $998,000 from the U.S. Trade and Development Agency (USTDA) to engage a contractor to update the existing feasibility study, taking into consideration the onsite data that have been collected; scope the pilot project; prepare the concept design, cost estimate, and implementation schedule; carry out a financial analysis to determine the feasibility of the project; and, lastly, prepare the tender documents for procurement of an engineering, procurement, and construction (EPC) contractor. The Consultant shall also carry out detailed site investigations comprising of geotechnical site investigations and the topographical surveys as well as Environmental and Social Impact Assessment (ESIA).

After analyzing the electricity sector of the target market and researching U.S. and international players in the solar photovoltaic (PV) sector, Green Powered Technology, LLC (GPTech), finds that the proposed project meets the USTDA’s basic funding criteria and, therefore, recommends USTDA funding. In summary of the merits of the proposal, the following apply: (1) the prospective Grantee is likely to secure financing for the proposed project, (2) solar PV projects in Kenya could represent opportunities for the sale of U.S. goods and services that are many times greater than the initial investment of USTDA assistance (GPTech estimates that U.S. firms could supply more than $11 million in goods and services for the proposed project), (3) renewable energy is a development priority for both the United States and the Government of Kenya, and (4) the proposed assistance will help U.S. companies to increase their footprint in a market dominated by Asian firms, many of which receive subsidies from their governments.

PROJECT DESCRIPTION
KenGen has a commitment to generate electricity using renewable sources that include hydropower, geothermal, wind, and solar technologies. KenGen views the recent price trends in the solar PV market as providing an opportunity for solar power generation. KenGen is considering an investment in a 10-megawatt (MW) pilot solar PV plant in Gitaru, Kenya, on land adjacent to the KenGen-owned 225-MW Gitaru Hydroelectric Power Station. The site is close to the grid connection for power evacuation and water and has the advantage of huge tracts of land already owned by the company. During GPTech’s DS review of the proposal, KenGen asked to expand capacity plan for the project up to 40 MW and GPTech modified the terms of reference (TOR) to include such analysis without increasing the budget.

Overview of Kenyan Energy Sector
In 2013, Kenya produced 8,876 gigawatt hours of electricity—44 percent was hydropower, 30 percent was produced from fossil sources, and 20 percent was produced by geothermal
As of October 2015, Kenya has yet to adopt official targets for renewable energy and is not bound by any regional agreements. However, the Government of Kenya and the Ministry of Energy’s “Vision 2030” strategy states that Kenya’s installed capacity will need to reach 19 gigawatts (GW) by 2030; renewable energy sources are expected to play a vital role in this expansion. The Energy Act, 2006, includes a strategy and framework to promote renewable energy and to increase market penetration. During the U.N. Framework Convention on Climate Change Conference of the Parties, Kenya committed to abate its greenhouse gas (GHG) emissions by 30 percent by 2030 relative to the business-as-usual scenario of 143 metric tons of carbon dioxide equivalent (MT CO₂eq).

To meet this ambitious goal while promoting healthy economic growth, Kenya plans to tap its geothermal, solar, and wind resources.

Kenya currently relies heavily on hydropower (which is risky due to uncertain precipitation) and expensive diesel generation. To diversify its energy mix, Kenya has implemented a number of policies to help encourage investment, including feed-in tariffs, tax incentives, and energy production payments for renewable energy technologies.

To encourage solar PV development, the Government of Kenya has introduced a feed-in tariff of $0.12 per kilowatt hour ($0.12/kWh) for grid-connected solar plants of between 0.5MW to 40 MW and a maximum cumulative capacity of upto 100MW. The Government of Kenya has also zero-rated the import duty and removed value added tax (VAT) on solar PV panels and accessories that are not equipped with diodes, batteries, or similar equipment. The Energy Regulations 2012 (solar PV), published by the Energy Regulatory Commission (ERC) of Kenya, provides a policy framework for solar PV development.

Kenya leads the way in the East African region in terms of power market sophistication; however, the level of privatization and unbundling in the electricity markets continues to be limited with national companies maintaining a dominant position and with governments reluctant to fully relinquish control over the national power companies. National utilities in the region often remain vertically integrated (controlling generation, transmission, and distribution). However, there is an uptick in the number of new entrants and private foreign competitors in Kenya’s renewable energy industry.

Kenya’s energy industry and its key players are diagrammed in figure 1 and discussed below:

- **Ministry of Energy and Petroleum (MoEP):** Responsible for policies to create an enabling environment for efficient operation and growth of the sector. It sets the

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5 BMI.
strategic direction for the growth of the sector and provides a long term vision for all
sector players.

- **Energy Regulatory Commission (ERC)**: Oversees all regulatory functions including
economic and technical regulation of electric power, renewable energy, and
downstream petroleum sub sectors. Its reasonability includes tariff setting and review,
licensing, enforcement, dispute settlement and approval of power purchase and
network services contracts.

- **Geothermal Development Company (GDC)**: Fast tracks the development of
devotional resources in the country as a Special Purpose Vehicle that is 100% state-
owned company

- **Rural Electrification Authority (REA)**: Responsible for enhancing rural
electrification in the country.

- **KenGen**: Operates in a liberalized power generation environment and sells all
electric power generated in bulk to Kenya Power, who then distributes it to
consumers.

- **Kenya Power and Lighting Company (KPLC) now known as Kenya Power**: The single off-taker in the power market, buying power from all power
generators on the basis of negotiated Power Purchase Agreements for onward
transmission, distribution and supply to consumers (single seller).

- **Kenya Electricity Transmission Company (KETRACO)**: A government
owned company established to plan, design, construct, own, operate and maintain
new high voltage (132kV and above) electricity transmission infrastructure that
will form the backbone of the National Transmission Grid and regional inter-
connections.

- **Independent Power Producers (IPPs)**: Private investors in the power sector
involved in competitively procured large scale generation and the development
of renewable energy under the Feed-in-Tariff Policy. The IPPs in Kenya include
Iberafrica, Tsavo, Mumias-Cogeneration, OrPower 4-Geothermal, Rabai Diesel,
Thika Diesel, Gulf Diesel, Imenti FiT hydro, Gikira FiT hydro and Aggreko

- **Kenya Nuclear Electricity Board (KNEB)**: has the responsibility of
developing a comprehensive legal and regulatory framework for the use of nuclear
energy in Kenya
Kenya receives daily solar insolation of 4 to 6 kilowatt hours per square meter (kWh/m²).\(^1\) Solar PV systems in Kenya are currently used mainly for telecommunication, cathodic protection of pipelines, lighting, and water pumping. Barriers slowing solar project development include high initial capital costs, low awareness of the potential opportunities and economic benefits offered by solar technologies, quality of infrastructure, and lack of adherence to system standards by suppliers.\(^2\)

Despite these barriers, the future of solar PV project development in Kenya has the advantage of a promising regulatory environment; positive demographic fundamentals and electrification programs mean more electric power customers and higher levels of energy consumption. The industry is also receiving support from development banks and international financial institutions, which play an important role in reducing financial risks for projects.

**Laws and Regulations**

Table 1 reflects the primary legislation that governs energy in Kenya.

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\(^2\) Ibid.
Table 1. Kenyan Energy Legislation¹

<table>
<thead>
<tr>
<th>Legislation/Regulation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tax Incentives for Renewable Energy (2015)</td>
<td>Under the VAT Act, 2013, and VAT Act, 2014 (amendment to the VAT Act 2013), Kenya offers an exemption from VAT and import duties for supplies imported or bought for the construction of a power-generating plant. According to the VAT Acts, solar cells and modules that are not equipped with elements, such as diodes, batteries, or similar equipment, are free from import duty and exempt from VAT. Solar PV semiconductor devices, including solar PV cells and light-emitting diodes, are subject to a 5% import duty and 16% VAT.</td>
</tr>
</tbody>
</table>
| Second Revision to Feed-In Tariffs for Renewable Energy (2012) | The second revision of feed-in tariffs for Kenya introduced the following:  
  - standardized power purchase agreements (PPAs) templates to be used as a basis for negotiations  
  - guidelines for connecting small-scale renewables to the grid to be used when undertaking mandatory grid connection study  
  - revised implementation guidelines to include a standardized application form and progress reporting and monitoring framework  
  - changed feed-in tariff levels ($0.12/kWh for grid-connected solar PV plants up to 0.5MW to 40MW and a maximum cumulative of up to 100 MW) |
| Least-Cost Power Development Plan 2011–2031               | Kenya’s power industry generation and transmission system planning is undertaken on the basis of a 20-year rolling Least-Cost Power Development Plan (LCPDP), which is updated every year.  
  
  It is estimated that the 2011 peak load will grow 13 times by the year 2031. Forecasted peak demand for 2031 is 15,026 MW. In its LCPDP for the period 2011–2031, the Government of Kenya identified that geothermal energy is the least-cost choice technology to meet Kenya’s growing energy demand. The cumulative geothermal capacity target is 5.5 GW for the planning period, which is equivalent to 26% of the system peak demand by 2031. Wind and hydropower plants will provide 9% and 5% of total capacity, respectively, by 2031.  
  
  The present value of the total system expansion cost over the period 2011–2031 for the reference case development plan amounts to $41.4 billion (in U.S. dollars), expressed in constant prices as of the beginning of 2010.  
  
  The transmission development plan indicates the need to develop approximately 10,345 km of new lines at an estimated present cost of $4.48 billion (in U.S. dollars). |
| Energy Regulatory Commission established (2007)            | Under the Energy Act of 2006, the Electricity Regulatory Board became the Energy Regulatory Commission (ERC). The Renewable Energy Department of the ERC carries out the following:  
  - Assists the Ministry of Energy to develop and monitor regulations and standards for all forms of renewable energy. This activity is done in consultation with statutory bodies, such as the Kenya Bureau of Standards |

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and Kenya Forest Services.
- Prepares an indicative energy plan for renewable energy using available energy data and carrying out relevant research activities in this sector.
- Promotes energy efficiency and conservation across the renewable sector, as well as the petroleum and electricity sector.

| Energy Act, 2006 | The Energy Act, 2006, sets up the ERC, an independent regulator meant to formulate licensing procedures, issue permits, make recommendations for further energy regulations, set and adjust tariffs, approve PPAs, and prepare national energy plans. The Energy Act, 2006, entrusts the Ministry of Energy to elaborate sustainable renewable energy production, distribution, and commercialization frameworks. These ministerial frameworks shall place emphasis on the expansion of local manufacturing sectors and shall provide specific incentives to existing renewable markets, such as solar systems (Articles 103–106).

