

**REQUEST FOR PROPOSALS**

**FEASIBILITY STUDY FOR THE**

**MEERKAT RUN-OF-RIVER HYDROPOWER PROJECT**

Submission Deadline: **5:00 P.M.**  
**LOCAL TIME, SOUTH AFRICA (GMT +2)**  
**21 NOVEMBER 2014**

Submission Place: Ian Curry  
Managing Director  
Basil Read Energy (Pty) Ltd  
Level 2  
No. 4 The High Street  
Melrose Arch  
2196  
SOUTH AFRICA  
Email: [icurry@brenergy.co.za](mailto:icurry@brenergy.co.za)

**PROPOSALS SHOULD BE SUBMITTED BOTH ELECTRONICALLY VIA EMAIL AND IN HARD COPY TO THE ABOVE POSTAL ADDRESS.**

**PROPOSALS RECEIVED AFTER THE TIME AND DATE SPECIFIED ABOVE WILL NOT BE ACCEPTED OR CONSIDERED.**

## REQUEST FOR PROPOSALS

SECTION 1: INTRODUCTION .....	4
1.1 BACKGROUND SUMMARY.....	4
1.2 OBJECTIVE .....	4
1.3 PROPOSALS TO BE SUBMITTED .....	4
1.4 CONTRACT FUNDED BY USTDA.....	5
SECTION 2: INSTRUCTIONS TO OFFERORS .....	6
2.1 PROJECT TITLE.....	6
2.2 DEFINITIONS.....	6
2.3 DEFINITIONAL MISSION REPORT .....	6
2.4 EXAMINATION OF DOCUMENTS .....	6
2.5 PROJECT FUNDING SOURCE.....	7
2.6 RESPONSIBILITY FOR COSTS .....	7
2.7 TAXES.....	7
2.8 CONFIDENTIALITY.....	7
2.9 ECONOMY OF PROPOSALS .....	7
2.10 OFFEROR CERTIFICATIONS .....	7
2.11 CONDITIONS REQUIRED FOR PARTICIPATION .....	7
2.12 LANGUAGE OF PROPOSAL.....	8
2.13 PROPOSAL SUBMISSION REQUIREMENTS .....	8
2.14 PACKAGING .....	8
2.15 OFFEROR’S AUTHORIZED NEGOTIATOR .....	9
2.16 AUTHORIZED SIGNATURE .....	9
2.17 EFFECTIVE PERIOD OF PROPOSAL .....	9
2.18 EXCEPTIONS .....	9
2.19 OFFEROR QUALIFICATIONS .....	9
2.20 RIGHT TO REJECT PROPOSALS .....	9
2.21 PRIME CONTRACTOR RESPONSIBILITY .....	9
2.22 AWARD .....	10
2.23 COMPLETE SERVICES .....	10
2.24 INVOICING AND PAYMENT .....	10
SECTION 3: PROPOSAL FORMAT AND CONTENT .....	11
3.1 EXECUTIVE SUMMARY .....	11
3.2 U.S. FIRM INFORMATION.....	12
3.3 ORGANIZATIONAL STRUCTURE, MANAGEMENT, AND KEY PERSONNEL .....	12
3.4 TECHNICAL APPROACH AND WORK PLAN .....	12
3.5 EXPERIENCE AND QUALIFICATIONS .....	12
SECTION 4: AWARD CRITERIA .....	14

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

## Section 1: INTRODUCTION

The U.S. Trade and Development Agency (“USTDA”) has provided a grant in the amount of US\$681,000 to Basil Read Energy (Pty) Ltd. (the “Grantee”) in accordance with a grant agreement dated June 6, 2014 (the “Grant Agreement”). This grant funds the cost of goods and services required for a feasibility study (“Feasibility Study”) on the Meerkat run-of-river hydropower project (“Project”) in South Africa (“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.

### 1.1 BACKGROUND SUMMARY

The Grantee is developing the Project, a run-of-river hydropower plant, which will be located on South Africa’s Orange River between the towns of Douglas and Hopetown. The Grantee intends to bid in the South African Renewable Energy Independent Power Producer Program with this Project. Portions of a background Definitional Mission are provided for reference in Annex 2.