The Ministry of Energy shall also improve levels of international co-operation in the field of technology transfer and financial support. Renewable energy support tools included in the Energy Act, 2006, are as follows:
- an authorization for 4-MW capacity (or a minimum of 30% of the co-generation plant total capacity) renewable energy systems to produce energy without a license
- income tax holidays for relevant generation and transmission projects
- full custom and import duties exemption for exclusive renewable energy equipment

Along with this renewable energy support framework, the Energy Act, 2006, creates the Rural Electrification Program that promotes locally available, sustainable, and efficient renewable electricity generation for household, farming, and nonagricultural income-generating activities. |

**Feed-in tariff Scheme**
FiTs for power from renewable energies were introduced in March 2008, reviewed in January 2010 and updated again in December 2012. Tables 2 and 3 provides the current rates. The FIT scheme allows power producers to sell electricity generated from renewable energy to the off-taker, Kenya Power, at a pre-determined tariff for a given period of time. The scheme is technology-specific.
Table 2. FIT (2012) for Projects less than 10 MW

<table>
<thead>
<tr>
<th></th>
<th>Installed Capacity (MW)</th>
<th>Standard FiT (US$/kWh)</th>
<th>% of FiT subject to esc</th>
<th>Min. Capacity (MW)</th>
<th>Max Capacity (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind</td>
<td>0.5 – 10</td>
<td>0.11</td>
<td>12%</td>
<td>0.5</td>
<td>10</td>
</tr>
<tr>
<td>Hydro</td>
<td>0.5</td>
<td>0.105</td>
<td>8%</td>
<td>0.5</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>0.0825</td>
<td>8%</td>
<td>0.5</td>
<td>10</td>
</tr>
<tr>
<td>Biomass</td>
<td>0.5 – 10</td>
<td>0.10</td>
<td>15%</td>
<td>0.5</td>
<td>10</td>
</tr>
<tr>
<td>Biogas</td>
<td>0.2 – 10</td>
<td>0.10</td>
<td>15%</td>
<td>0.2</td>
<td>10</td>
</tr>
<tr>
<td>Solar (grid)</td>
<td>0.5 – 10</td>
<td>0.12</td>
<td>8%</td>
<td>0.5</td>
<td>10</td>
</tr>
<tr>
<td>Solar (off-grid)</td>
<td>0.5 – 10</td>
<td>0.20</td>
<td>8%</td>
<td>0.5</td>
<td>10</td>
</tr>
</tbody>
</table>

Table 3. FIT (2012) for Projects more than 10 MW

<table>
<thead>
<tr>
<th></th>
<th>Installed Capacity (MW)</th>
<th>Standard FiT (US$/kWh)</th>
<th>% of FiT subject to esc</th>
<th>Min. Capacity (MW)</th>
<th>Max Capacity (MW)</th>
<th>Max Cumulative Capacity (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind</td>
<td>10.1 – 50</td>
<td>0.11</td>
<td>12%</td>
<td>10.1</td>
<td>50</td>
<td>500</td>
</tr>
<tr>
<td>Geothermal</td>
<td>35 – 70</td>
<td>0.088</td>
<td>20%/15%</td>
<td>35</td>
<td>70</td>
<td>500</td>
</tr>
<tr>
<td>Hydro</td>
<td>10.1 – 20</td>
<td>0.825</td>
<td>8%</td>
<td>10.1</td>
<td>20</td>
<td>200</td>
</tr>
<tr>
<td>Biomass</td>
<td>10.1 – 40</td>
<td>0.10</td>
<td>15%</td>
<td>10.1</td>
<td>40</td>
<td>200</td>
</tr>
<tr>
<td>Solar (grid)</td>
<td>10.1 – 40</td>
<td>0.12</td>
<td>12%</td>
<td>10.1</td>
<td>40</td>
<td>100</td>
</tr>
</tbody>
</table>

Major Regulatory and Administrative Steps to Project Implementation

Below are the steps necessary to comply with Kenyan regulations for solar PV project implementation. KenGen is registered as an established utility. The company also owns the land on which it proposes to build the solar PV plant. It has, therefore, completed Step 1 of the steps necessary for the clearance of a solar PV project below.

Renewable projects need to abide with the feed-in tariffs application and implementation guidelines; feed-in tariffs policy; connection guidelines for a small renewable generating plant; and other relevant laws, regulations, and policies applicable to electricity generation and renewable energy projects in Kenya.

Implementation of a renewable energy power plant project generally consists of the following eight steps:

1. site and project identification
2. feasibility studies
3. land acquisition
4. licensing and consents
5. financing
6. EPC
7. testing and commissioning
(8) operations, maintenance, and reporting

The steps necessary for the clearance of a solar PV project are listed below.

Step 1:
- Register company.¹
- Acquire purchased or leased land.

Step 2:
- Obtain approval of expression of interest (EOI), the requirements and conditions of which are stated below:
  - Statement of Purpose: The Ministry of Energy and Petroleum will determine how the proposed power plant will be integrated into the national power development plan and will estimate the suitability of the proposed power plant location for interconnection, including interconnection facilities and costs.
  - Application Fee: None
  - Clearance Fee: None
  - Maximum Processing Time: 90 days
  - Validity: 24 months to complete feasibility study
  - Clearance Type: Approval
  - Legal Basis: No primary or secondary legislation is in place. The Ministry of Energy and Petroleum describes the procedure in the Feed-In Tariffs Policy, 2012.
  - Renewal: 2 years, subject to the investor updating the Feed-In Tariff Policy Committee
- Submit the EOI to the Ministry of Energy and Petroleum.
- The Feed-In Tariff Policy Committee reviews the EOI.
- The Feed-In Tariff Policy Committee approves the EOI with or without a feasibility study.

Step 3:
- Obtain an environmental impact assessment license.

Step 4:
- Feed-In Tariff PPA
  - Approval of PPA
- Capacity-Based Power PPA
  - Approval of PPA

Step 5:
- Obtain approval of change of user.
- Obtain a development permit.

¹ Note: This would not be applicable if the project is implemented and owned 100% by KenGen
Developing a renewable electricity generation project under the Feed-In Tariffs Policy, 2012, requires the completion of a number of steps. Table 4 provides an overview and estimated timeline of these steps.¹

**Table 4. Overview and Estimated Timeline for a Renewable Electricity Generation Project**

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Responsibility</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>A project applicant identifies and undertakes a pre-feasibility assessment of the proposed project site.</td>
<td>Applicant</td>
<td></td>
</tr>
<tr>
<td>The project applicant submits an expression of interest (EOI) project application form to the Ministry of Energy and Petroleum.</td>
<td>Applicant</td>
<td>Start</td>
</tr>
<tr>
<td>The Feed-In Tariff Committee reviews the EOI application form and either approves the project for a 3-year exclusivity period or rejects it. The committee may require the applicant to provide further information in support of his or her EOI before acceptance or rejection.</td>
<td>Feed-In Tariff Committee</td>
<td>3 months</td>
</tr>
<tr>
<td>The applicant performs a full feasibility study for the project.</td>
<td>Applicant</td>
<td>24 months</td>
</tr>
<tr>
<td>The Feed-In Tariff Committee reviews the feasibility study.</td>
<td>Feed-In Tariff Committee</td>
<td>3 months</td>
</tr>
<tr>
<td>Conclusion of Non-Negotiable Power Purchase Agreement</td>
<td>Applicant/Power Off-Taker</td>
<td>4 months</td>
</tr>
<tr>
<td>The National Regulator approves the purchase power agreement.</td>
<td>Regulator</td>
<td>3 months</td>
</tr>
<tr>
<td>The applicant completes the development, construction, and commissioning of the project.</td>
<td>Applicant</td>
<td>1-3 years</td>
</tr>
</tbody>
</table>

**Proposed Technological Approach**

Solar PV refers to the generation of electrical power by converting photons of light energy into direct-current electricity by means of semiconductors that employ the PV effect. A number of materials are used in solar PV, including monocrystalline silicon, polycrystalline silicon, amorphous silicon, cadmium telluride, and copper indium gallium selenide/sulfide. These materials are commonly organized in groups of cells assembled into modules, which are installed in a favorable orientation to the sun’s rays. The modules are wired together into multiple strings feeding inverters that convert the direct-current power to alternating-current power. Modules and inverters can be organized to create power plants of any size. These power plants can be integrated with other power-generating systems or can be designed to operate independently with some form of energy storage.

**PROJECT DETAILS**

KenGen is considering investment in a 10 MW pilot solar PV plant in Gitaru, Kenya, approximately 160 km northeast of Nairobi on land adjacent to the KenGen-owned 225 MW

Gitaru Hydroelectric Power Station. The GPS coordinates is E359701, N9912078, Elevation 967 m (UTM). The site is about 8 km off the Kangonde - Embu road and along the Gitaru – Kiambere road.

The project could also be upgraded in the future to operate in tandem with the hydropower plant as a hybrid to make it a fully dispatchable energy source and to save on water in the dam. The site is close to the grid connection, making power evacuation and access to water convenient. Because the pilot plant will only occupy a fraction of KenGen’s land, the company will be able to scale up its investment if the pilot project is successful. The proposed land at Gitaru is 900 hectare. KenGen estimates the land at Gitaru provides a potential development of about 350MW solar power generation. Based a prior feasibility study, the land requirements for a 2, 10, and 20MW PV Power Plant is respectively 28,254, 138,348 and 276,165 m². The land is free of any settlements and is currently lying fallow. Therefore, development of the project would have minimal negative environmental and social impacts.

KenGen carried out a feasibility study from 2012 to 2013 and later installed a weather station at the site in January 2014 to collect solar irradiation data. As a result, more than 2 years of Global Horizontal Irradiation (GHI) data are available for this site, which has a recorded annual average GHI value of 2,117 kWh/m² per year that is well above the commercial threshold of 1,750 kWh/m² per year.

KenGen is seeking a USTDA technical assistance grant to engage a contractor to update the existing feasibility study, taking into consideration the onsite data that have been collected; scope the pilot project; prepare the concept design, cost estimate, and implementation schedule; carry out financial analysis to determine the feasibility of the project; and, lastly, prepare the tender documents for procurement of an EPC contractor.

**PROJECT SPONSOR’S CAPABILITIES AND COMMITMENT**

KenGen is well suited to develop a solar project because of its experience in developing power-generation projects in Kenya and its strong interest in developing capacity through renewables and financial strength. KenGen’s significant asset base, balance sheet, and project development expertise sets the company apart from its peers.

KenGen is the leading power-generation company in Kenya, producing 70 percent of electricity consumed in the country. KenGen’s core business is to develop, manage, and operate power-generation plants to supply bulk electric energy to the Kenyan market and the East Africa region. In 2015, KenGen had an installed capacity of 1,617 MW from 32 power-generating plants comprising hydropower (819.9 MW), geothermal (508.8 MW), thermal (262.5 MW), and wind (25.5 MW) technologies. The power is sold to one customer, Kenya Power, which is the country’s sole power off-taker. The current installed capacity in Kenya is 2,320 MW.¹

The map in Figure 2 shows the locations of the KenGen’s existing power installations.

¹ KenGen proposal.
Strategic Direction
KenGen’s strategy is to triple power-generation capacity in the next 10 years with over 80 percent of that capacity generated by renewable sources. KenGen’s strategic direction aligns well with the national growth plan. This is aimed at stabilizing and creating a sustainable power system in the country by increasing generation capacity from the initial 918 MW in 2007 to over 3,000 MW by 2018.

History
KenGen was incorporated in 1954 under the Companies Act of the Laws of Kenya as Kenya Power Company (KPC). KenGen was formed with the initial mandate of constructing electricity transmission lines between Nairobi and Tororo in Uganda to import power from the Owen Falls hydroelectric plant and, later, of managing all local power-generation resources. The East Africa Power & Lighting Company (EAP&L) was then contracted by the
shareholders of KPC to manage the company on their behalf. The EAP&L Company later changed to Kenya Power & Lighting Company (KPLC) in 1983.

Following the energy sector reforms in 1996, the management of KPC was formally separated from Kenya Power and renamed KenGen in January 1997. In 2006, KenGen was listed on the Nairobi Securities Exchange after the Government of Kenya sold 30 percent of its stake in the company through a very successful initial public offer.

**Management**

KenGen is headed by a managing director and CEO who reports to a board of directors. The Business Development Division is responsible for capital planning and project execution. The Capital Planning Department is responsible for energy planning, project planning, and power-generation monitoring. The team lead for the solar PV project is the assistant manager of capital planning, who reports to the capital planning and public private partnerships manager.

![KenGen Top Organizational Structure](image)

**Figure 3: KenGen Top Organizational Structure**
Figure 4: Business Development Divisional Structure
ANNEX 3: USTDA NATIONALITY REQUIREMENT
The purpose of USTDA’s nationality, source, and origin requirements is to ensure 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, 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, non-U.S. citizens lawfully admitted for permanent residence in the United States or non-U.S. citizens lawfully admitted to work 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.
NATIONALITY:

1) Application

A U.S. firm that submits a proposal must meet USTDA’s nationality requirements as of the date of submission of the proposal and, if selected, must continue to meet such requirements throughout the duration of the USTDA-funded activity. These nationality provisions apply to all portions of the Terms of Reference that are funded with the USTDA grant.

2) Definitions

A "U.S. firm" is a privately owned firm that 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. citizens and/or non-U.S. citizens lawfully admitted for permanent residence in the United States, 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 that is organized in the U.S., has its principal place of business in the U.S., and is more than 50% owned by U.S. citizens and/or permanent residents, qualifies as a “U.S. firm”.

A nonprofit organization, such as an educational institution, foundation, or association, also qualifies as a “U.S. firm” if it is incorporated in the U.S. and managed by a governing body, a majority of whose members are U.S. citizens and/or permanent residents.

SOURCE AND ORIGIN:

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.

Version 01.17.2014
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Version 01.17.2014
ANNEX 4: GRANT AGREEMENT, INCLUDING MANDATORY CONTRACT CLAUSES
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 Kenya Electricity Generating Company Limited (“Grantee”). USTDA agrees to provide the Grantee under the terms of this Grant Agreement US$998,000 (“USTDA Grant”) to fund the cost of goods and services required for a feasibility study (“Study”) on the proposed ten Megawatt (“MW”) Gitaru Solar Photovoltaic Power Plant (“Project”) in Kenya (“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 office space and secretarial support. The Grantee shall provide the Contractor with all currently available information and data regarding the Project that is in the possession and/or control of the Grantee.

The Grantee shall facilitate the Contractor’s access to the proposed site, provide guidance to the Contractor on the Contractor’s proposed approach to contact information sources in Kenya, and review and provide concurrence on the Contractor’s plan to contact and meet with other Project stakeholders to assess their interest in and potential impact on the Project.
The Grantee shall provide the Contractor with on-site measured data for the Contractor’s solar resource assessment under Subtask 2(b). The Grantee-provided data shall include all Global Horizontal Irradiation data from the weather station installed on January 2014.

The Grantee shall assist the Contractor to obtain the necessary information and documents needed for connecting the Project under Kenya’s feed-in-tariff program and to follow relevant requirements under Kenya’s Grid Code.

The Grantee will be responsible for providing the venue and arranging for its staff to attend the Training Session (including venue fees, potential staff accommodation, food/drink) conducted by the Contractor under Task 10.

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 (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 copy of an English language version of the final negotiated draft version of the Contract. USTDA then shall notify the Grantee and the Contractor whether or not USTDA approves the Contract before execution of the Contract by both parties. The Grantee shall then provide a photocopy of the duly executed Contract to USTDA for its records.
(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 June 30, 2018, 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

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 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, non-U.S. citizens lawfully admitted for permanent residence in the United States or non-U.S. citizens lawfully admitted to work 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.

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 Chief Executive Officer. 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: Kenya Electricity Generating Company Limited  
   Stima Plaza Phase II Kolobot Road Parklands  
   P.O. Box 47936-00100  
   Nairobi, Kenya  
   Attn: Elizabeth Njenga, Capital Planning and Strategy Manager  
   Phone: +254-20-3666427  
   E-Mail: enjenga@kengen.co.ke; cc: jnjeru@kengen.co.ke

To: U.S. Trade and Development Agency  
   1000 Wilson Boulevard, Suite 1600  
   Arlington, Virginia 22209-3901
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.: 1111/16 10001  
Activity No.: 2016-11019A  
Reservation No.: 2016174  
Grant No.: GH201611174

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.

[THE REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK]
IN WITNESS WHEREOF, the Government of the United States of America and Kenya Electricity Generating Company Limited, 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: [Signature]

Date: [Signature]

Witnessed:

By: [Signature]

For Kenya Electricity Generating Company Limited

By: [Signature]

Date: [Signature]

Witnessed:

By: [Signature]

Annex I – Terms of Reference

Annex II – USTDA Mandatory Contract Clauses
Annex I

Terms of Reference

This feasibility study ("Study") shall provide Kenya Electricity Generating Company Limited ("Grantee") with the necessary analysis and recommendations for the implementation and operation of a ten megawatt ("MW") solar photovoltaic ("PV") power plant ("Project") co-located next to an existing Grantee-owned 225 MW hydroelectric dam in Gitaru, Kenya. The primary objective of the Study is to assess the technical, economic and financial viability of the Project and to prepare the tender documents for procurement of an engineering, procurement and construction ("EPC") contractor to implement the Project, in accordance with the tasks and deliverables of these Terms of Reference ("TOR") as set forth below. The Study shall include guidance on how the Grantee could scale-up the Project to 40 MW in phases, with the first phase having a capacity of ten MW. A secondary objective of the Study is to assist the Grantee with its technical capacity and understanding of the feasibility process for solar PV projects, so the Grantee can independently conduct similar assessments in the future.

The Grantee shall be solely responsible for any costs incurred by the Grantee for technical labor, travel, and/or other support provided by the Grantee to the Contractor in performance of the Study as described in the TOR.

The Contractor shall perform the following tasks described in the TOR. All data collected, designs made, and/or analyses produced by the Contractor in performance of each task ("Task") under the Study shall be documented in written reports and constitute a deliverable ("Deliverable") in the manner described below.

Task 1: Kick-Off Meeting and Information Gathering; Review of Prior (2012) Feasibility Study

The Contractor shall hold a kick-off meeting in Nairobi, Kenya with the Grantee within four weeks of contract award to review the TOR with the Grantee and develop a detailed work plan based on the TOR ("Work Plan"). The Work Plan shall detail the Study timeline and milestones, and shall form the basis for assessing the Contractor’s monthly progress. During this kick-off meeting, the Contractor shall establish the Grantee’s desired reporting formats and timing for monthly reporting updates. The Grantee and Contractor’s points of contact and key members of the Project team shall be identified and roles and responsibility of each member established. The Contractor, with assistance from the Grantee, shall identify the key Project stakeholders (e.g. Energy Regulatory Commission of Kenya, Kenya Power and Lighting Company ("KPLC"), Ministry of Energy) and review their interest and influence on the implementation of the Project. As part of the Study, the Contractor shall specifically address the role and requirements of KPLC as the primary off-taker for the Project, as well as under the power purchase agreement between KPLC and the Grantee ("PPA").
The Grantee shall provide the Contractor with any existing reports, including previous feasibility studies, solar radiation data collected, site surveys, environmental studies, geotechnical analysis, and electricity infrastructure drawings. The Contractor shall review this material, identify any information gaps and develop a plan for collecting such information. The Contractor shall discuss with the Grantee the required access to the proposed site and the approach for collecting data from various sources. The Grantee shall facilitate the Contractor's access to the proposed site, provide guidance to the Contractor on the Contractor's proposed approach to contact information sources in Kenya, and review and provide concurrence on the Contractor's plan to contact and meet with other Project stakeholders to assess their interest in and potential impact on the Project.

**Task 1 Deliverable:** The Contractor shall provide the Grantee a report that contains all findings and provides a detailed account of all work performed under Task 1, including, but not limited to, (i) the Work Plan that details the Study timeline, milestones, Deliverables, and roles and responsibilities of the Contractor and Grantee for successful completion of the Study; (ii) a review of key stakeholders and outreach conducted to gather stakeholder feedback on the Project; and (iii) a review of Project materials and existing reports, identification of information gaps, and plan for obtaining necessary information. The Task 1 Deliverable shall be included as a stand-alone chapter in the Final Report.

**Task 2: Technical Analysis and Conceptual Design**

**Subtask 2(a): Site Survey and Geotechnical Analysis**

The Contractor shall conduct a land survey and geotechnical analysis at the proposed power plant site. The survey and geotechnical analysis shall be detailed enough for development of civil work\(^1\) costs, including any earthwork and foundation costs, for the Project. The civil works costs shall include any drainage, grading, leveling and fencing that may be required at the proposed site. The Contractor shall evaluate different types of foundation design including, but not limited to, ballasted foundations and pounded steel pile foundations, and select the most appropriate design for the Project site.

**Subtask 2(b): Collection of Available Solar Irradiation and Meteorological Data**

The Contractor shall assess the solar resource using GeoModel Solar Time series 18-year hourly data (total irradiance, diffuse irradiance and temperature) or other satellite-derived data, as well as data adapted from on-site or neighboring weather stations’ measurements. The findings from the solar resource assessment shall be incorporated into the performance models in Subtask 2(c). The Grantee shall provide the Contractor with on-site measured data for this assessment, which includes over two years of Global Horizontal Irradiation data from a weather station installed on January 2014.\(^2\)

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\(^1\) Civil works includes typical civil engineering tasks: project planning, layout, geotechnical and structural design elements, including grading and drainage design.

\(^2\) The on-site weather station currently uses a Vaisala AWS310 with a CMP6 Pyranometer to take by the minute measurements for air temperature, humidity, barometric pressure, wind speed and direction, precipitation, GHI solar radiation (W/m\(^2\)), and evapotranspiration (mm/day).

Annex I-2
If the Contractor finds the on-site measured data insufficient, they shall suggest modifications that need to be made by the Grantee to its existing weather station or suggest an alternative solar resource assessment approach that the Grantee should adopt going forward (e.g., bankable satellite assessment option). The Contractor shall present the data in an industry standard format for assessment of solar resources that would be acceptable to financial institutions.

Subtask 2(c): Technology Assessment, Conceptual Design, and Project Performance Modeling

Using the data collected in Task 1, Subtasks 2(a) and 2(b), equipment manufacturer design and performance information, and other available information, the Contractor shall assess available solar PV technologies, develop a conceptual plant design and technical specifications, develop a model plant performance and energy production profile, and perform interconnection analysis for the Project.

The Contractor shall conduct an assessment of available solar PV technologies that may be used for each of the following components of the Project: solar PV modules, inverters, trackers, transformers, switchgear, meters, and balance of system components. The Contractor shall collect, analyse, and consider the following factors in its assessment of each PV technology:

- Basic topography of the proposed site (publically available data such as a contour survey);
- Geotechnical analysis for the proposed site (Subtask 2(a));
- Solar resource and meteorological data (Subtask 2(b));
- Access roads and construction logistics evaluation;
- Interconnection with the national electricity grid;
- Electrical evacuation alternatives;
- Equipment required for construction and maintenance;
- Performance, availability, and equipment warranties;
- Operations and maintenance schedule and costs; and
- Auxiliary power requirements during construction and operation.

The Contractor shall develop a conceptual plant design and technical specifications for a ten MW solar PV plant that include, but are not limited to, the following items:

- Site plan and layout;
- Electrical single line diagrams³;
- Instrumentation and control systems;
- Major equipment list with sizing;

³ One-line diagram or single-line diagram ("SLD") is a simplified notation for representing a three-phase power system in power engineering. Electrical elements such as circuit breakers, transformers, capacitors, bus bars, and conductors are shown by standardized schematic symbols. It is a form of block diagram graphically depicting the paths for power flow between entities of the system.
• Major equipment specifications;
• Plant cost estimation (implementation and operation); and
• Energy production estimation.

After completing the conceptual design and technical specifications for the Project, the Contractor shall analyse plant design variables and run cost and performance model(s) to develop an energy production profile for the Project using an industry standard model.

Based on the Contractor's technical analysis and conceptual design, the Contractor shall provide recommendations on how the Grantee can scale-up the Project to 40 MW in phases, with the first Project phase having a capacity of up to ten MW. The Contractor shall identify the factors and considerations for expanding PV capacity at the Project site and recommend options for layout of the Project site to best accommodate the addition of future solar PV capacity. The Contractor's recommendations shall address additional infrastructure required for subsequent PV installations (i.e., foundations; racks; and enclosures for modular components such as inverters, switchgear, and controllers; site electrical collection system backbone sizing; and sizing of grid interconnection equipment such as transformers, capacitor banks and their foundations, racks and enclosures) to ensure that expansion would not be constrained by the layout of the initial Project phase. The Contractor shall identify potential economies for investing in higher capacity site infrastructure during the first phase of the Project that could enable savings when implementing later Project phases.

**Task 2 Deliverable:** The Contractor shall provide the Grantee with a report that contains all findings and provides a detailed account of all work performed under Task 2. The Deliverable shall detail each Subtask 2(a) through 2(c), including results from the site survey and geotechnical analysis, the assessment of solar resource and meteorological data, the technology assessment, potential software files, model(s) developed, conceptual design and performance modeling for the Project. The model(s) shall be provided in a format that the Grantee can easily follow and adapt for future projects. The Task 2 Deliverable shall be included as a stand-alone chapter in the Final Report.

**Task 3: Transmission and Interconnection Study**

The Contractor shall assess interconnection requirements and develop a conceptual design for grid interconnection based on both the site assessment conducted in Task 2 and Kenya's Grid Code.

Since the capital cost of the Project will include the substation and the associated connection costs to the national electrical grid, the Contractor shall prepare a conceptual design for the new solar PV plant and power evacuation facility to the national grid. The Contractor shall also carry out a grid connection study to assess the potential impact of the Project on the national grid and required modifications to the existing substation equipment and other infrastructure. Since a grid connection study is required as part of Kenya's feed-in-tariff ("FiT") program, this grid connection study shall meet the FiT guidelines issued by the Ministry of Energy and Petroleum of Kenya. The Contractor’s grid connection study
shall also include a potential plan to transfer new infrastructure to the transmission company after commercial operations of the Project.

The Contractor's conceptual design shall take into account existing on-site substation equipment from the adjacent Grantee-owned 225 MW hydroelectric dam, such as electric lines, substation equipment, transformers, and other auxiliary equipment that could be leveraged.

The Contractor shall also provide high-level analysis and recommendations on potential options for integrating the existing hydroelectric dam with the solar PV plant in a hybrid configuration at a future stage of operation.

The Grantee shall assist the Contractor in obtaining the necessary information and documents needed for connecting the Project to the national grid under Kenya's feed-in-tariff program and to comply with Kenya's Grid Code requirements.

**Task 3 Deliverable:** The Contractor shall provide the Grantee a report of all work performed under Task 3, including a grid connection study, conceptual design for power evacuation and connection to the national grid and application requirements for Kenya's feed-in-tariff program. The Task 3 Deliverable shall be included as a stand-alone chapter in the Final Report.

**Task 4: Cost Estimate Preparation and Economic Analysis**

Once the Contractor has completed the conceptual engineering design in Task 2(c), the Contractor shall prepare a detailed EPC cost estimate. The Contractor shall review and revise the operations and maintenance (“O&M”) assessment that was completed under Task 2. The revised O&M costs shall reflect any new and/or updated information. The Contractor's estimate shall include a detailed breakdown of equipment and materials for all major components, including major equipment, balance of plant⁴, instrumentation and controls, and electrical interconnection.

Based on information analyzed under previous Tasks, the Contractor shall complete a Leveled Cost of Energy (“LCOE”) analysis for the conceptual design. The intent of the LCOE is to provide a high-level estimate of the anticipated capital, O&M, performance, and other LCOE cost factors for the Project.

The Contractor shall include in its analysis a cash flow analysis, Life Cycle Cost Analysis (“LCCA”), market conditions, raw material availability, supply agreements, the PPA, and competing alternative methods of achieving the same or similar Project objectives. The LCCA shall consider all initial capital costs (e.g., plan, design, development, and construction) and long-term operational costs (e.g., warranties, operations, maintenance, spare parts, installation, refurbishment, and disposal).

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⁴ Balance of plant will include all structural elements, cabling, wiring, switchgear, any combiner boxes and any re-combiner box requirements.
The Contractor shall perform an economic analysis which incorporates all costs and benefits associated with Project implementation, including assigning monetary value to non-market goods and services. The economic analysis must also take into account when the costs and benefits are incurred. The Contractor's economic analysis shall include a net present value and/or other standard indicator used by funding agencies/donors, such as the World Bank, the African Development Bank, and any other relevant investors as determined by the Contractor and Grantee for appraising investment projects.

The Contractor's economic analysis shall consider, at a minimum, the following items:

- Forecasted financial statements and supporting information;
- Forecasted sources and uses of funding;
- Forecasted key financial ratios and financial covenants;
- Expenses, O&M costs, and projected revenues;
- Inflation;
- Cost of capital (equity finance and external debt finance);
- Discounted value of future cash flows for the Project and discount rate used;
- Taxes; and
- Development fees and success payments.

The Contractor shall provide a rationale for the selected discount rate to ensure that the assumptions and methodologies used to select the discount rate are clear for potential financiers. Rationales may include, but are not limited to, the following:

- Opportunity cost of capital;
- Societal rate of time preference;
- Zero interest rate; and
- Cost of borrowing funds.

The Contractor shall perform a sensitivity analysis related to Project risk, including, but not limited to, capital costs (from -20 percent to 20 percent, in increments of five percent), operating and maintenance expenditure (from -20 percent to 20 percent, in increments of five percent), inflation indices where appropriate, exchange rates, and discount rate. The Contractor's sensitivity analysis may account for the cost recovery indicators based on different assumptions for key Project variables, such as electricity tariffs, sales volumes, capital and operating cost estimates, interest rates and investment requirements. The Contractor shall provide a financial model and report, including, but not limited to, net present value, payback time, internal rate of return, cash flow, and LCCA for the base case and all sensitivity analyses. The Contractor may use the Overseas Private Investment Corporation ("OPIC") Sources and Uses Financial Model\(^3\) or another verifiable model. The Contractor shall provide the Grantee with copies of the original electronic files for all economic and financial models.

**Task 4 Deliverable:** The Contractor shall provide the Grantee a report of all work performed under Task 4, including, but not limited to, the EPC cost estimates, O&M cost estimates, cash flow analysis, economic analysis, electronic financial models with detailed

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documentation, LCCA, and sensitivity analysis necessary to advance the development of the Project and that can be presented to potential sources of implementation financing for the Project. The Task 4 Deliverable shall be included as a stand-alone chapter in the Final Report.

**Task 5: Financial Analysis**

The Contractor shall meet with potential sources of implementation financing and gauge level of interest and potential terms from lenders and equity investors, and the Contractor shall determine potential combinations of debt and equity that would provide the full capital requirements for the Project.

The Contractor shall also identify potential U.S. private sources of equity, in addition to U.S. brand name franchisers or contractors that would help to connect the Project with U.S. private sector investors to provide at least 25 percent of project investment.

The Contractor shall also identify likely sources of debt funding options from entities including the Export-Import Bank of the United States ("U.S. Ex-Im Bank"), World Bank, regional multilateral development banks, and private sector sources of financing, such as commercial loans, supplier credits, and bond markets.

Based on the Contractor’s outreach and analysis, the Contractor shall provide the Grantee with recommendations for the financial structure and sources of financing for the Project.

**Task 5 Deliverable:** The Contractor shall provide a report of all work performed under Task 5, including, but not limited to, an assessment of potential sources of implementation financing for the Project and recommendations for the financial structure and sources of financing for the Project. The Task 5 Deliverable shall be included as a stand-alone chapter in the Final Report.

**Task 6: Environmental Review and Social Impact Assessment**

The Contractor shall conduct an environmental and social impact assessment ("ESIA") to ensure that the proposed Project complies with all relevant local environmental regulations; the necessary environmental permits have been secured by the project team; and the Project complies with the requirements of U.S. Ex-Im Bank, OPIC, and other potential sources of financing/funding. The Contractor’s ESIA should include at a minimum the following:

- Environmental and regulatory considerations;
- Permitting requirements;
- Assessment of land use and land agreements for the Project;
- Site environmental assessments;
- Site environmental restrictions;
- Environmental impacts across the design, construction, operation, and decommissioning phases;
- Environmental risk assessment;
- Public participation process;

Annex I-7
• Glare analysis;
• Air/water quality and noise assessment; and
• Waste management assessment.

The ESIA shall be performed in accordance with Kenya’s environmental regulations. The Contractor shall also conduct a social impact assessment in the context of the environmental review.

**Task 6 Deliverable:** The Contractor shall provide a report of all work performed under Task 6, including but not limited to, the ESIA described above. The Task 6 Deliverable shall be included as a stand-alone chapter in the Final Report.

**Task 7: Development Impact Assessment**

Anticipated outcomes of the Project implementation include increasing access to clean energy and reducing greenhouse gas ("GHG") emissions by stimulating increased investments in clean energy generating infrastructure in Kenya. The outcomes of the Study and subsequent Project will be measured by the performance indicators listed below. The Contractor shall provide an assessment of the potential development impact in Kenya if the Project is implemented according to the Study’s recommendations. This is essential to the ability of USTDA to measure and monitor the impact of its funding for the Study to support the Project’s implementation.

While there may be immediate benefits resulting from the completion of the Study (i.e., new technology applications or training for the Grantee’s staff), the Contractor’s development impact assessment shall focus on the outcomes that would result from the Project being implemented.

The Contractor’s analysis of the potential development impacts shall be concrete, detailed, and based on the data and information collected during the performance of the Study. The development impact factors are intended to provide the Project’s decision makers and interested parties with a broader view of the Project’s potential effects in Kenya. The Contractor shall analyze each of the indicators listed below:

• **Clean Energy Generation:** A description of Kenya’s physical infrastructure developed as a result of the implementation of the Project.
  - The number of renewable energy generating facilities that may receive financing as a result of this Study.
  - Quantity of operational renewable electric generation capacity as a result of the Project, measured in MW. The Contractor shall confirm whether this is still ten MW as anticipated or whether and why this may have changed as a result of the Study findings.

• **Human Capacity Building:**
  - Job Creation: A description of the number and type of staff, including the anticipated level of education and/or skills that would be needed to construct the Project.

Annex I-8
• Environmental Impacts:
  o The Contractor shall quantify the GHG emissions reduced or avoided, measured in metric tons of carbon dioxide ("CO₂"), if the Project is implemented. The Contractor shall calculate GHG emissions using publically available tools from the U.N. Framework Convention on Climate Change or an equivalent approved by the Grantee.
  o The Contractor shall also quantify any CO₂ that may be produced if the Project is implemented (e.g., diesel backup generation).
• Technology Transfer and Productivity Enhancement: A description of the potential knowledge and skills transfer and capacity building impacts expected from both the Project and the Study.
• Market Oriented Reforms: A description of any regulatory, legal, or institutional changes that are recommended and the effect such changes would have if implemented.

Task 7 Deliverable: The Contractor shall provide the Grantee a report of all work performed under Task 7, including, but not limited to, an assessment of the potential development impact in Kenya if the Project is implemented according to the Study recommendations. The Task 7 Deliverable shall be included as a stand-alone chapter in the Final Report.

Task 8: U.S. Sources of Supply Assessment

Based on information collected in Tasks 1-7, the Contractor shall identify U.S. manufacturers and suppliers of equipment and U.S. service providers that are capable of providing goods and services required for implementation of the Project. The primary categories of equipment addressed by the Contractor shall include, but are not limited to, solar PV modules, inverters, trackers, transformers, switchgear, meters, and balance of plant components. The Contractor shall identify potential U.S. service providers (i.e., technical, legal, financial consulting, EPC, O&M, etc.) for the Project. The Contractor shall discuss the Project with the relevant potential U.S. suppliers and service providers and analyze their interest in supplying equipment and services for the Project. The Contractor shall provide an assessment of the strengths of each potential supplier and service provider for the Project.

The Contractor shall prepare a list of qualified and interested U.S. suppliers and service providers for the Project. The list shall include: (i) potential U.S. sources of supply and services for the Project; (ii) a description of relevant products, solutions and services to be provided; and (iii) contact information for the parties responsible for marketing and sales in Kenya. The U.S. company names, contact name(s), physical and email addresses and phone numbers shall be included for each identified party.

Task 8 Deliverable: The Contractor shall provide the Grantee a report of all work performed under Task 8 including, but not limited to, an assessment of U.S. sources of equipment, supplies, and services for implementing the Project. The Task 8 Deliverable shall be included as a stand-alone chapter in the Final Report.

Annex 1-9
Task 9: Risk Analysis and Mitigation

The Contractor shall assess potential risks and mitigation strategies for the Project. The Contractor’s risk analysis shall include, but not be limited to, risks associated with the solar PV plant during all phases of the project (e.g., planning, construction, and operation), and potential mitigation options to manage these risks. The Contractor shall also provide more general guidance on common risks and mitigation approaches to consider for future solar PV projects in Kenya.

Task 9 Deliverable: The Contractor shall provide the Grantee a report of all work performed under Task 9 including, but not limited to, a risk analysis and recommendations for risk mitigation. The Task 9 Deliverable shall be included as a stand-alone chapter in the Final Report.

Task 10: Implementation Plan and Capacity Building

The Contractor shall develop an implementation plan for the Project, including a comprehensive plan, schedule, and timeline for the implementation of Project. The timeline shall include a list of required steps for Project implementation, including the PPA negotiations, project financing, design, procurement, construction, commissioning, start-up, and performance acceptance testing, indicating the estimated time required for each step, as well as milestones, including commercial operation date. The Contractor shall assess and recommend a logistics plan for delivering equipment to the Project site, ensuring security, identifying labor requirements, and recommending staffing based on local labor capacity.

In consultation with the Grantee, the Contractor shall develop and conduct a two-day training session for the Grantee’s staff that will address key aspects of the Project development and implementation and support the Grantee’s ability to develop future solar projects in Kenya (“Training Session”). The Training Session shall include guidance on modeling or software tools used, solar PV feasibility steps and best practices, U.S sources of supply, and other important Project-related lessons for the Grantee based on the findings of the Study. The Grantee shall be responsible for providing the venue and arranging for its staff to attend the Training Session (including venue fees, potential staff accommodation, food/drink), while the Contractor shall be responsible for the providing the instructional content, handout materials and leading the Training Session. The Contractor, in consultation with the Grantee, shall notify and provide updates to USTDA on the timing and agenda of the training at least three weeks prior to conducting the Training Session.

Task 10 Deliverable: The Contractor shall provide the Grantee a report of all work performed under Task 10, including, but not limited to, a comprehensive implementation plan for the Project. The Contractor shall also lead a two-day Training Session for the Grantee’s staff and provide the necessary content and instructional materials. Written work
product for the Task 10 Deliverable shall be included as a stand-alone chapter in the Final Report.

**Task 11: Prepare Documentation for Procurement of an EPC Contractor**

In consultation with the Grantee, the Contractor shall develop documentation necessary for the Project, including:

1. Tender documents with detailed technical specifications for EPC procurement based on the latest World Bank Procurement guidelines (i.e., Standard Bidding Documents for Procurements of Works);
2. Draft EPC contract, reflecting terms in accordance with World Bank Guidelines and industry best practices (e.g. appropriate allocation of risk, equipment procurement, warranty, commissioning, and payment milestones);
3. Completed forms and other supporting documents necessary to apply for Kenya’s feed-in-tariff.

**Task 11 Deliverable:** The Contractor shall provide a report of all work performed under Task 11, including, but not limited to tender documents required for EPC procurement and completed documentation necessary for feed-in-tariff application. The Task 11 Deliverable shall be included as a stand-alone chapter in the Final Report.

**Task 12: Final Report**

The Contractor shall prepare a final report that includes all Deliverables, analyses, findings, and work performed under these TOR ("Final Report"). The Contractor shall present the complete findings of the Study to the Grantee and provide an initial draft Final Report to the Grantee for review and discussion.

Once the Grantee has provided comments and revisions to the draft Final Report, the Contractor shall make the necessary changes and modifications. The Contractor shall prepare and deliver the Final Report to the Grantee and USTDA. The Final Report shall be organized according to the preceding Tasks, and shall include all Deliverables and work product that have been provided by the Contractor to the Grantee. The Final Report shall incorporate all of the findings, recommendations, and conclusions of the Study and shall incorporate all other documents and reports provided pursuant to the Tasks described above. In addition to the TOR Deliverables, the Final Report shall contain an Executive Summary. The Final Report shall be prepared in accordance with Clause I of Annex II of the Grant Agreement.

**Task 12 Deliverable:** The Contractor shall prepare and deliver the Final Report to USTDA and the Grantee in the manner set forth in Task 12 of the TOR and Clause I of Annex II of

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6 IFC’s Project Developers Guide for Utility-Scale Solar PV Power Plants provides more detail on best practices to be used in procuring EPC services.  
http://www.ifc.org/wps/wcm/connect/f05d3e00498e0841bb61bce5d141794/IFC+Solar+Report_WEB+08+05.pdf?MOD=AJPERES

Annex 1-11
the Grant Agreement. 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 Contractor shall provide the Grantee with six electronic copies of the Final Report on CD-ROM or USB media. The electronic version of the Final Report shall include:

- Adobe Acrobat readable copies of all documents;
- Source files for all drawings in AutoCAD or Visio format;
- Source files for all documents in Microsoft Office 2000 or later formats; and
- Source files for any analytical tools used to complete the TOR.
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 Kenya Electricity Generating Company Limited ("Client"), dated _____ ("Grant Agreement"). The Client has selected _______ ("Contractor") to perform the feasibility study ("Study") for the proposed ten Megawatt ("MW") Gitaru Solar Photovoltaic Power Plant project ("Project") in Kenya ("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, non-U.S. citizens lawfully admitted for permanent residence in the United States or non-U.S. citizens lawfully admitted to work 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.

Annex II-2
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.

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

Annex II-5
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;

(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.

Annex II-6
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 June 30, 2018, 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:

Annex II-8
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 11/16 10001  
Activity No.: 2016-11019A  
Reservation No.: 2016174  
Grant No.: GH201611174  

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:  

Elizabeth Njenga  
Capital Planning and Strategy Manager  
Kenya Electricity Generating Company Limited  
P.O. Box 47936-00100  
Phone: +254 711 036 000, +254 711 036427  
Email: enjenga@kengen.co.ke  

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

Name:  
Title:  

Annex II-9
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 damages that are natural, probable, and reasonably foreseeable as a result of a breach of this Contract, 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. If any clause included by the Contract Parties is inconsistent with either or both of these limitations, it shall be invalid and unenforceable to the extent of the inconsistency.

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: TERMS OF REFERENCE (FROM USTDA GRANT AGREEMENT)
Terms of Reference

This feasibility study (“Study”) shall provide Kenya Electricity Generating Company Limited (“Grantee”) with the necessary analysis and recommendations for the implementation and operation of a ten megawatt (“MW”) solar photovoltaic (“PV”) power plant (“Project”) co-located next to an existing Grantee-owned 225 MW hydroelectric dam in Gitaru, Kenya. The primary objective of the Study is to assess the technical, economic and financial viability of the Project and to prepare the tender documents for procurement of an engineering, procurement and construction (“EPC”) contractor to implement the Project, in accordance with the tasks and deliverables of these Terms of Reference (“TOR”) as set forth below. The Study shall include guidance on how the Grantee could scale-up the Project to 40 MW in phases, with the first phase having a capacity of ten MW. A secondary objective of the Study is to assist the Grantee with its technical capacity and understanding of the feasibility process for solar PV projects, so the Grantee can independently conduct similar assessments in the future.

The Grantee shall be solely responsible for any costs incurred by the Grantee for technical labor, travel, and/or other support provided by the Grantee to the Contractor in performance of the Study as described in the TOR.

The Contractor shall perform the following tasks described in the TOR. All data collected, designs made, and/or analyses produced by the Contractor in performance of each task (“Task”) under the Study shall be documented in written reports and constitute a deliverable (“Deliverable”) in the manner described below.

**Task 1: Kick-Off Meeting and Information Gathering; Review of Prior (2012) Feasibility Study**

The Contractor shall hold a kick-off meeting in Nairobi, Kenya with the Grantee within four weeks of contract award to review the TOR with the Grantee and develop a detailed work plan based on the TOR (“Work Plan”). The Work Plan shall detail the Study timeline and milestones, and shall form the basis for assessing the Contractor’s monthly progress. During this kick-off meeting, the Contractor shall establish the Grantee’s desired reporting formats and timing for monthly reporting updates. The Grantee and Contractor’s points of contact and key members of the Project team shall be identified and roles and responsibility of each member established. The Contractor, with assistance from the Grantee, shall identify the key Project stakeholders (e.g. Energy Regulatory Commission of Kenya, Kenya Power and Lighting Company (“KPLC”), Ministry of Energy) and review their interest and influence on the implementation of the Project. As part of the Study, the Contractor shall specifically address the role and requirements of KPLC as the primary offtaker for the Project, as well as under the power purchase agreement between KPLC and the Grantee (“PPA”).

The Grantee shall provide the Contractor with any existing reports, including previous feasibility studies, solar radiation data collected, site surveys, environmental studies, geotechnical analysis, and electricity infrastructure drawings. The Contractor shall review this material, identify any information gaps and develop a plan for collecting such information. The Contractor shall discuss with the Grantee the required access to the proposed site and the approach for collecting data from various sources. The Grantee shall facilitate the Contractor’s...
access to the proposed site, provide guidance to the Contractor on the Contractor’s proposed approach to contact information sources in Kenya, and review and provide concurrence on the Contractor’s plan to contact and meet with other Project stakeholders to assess their interest in and potential impact on the Project.

**Task 1 Deliverable:** The Contractor shall provide the Grantee a report that contains all findings and provides a detailed account of all work performed under Task 1, including, but not limited to, (i) the Work Plan that details the Study timeline, milestones, Deliverables, and roles and responsibilities of the Contractor and Grantee for successful completion of the Study; (ii) a review of key stakeholders and outreach conducted to gather stakeholder feedback on the Project; and (iii) a review of Project materials and existing reports, identification of information gaps, and plan for obtaining necessary information. The Task 1 Deliverable shall be included as a stand-alone chapter in the Final Report.

**Task 2: Technical Analysis and Conceptual Design**

**Subtask 2(a): Site Survey and Geotechnical Analysis**

The Contractor shall conduct a land survey and geotechnical analysis at the proposed power plant site. The survey and geotechnical analysis shall be detailed enough for development of civil work\(^1\) costs, including any earthwork and foundation costs, for the Project. The civil works costs shall include any drainage, grading, leveling and fencing that may be required at the proposed site. The Contractor shall evaluate different types of foundation design including, but not limited to, ballasted foundations and pounded steel pile foundations, and select the most appropriate design for the Project site.

**Subtask 2(b): Collection of Available Solar Irradiation and Meteorological Data**

The Contractor shall assess the solar resource using GeoModel Solar Time series 18-year hourly data (total irradiance, diffuse irradiance and temperature) or other satellite-derived data, as well as data adapted from on-site or neighboring weather stations’ measurements. The findings from the solar resource assessment shall be incorporated into the performance models in Subtask 2(c). The Grantee shall provide the Contractor with on-site measured data for this assessment, which includes over two years of Global Horizontal Irradiation data from a weather station installed on January 2014.\(^2\)

If the Contractor finds the on-site measured data insufficient, they shall suggest modifications that need to be made by the Grantee to its existing weather station or suggest an alternative solar resource assessment approach that the Grantee should adopt going forward (e.g., bankable satellite assessment option). The Contractor shall present the data in an industry standard format for assessment of solar resources that would be acceptable to financial institutions.

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\(^1\) Civil works includes typical civil engineering tasks: project planning, layout, geotechnical and structural design elements, including grading and drainage design.

\(^2\) The on-site weather station currently uses a Vaisala AWS310 with a CMP6 Pyranometer to take by the minute measurements for air temperature, humidity, barometric pressure, wind speed and direction, precipitation, GHI solar radiation (W/m\(^2\)), and evapotranspiration (mm/day).
Subtask 2(c): Technology Assessment, Conceptual Design, and Project Performance Modeling

Using the data collected in Task 1, Subtasks 2(a) and 2(b), equipment manufacturer design and performance information, and other available information, the Contractor shall assess available solar PV technologies, develop a conceptual plant design and technical specifications, develop a model plant performance and energy production profile, and perform interconnection analysis for the Project.

The Contractor shall conduct an assessment of available solar PV technologies that may be used for each of the following components of the Project: solar PV modules, inverters, trackers, transformers, switchgear, meters, and balance of system components. The Contractor shall collect, analyse, and consider the following factors in its assessment of each PV technology:

- Basic topography of the proposed site (publically available data such as a contour survey);
- Geotechnical analysis for the proposed site (Subtask 2(a));
- Solar resource and meteorological data (Subtask 2(b));
- Access roads and construction logistics evaluation;
- Interconnection with the national electricity grid;
- Electrical evacuation alternatives;
- Equipment required for construction and maintenance;
- Performance, availability, and equipment warranties;
- Operations and maintenance schedule and costs; and
- Auxiliary power requirements during construction and operation.

The Contractor shall develop a conceptual plant design and technical specifications for a ten MW solar PV plant that include, but are not limited to, the following items:

- Site plan and layout;
- Electrical single line diagrams1;
- Instrumentation and control systems;
- Major equipment list with sizing;
- Major equipment specifications;
- Plant cost estimation (implementation and operation); and
- Energy production estimation.

After completing the conceptual design and technical specifications for the Project, the Contractor shall analyse plant design variables and run cost and performance model(s) to develop an energy production profile for the Project using an industry standard model.

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1 One-line diagram or single-line diagram (“SLD”) is a simplified notation for representing a three-phase power system in power engineering. Electrical elements such as circuit breakers, transformers, capacitors, bus bars, and conductors are shown by standardized schematic symbols. It is a form of block diagram graphically depicting the paths for power flow between entities of the system.
Based on the Contractor’s technical analysis and conceptual design, the Contractor shall provide recommendations on how the Grantee can scale-up the Project to 40 MW in phases, with the first Project phase having a capacity of up to ten MW. The Contractor shall identify the factors and considerations for expanding PV capacity at the Project site and recommend options for layout of the Project site to best accommodate the addition of future solar PV capacity. The Contractor’s recommendations shall address additional infrastructure required for subsequent PV installations (i.e., foundations; racks; and enclosures for modular components such as inverters, switchgear, and controllers; site electrical collection system backbone sizing; and sizing of grid interconnection equipment such as transformers, capacitor banks and their foundations, racks and enclosures) to ensure that expansion would not be constrained by the layout of the initial Project phase. The Contractor shall identify potential economies for investing in higher capacity site infrastructure during the first phase of the Project that could enable savings when implementing later Project phases.

**Task 2 Deliverable:** The Contractor shall provide the Grantee with a report that contains all findings and provides a detailed account of all work performed under Task 2. The Deliverable shall detail each Subtask 2(a) through 2(c), including results from the site survey and geotechnical analysis, the assessment of solar resource and meteorological data, the technology assessment, potential software files, model(s) developed, conceptual design and performance modeling for the Project. The model(s) shall be provided in a format that the Grantee can easily follow and adapt for future projects. The Task 2 Deliverable shall be included as a stand-alone chapter in the Final Report.

**Task 3: Transmission and Interconnection Study**

The Contractor shall assess interconnection requirements and develop a conceptual design for grid interconnection based on both the site assessment conducted in Task 2 and Kenya’s Grid Code.

Since the capital cost of the Project will include the substation and the associated connection costs to the national electrical grid, the Contractor shall prepare a conceptual design for the new solar PV plant and power evacuation facility to the national grid. The Contractor shall also carry out a grid connection study to assess the potential impact of the Project on the national grid and required modifications to the existing substation equipment and other infrastructure. Since a grid connection study is required as part of Kenya’s feed-in-tariff (“FiT”) program, this grid connection study shall meet the FiT guidelines issued by the Ministry of Energy and Petroleum of Kenya. The Contractor’s grid connection study shall also include a potential plan to transfer new infrastructure to the transmission company after commercial operations of the Project.

The Contractor’s conceptual design shall take into account existing on-site substation equipment from the adjacent Grantee-owned 225 MW hydroelectric dam, such as electric lines, substation equipment, transformers, and other auxiliary equipment that could be leveraged.

The Contractor shall also provide high-level analysis and recommendations on potential options for integrating the existing hydroelectric dam with the solar PV plant in a hybrid configuration at a future stage of operation.
The Grantee shall assist the Contractor in obtaining the necessary information and documents needed for connecting the Project to the national grid under Kenya’s feed-in-tariff program and to comply with Kenya’s Grid Code requirements.

**Task 3 Deliverable:** The Contractor shall provide the Grantee a report of all work performed under Task 3, including a grid connection study, conceptual design for power evacuation and connection to the national grid and application requirements for Kenya’s feed-in-tariff program. The Task 3 Deliverable shall be included as a stand-alone chapter in the Final Report.

**Task 4: Cost Estimate Preparation and Economic Analysis**

Once the Contractor has completed the conceptual engineering design in Task 2(c), the Contractor shall prepare a detailed EPC cost estimate. The Contractor shall review and revise the operations and maintenance (“O&M”) assessment that was completed under Task 2. The revised O&M costs shall reflect any new and/or updated information. The Contractor’s estimate shall include a detailed breakdown of equipment and materials for all major components, including major equipment, balance of plant\(^1\), instrumentation and controls, and electrical interconnection.

Based on information analyzed under previous Tasks, the Contractor shall complete a Leveled Cost of Energy (“LCOE”) analysis for the conceptual design. The intent of the LCOE is to provide a high-level estimate of the anticipated capital, O&M, performance, and other LCOE cost factors for the Project.

The Contractor shall include in its analysis a cash flow analysis, Life Cycle Cost Analysis (“LCCA”), market conditions, raw material availability, supply agreements, the PPA, and competing alternative methods of achieving the same or similar Project objectives. The LCCA shall consider all initial capital costs (e.g., plan, design, development, and construction) and long-term operational costs (e.g., warranties, operations, maintenance, spare parts, installation, refurbishment, and disposal).

The Contractor shall perform an economic analysis which incorporates all costs and benefits associated with Project implementation, including assigning monetary value to non-market goods and services. The economic analysis must also take into account when the costs and benefits are incurred. The Contractor’s economic analysis shall include a net present value and/or other standard indicator used by funding agencies/donors, such as the World Bank, the African Development Bank, and any other relevant investors as determined by the Contractor and Grantee for appraising investment projects.

The Contractor’s economic analysis shall consider, at a minimum, the following items:

- Forecasted financial statements and supporting information;
- Forecasted sources and uses of funding;
- Forecasted key financial ratios and financial covenants;

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\(^1\) Balance of plant will include all structural elements, cabling, wiring, switchgear, any combiner boxes and any re-combiner box requirements.
• Expenses, O&M costs, and projected revenues;
• Inflation;
• Cost of capital (equity finance and external debt finance);
• Discounted value of future cash flows for the Project and discount rate used;
• Taxes; and
• Development fees and success payments.

The Contractor shall provide a rationale for the selected discount rate to ensure that the assumptions and methodologies used to select the discount rate are clear for potential financiers. Rationales may include, but are not limited to, the following:
• Opportunity cost of capital;
• Societal rate of time preference;
• Zero interest rate; and
• Cost of borrowing funds.

The Contractor shall perform a sensitivity analysis related to Project risk, including, but not limited to, capital costs (from -20 percent to 20 percent, in increments of five percent), operating and maintenance expenditure (from -20 percent to 20 percent, in increments of five percent), inflation indices where appropriate, exchange rates, and discount rate. The Contractor's sensitivity analysis may account for the cost recovery indicators based on different assumptions for key Project variables, such as electricity tariffs, sales volumes, capital and operating cost estimates, interest rates and investment requirements. The Contractor shall provide a financial model and report, including, but not limited to, net present value, payback time, internal rate of return, cash flow, and LCCA for the base case and all sensitivity analyses. The Contractor may use the Overseas Private Investment Corporation (“OPIC”) Sources and Uses Financial Model1 or another verifiable model. The Contractor shall provide the Grantee with copies of the original electronic files for all economic and financial models.

**Task 4 Deliverable:** The Contractor shall provide the Grantee a report of all work performed under Task 4, including, but not limited to, the EPC cost estimates, O&M cost estimates, cash flow analysis, economic analysis, electronic financial models with detailed documentation, LCCA, and sensitivity analysis necessary to advance the development of the Project and that can be presented to potential sources of implementation financing for the Project. The Task 4 Deliverable shall be included as a stand-alone chapter in the Final Report.

**Task 5: Financial Analysis**

The Contractor shall meet with potential sources of implementation financing and gauge level of interest and potential terms from lenders and equity investors, and the Contractor shall determine potential combinations of debt and equity that would provide the full capital requirements for the Project.

The Contractor shall also identify potential U.S. private sources of equity, in addition to U.S. brand name franchisers or contractors that would help to connect the Project with U.S. private sector investors to provide at least 25 percent of project investment.

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The Contractor shall also identify likely sources of debt funding options from entities including the Export-Import Bank of the United States (“U.S. Ex-Im Bank”), World Bank, regional multilateral development banks, and private sector sources of financing, such as commercial loans, supplier credits, and bond markets.

Based on the Contractor’s outreach and analysis, the Contractor shall provide the Grantee with recommendations for the financial structure and sources of financing for the Project.

**Task 5 Deliverable:** The Contractor shall provide a report of all work performed under Task 5, including, but not limited to, an assessment of potential sources of implementation financing for the Project and recommendations for the financial structure and sources of financing for the Project. The Task 5 Deliverable shall be included as a stand-alone chapter in the Final Report.

**Task 6: Environmental Review and Social Impact Assessment**

The Contractor shall conduct an environmental and social impact assessment (“ESIA”) to ensure that the proposed Project complies with all relevant local environmental regulations; the necessary environmental permits have been secured by the project team; and the Project complies with the requirements of U.S. Ex-Im Bank, OPIC, and other potential sources of financing/funding. The Contractor’s ESIA should include at a minimum the following:

- Environmental and regulatory considerations;
- Permitting requirements;
- Assessment of land use and land agreements for the Project;
- Site environmental assessments;
- Site environmental restrictions;
- Environmental impacts across the design, construction, operation, and decommissioning phases;
- Environmental risk assessment;
- Public participation process;
- Glare analysis;
- Air/water quality and noise assessment; and
- Waste management assessment.

The ESIA shall be performed in accordance with Kenya’s environmental regulations. The Contractor shall also conduct a social impact assessment in the context of the environmental review.

**Task 6 Deliverable:** The Contractor shall provide a report of all work performed under Task 6, including but not limited to, the ESIA described above. The Task 6 Deliverable shall be included as a stand-alone chapter in the Final Report.

**Task 7: Development Impact Assessment**
Anticipated outcomes of the Project implementation include increasing access to clean energy and reducing greenhouse gas ("GHG") emissions by stimulating increased investments in clean energy generating infrastructure in Kenya. The outcomes of the Study and subsequent Project will be measured by the performance indicators listed below. The Contractor shall provide an assessment of the potential development impact in Kenya if the Project is implemented according to the Study’s recommendations. This is essential to the ability of USTDA to measure and monitor the impact of its funding for the Study to support the Project’s implementation.

While there may be immediate benefits resulting from the completion of the Study (i.e., new technology applications or training for the Grantee’s staff), the Contractor’s development impact assessment shall focus on the outcomes that would result from the Project being implemented.

The Contractor’s analysis of the potential development impacts shall be concrete, detailed, and based on the data and information collected during the performance of the Study. The development impact factors are intended to provide the Project's decision makers and interested parties with a broader view of the Project's potential effects in Kenya. The Contractor shall analyze each of the indicators listed below:

- **Clean Energy Generation:** A description of Kenya’s physical infrastructure developed as a result of the implementation of the Project.
  - The number of renewable energy generating facilities that may receive financing as a result of this Study.
  - Quantity of operational renewable electric generation capacity as a result of the Project, measured in MW. The Contractor shall confirm whether this is still ten MW as anticipated or whether and why this may have changed as a result of the Study findings.
- **Human Capacity Building:**
  - Job Creation: A description of the number and type of staff, including the anticipated level of education and/or skills that would be needed to construct the Project.
- **Environmental Impacts:**
  - The Contractor shall quantify the GHG emissions reduced or avoided, measured in metric tons of carbon dioxide ("CO2"), if the Project is implemented. The Contractor shall calculate GHG emissions using publically available tools from the U.N. Framework Convention on Climate Change or an equivalent approved by the Grantee.
  - The Contractor shall also quantify any CO2 that may be produced if the Project is implemented (e.g., diesel backup generation).
- **Technology Transfer and Productivity Enhancement:** A description of the potential knowledge and skills transfer and capacity building impacts expected from both the Project and the Study.
- **Market Oriented Reforms:** A description of any regulatory, legal, or institutional changes that are recommended and the effect such changes would have if implemented.
**Task 7 Deliverable:** The Contractor shall provide the Grantee a report of all work performed under Task 7, including, but not limited to, an assessment of the potential development impact in Kenya if the Project is implemented according to the Study recommendations. The Task 7 Deliverable shall be included as a stand-alone chapter in the Final Report.

**Task 8: U.S. Sources of Supply Assessment**

Based on information collected in Tasks 1-7, the Contractor shall identify U.S. manufacturers and suppliers of equipment and U.S. service providers that are capable of providing goods and services required for implementation of the Project. The primary categories of equipment addressed by the Contractor shall include, but are not limited to, solar PV modules, inverters, trackers, transformers, switchgear, meters, and balance of plant components. The Contractor shall identify potential U.S. service providers (i.e., technical, legal, financial consulting, EPC, O&M, etc.) for the Project. The Contractor shall discuss the Project with the relevant potential U.S. suppliers and service providers and analyze their interest in supplying equipment and services for the Project. The Contractor shall provide an assessment of the strengths of each potential supplier and service provider for the Project.

The Contractor shall prepare a list of qualified and interested U.S. suppliers and service providers for the Project. The list shall include: (i) potential U.S. sources of supply and services for the Project; (ii) a description of relevant products, solutions and services to be provided; and (iii) contact information for the parties responsible for marketing and sales in Kenya. The U.S. company names, contact name(s), physical and email addresses and phone numbers shall be included for each identified party.

**Task 8 Deliverable:** The Contractor shall provide the Grantee a report of all work performed under Task 8 including, but not limited to, an assessment of U.S. sources of equipment, supplies, and services for implementing the Project. The Task 8 Deliverable shall be included as a stand-alone chapter in the Final Report.

**Task 9: Risk Analysis and Mitigation**

The Contractor shall assess potential risks and mitigation strategies for the Project. The Contractor’s risk analysis shall include, but not be limited to, risks associated with the solar PV plant during all phases of the project (e.g., planning, construction, and operation), and potential mitigation options to manage these risks. The Contractor shall also provide more general guidance on common risks and mitigation approaches to consider for future solar PV projects in Kenya.

**Task 9 Deliverable:** The Contractor shall provide the Grantee a report of all work performed under Task 9 including, but not limited to, a risk analysis and recommendations for risk mitigation. The Task 9 Deliverable shall be included as a stand-alone chapter in the Final Report.

**Task 10: Implementation Plan and Capacity Building**
The Contractor shall develop an implementation plan for the Project, including a comprehensive plan, schedule, and timeline for the implementation of Project. The timeline shall include a list of required steps for Project implementation, including the PPA negotiations, project financing, design, procurement, construction, commissioning, start-up, and performance acceptance testing, indicating the estimated time required for each step, as well as milestones, including commercial operation date. The Contractor shall assess and recommend a logistics plan for delivering equipment to the Project site, ensuring security, identifying labor requirements, and recommending staffing based on local labor capacity.

In consultation with the Grantee, the Contractor shall develop and conduct a two-day training session for the Grantee’s staff that will address key aspects of the Project development and implementation and support the Grantee’s ability to develop future solar projects in Kenya (“Training Session”). The Training Session shall include guidance on modeling or software tools used, solar PV feasibility steps and best practices, U.S sources of supply, and other important Project-related lessons for the Grantee based on the findings of the Study. The Grantee shall be responsible for providing the venue and arranging for its staff to attend the Training Session (including venue fees, potential staff accommodation, food/drink), while the Contractor shall be responsible for the providing the instructional content, handout materials and leading the Training Session. The Contractor, in consultation with the Grantee, shall notify and provide updates to USTDA on the timing and agenda of the training at least three weeks prior to conducting the Training Session.

**Task 10 Deliverable:** The Contractor shall provide the Grantee a report of all work performed under Task 10, including, but not limited to, a comprehensive implementation plan for the Project. The Contractor shall also lead a two-day Training Session for the Grantee’s staff and provide the necessary content and instructional materials. Written work product for the Task 10 Deliverable shall be included as a stand-alone chapter in the Final Report.

**Task 11: Prepare Documentation for Procurement of an EPC Contractor**

In consultation with the Grantee, the Contractor shall develop documentation necessary for the Project, including:

1. Tender documents with detailed technical specifications for EPC procurement based on the latest World Bank Procurement guidelines (*i.e.*, Standard Bidding Documents for Procurements of Works);
2. Draft EPC contract, reflecting terms in accordance with World Bank Guidelines\(^1\) and industry best practices (e.g. appropriate allocation of risk, equipment procurement, warranty, commissioning, and payment milestones);
3. Completed forms and other supporting documents necessary to apply for Kenya’s feed-in-tariff.

**Task 11 Deliverable:** The Contractor shall provide a report of all work performed under Task 11, including, but not limited to tender documents required for EPC procurement and

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\(^1\) IFC’s Project Developers Guide for Utility-Scale Solar PV Power Plants provides more detail on best practices to be used in procuring EPC services.
http://www.ifc.org/wps/wcm/connect/f05d3e00498e0841bb6f5be54d141794/IFC+Solar+Report+Web+_08+05.pdf?MOD=AJPERES

Annex I-10
completed documentation necessary for feed-in-tariff application. The Task 11 Deliverable shall be included as a stand-alone chapter in the Final Report.

**Task 12: Final Report**

The Contractor shall prepare a final report that includes all Deliverables, analyses, findings, and work performed under these TOR (“Final Report”). The Contractor shall present the complete findings of the Study to the Grantee and provide an initial draft Final Report to the Grantee for review and discussion.

Once the Grantee has provided comments and revisions to the draft Final Report, the Contractor shall make the necessary changes and modifications. The Contractor shall prepare and deliver the Final Report to the Grantee and USTDA. The Final Report shall be organized according to the preceding Tasks, and shall include all Deliverables and work product that have been provided by the Contractor to the Grantee. The Final Report shall incorporate all of the findings, recommendations, and conclusions of the Study and shall incorporate all other documents and reports provided pursuant to the Tasks described above. In addition to the TOR Deliverables, the Final Report shall contain an Executive Summary. The Final Report shall be prepared in accordance with Clause I of Annex II of the Grant Agreement.

**Task 12 Deliverable:** The Contractor shall prepare and deliver the Final Report to USTDA and the Grantee in the manner set forth in Task 12 of the TOR and Clause I of Annex II of the Grant Agreement. 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 Contractor shall provide the Grantee with six electronic copies of the Final Report on CD-ROM or USB media. The electronic version of the Final Report shall include:

- Adobe Acrobat readable copies of all documents;
- Source files for all drawings in AutoCAD or Visio format;
- Source files for all documents in Microsoft Office 2000 or later formats; and
- Source files for any analytical tools used to complete the TOR.
ANNEX 6: U.S. FIRM INFORMATION FORM
# 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.

<table>
<thead>
<tr>
<th>USTDA Activity Number [To be completed by USTDA]</th>
<th>2016-11019A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity Type [To be completed by USTDA]</td>
<td>Feasibility Study</td>
</tr>
<tr>
<td>Activity Title [To be completed by USTDA]</td>
<td>Gitaru 10 Megawatt Solar Power Plant</td>
</tr>
<tr>
<td>Full Legal Name of U.S. Firm</td>
<td></td>
</tr>
<tr>
<td>Business Address (street address only)</td>
<td></td>
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<tr>
<td>Telephone</td>
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<tr>
<td>Fax</td>
<td></td>
</tr>
<tr>
<td>Website</td>
<td></td>
</tr>
<tr>
<td>Year Established (include any predecessor company(s) and year(s) established, if appropriate). Please attach additional pages as necessary.</td>
<td></td>
</tr>
<tr>
<td>Type of Ownership</td>
<td>Publicly Traded Company</td>
</tr>
<tr>
<td></td>
<td>Private Company</td>
</tr>
<tr>
<td></td>
<td>Other (please specify)</td>
</tr>
<tr>
<td>Please provide a list of directors and principal officers as detailed in Attachment A. Attached?</td>
<td>Yes</td>
</tr>
<tr>
<td>(Not Applicable for U.S. Publicly Traded Company)</td>
<td></td>
</tr>
<tr>
<td>Is the U.S. Firm a wholly-owned or partially owned subsidiary?</td>
<td>Yes</td>
</tr>
<tr>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>Is the U.S. Firm proposing to subcontract some of the proposed work to another firm?</td>
<td>Yes</td>
</tr>
<tr>
<td>If yes, U.S. Firm shall complete Attachment C for each subcontractor. Attached?</td>
<td>Yes</td>
</tr>
<tr>
<td>Project Manager</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td></td>
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<tr>
<td>Surname</td>
<td></td>
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<tr>
<td>Given Name</td>
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<td>Address</td>
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<td>Telephone</td>
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<td>Email</td>
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<tr>
<td>Negotiation Prerequisites</td>
<td></td>
</tr>
<tr>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>Identify any specific information which is needed from the Grantee before commencing negotiations.</td>
<td></td>
</tr>
</tbody>
</table>

*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: [insert state].
|    | 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: [insert state].
|    | 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 directors and 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 directors and 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.

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>Date</td>
</tr>
<tr>
<td>Full Legal Name of U.S. Firm</td>
<td></td>
</tr>
</tbody>
</table>
**ATTACHMENT A**

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

**U.S. Firm Information Form – Directors and Principal Officers**
(Not Applicable for U.S. Publicly Traded Company)

Provide a list of all directors and principal officers (e.g., President, Chief Executive Officer, Vice-President(s), Secretary and Treasurer). Please provide full names including surname and given name.

<table>
<thead>
<tr>
<th>USTDA Activity Number [To be completed by USTDA]</th>
<th>2016-11019A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity Title [To be completed by USTDA]</td>
<td>Gitaru 10 Megawatt Solar Power Plant</td>
</tr>
<tr>
<td>Full Legal Name of Entity</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Title (e.g., Director, President, Chief Executive Officer, Vice-President(s), Secretary, Treasurer)</th>
<th>Surname</th>
<th>Given Name</th>
<th>Middle Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Please place an asterisk (*) next to the names of those principal officers who will be involved in the USTDA-funded activity</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
**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.

<table>
<thead>
<tr>
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<tbody>
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</tr>
<tr>
<td>Full Legal Name of U.S. Firm</td>
<td></td>
</tr>
<tr>
<td>Full Legal Name of Shareholder</td>
<td></td>
</tr>
<tr>
<td>Business Address of Shareholder (street address only)</td>
<td></td>
</tr>
<tr>
<td>Telephone number</td>
<td>Fax Number</td>
</tr>
<tr>
<td>Year Established (include any predecessor company(s) and year(s) established, if appropriate). Please attach additional pages as necessary.</td>
<td></td>
</tr>
<tr>
<td>Country of Shareholder’s Principal Place of Business</td>
<td></td>
</tr>
<tr>
<td>Please provide a list of directors and principal officers as detailed in Attachment A. Attached?</td>
<td>Yes</td>
</tr>
<tr>
<td>Type of Ownership</td>
<td></td>
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<tr>
<td>Publicly Traded Company</td>
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<tr>
<td>Private Company</td>
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<tr>
<td>Other</td>
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<tr>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>Is the Shareholder a wholly-owned or partially owned subsidiary?</td>
<td>Yes</td>
</tr>
<tr>
<td>If so, please provide the name of the Shareholder’s parent(s). In addition, for any parent identified, please complete Attachment B.</td>
<td>No</td>
</tr>
</tbody>
</table>

*Shareholder may attach additional sheets, as necessary.*
**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.

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<tbody>
<tr>
<td>Activity Title [To be completed by USTDA]</td>
<td>Gitaru 10 Megawatt Solar Power Plant</td>
</tr>
<tr>
<td>Full Legal Name of Prime Contractor U.S. Firm (&quot;U.S. Firm&quot;)</td>
<td></td>
</tr>
<tr>
<td>Full Legal Name of Subcontractor</td>
<td></td>
</tr>
<tr>
<td>Business Address of Subcontractor (street address only)</td>
<td></td>
</tr>
<tr>
<td>Telephone Number</td>
<td></td>
</tr>
<tr>
<td>Fax Number</td>
<td></td>
</tr>
<tr>
<td>Year Established (include any predecessor company(s) and year(s) established, if appropriate). Please attach additional pages as necessary.</td>
<td></td>
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</table>

**Subcontractor Point of Contact**

<table>
<thead>
<tr>
<th>Name</th>
<th>Surname</th>
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| 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 [check one]**
   - Corporation
   - LLC
   - Partnership
   - Sole Proprietor
   - Other

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

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

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

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

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

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

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

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

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
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<tbody>
<tr>
<td>Title</td>
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<tr>
<td>Full Legal Name of Subcontractor</td>
<td>Date</td>
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</table>