### 1.2 OBJECTIVE

The objective of the Feasibility Study is to determine the technical feasibility, economic viability, and financeability of the Project that the Grantee is developing with the intent of bidding in the South Africa Renewable Energy Independent Power Producer Program. 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\$681,000. **The USTDA grant of US\$681,000 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\$681,000 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 Meerkat Run-of-River Hydropower Project.

### **2.2 DEFINITIONS**

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

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

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

### **2.3 DEFINITIONAL MISSION REPORT**

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

### **2.4 EXAMINATION OF DOCUMENTS**

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

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

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

## **2.5 PROJECT FUNDING SOURCE**

The Feasibility Study will be funded under a grant from USTDA. The total amount of the grant is not to exceed US\$681,000.

## **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:

Ian Curry  
Managing Director  
Basil Read Energy (Pty) Ltd  
Level 2  
No. 4 The High Street  
Melrose Arch  
2196  
SOUTH AFRICA  
Email: icurry@brenergy.co.za  
Tel: + 27 11 581 7674

**An Original and one (1) copies (for a total of two (2) hard-copies) of your proposal, as well as an electronic version sent via email, must be received at the above address no later than 5:00 P.M. (local time, South Africa), on 21 November 2014.**

Proposals may be either sent by mail, overnight courier, or hand-delivered, and a copy shall also be sent electronically. 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 1." The original and one (1) copy should be collectively wrapped and sealed, and clearly labeled, including the contact name and the name of the project.

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

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

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

## **2.16 AUTHORIZED SIGNATURE**

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

## **2.17 EFFECTIVE PERIOD OF PROPOSAL**

The proposal shall be binding upon the Offeror for sixty (60) days after the proposal due date, and Offeror may withdraw or modify this proposal at any time prior to the due date upon written request, signed in the same manner and by the same person who signed the original proposal.

## **2.18 EXCEPTIONS**

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

## **2.19 OFFEROR QUALIFICATIONS**

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

## **2.20 RIGHT TO REJECT PROPOSALS**

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

## **2.21 PRIME CONTRACTOR RESPONSIBILITY**

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

## **2.22 AWARD**

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

## **2.23 COMPLETE SERVICES**

The successful Offeror shall be required to (a) provide local transportation, office space and secretarial support required to perform the TOR if such support is not provided by the Grantee; (b) provide and perform all necessary labor, supervision and services; and (c) in accordance with best technical and business practice, and in accordance with the requirements, stipulations, provisions and conditions of this RFP and the resultant contract, execute and complete the TOR to the satisfaction of the Grantee and USTDA.

## **2.24 INVOICING AND PAYMENT**

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

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

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

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

The proposal shall consist of a technical proposal only. A cost proposal is NOT required because the amount for the contract has been established by a USTDA grant of US\$681,000 which is a fixed amount.

Offerors shall submit one (1) original and one (1) copy of the proposal both in hardcopy and electronically by email. Proposals received by fax cannot be accepted.

Each proposal must include the following:

- Transmittal Letter,
- Cover/Title Page,
- Table of Contents,
- Executive Summary,
- Firm Background Information,
- Completed U.S. Firm Information Form,
- Organizational Structure, Management Plan, and Key Personnel,
- Technical Approach and Work Plan, and
- Experience and Qualifications.

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

#### **3.1 EXECUTIVE SUMMARY**

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

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

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

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

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

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

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

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

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

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

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

### **3.5 EXPERIENCE AND QUALIFICATIONS**

Provide a discussion of the Offeror's experience and qualifications that are relevant to the objectives and TOR for the Feasibility Study. If a subcontractor(s) is being used, similar information must be provided for the prime and each subcontractor firm proposed for the project.

The Offeror shall provide information with respect to relevant experience and qualifications of key staff proposed. The Offeror shall include letters of commitment from the individuals proposed confirming their availability for contract performance.

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

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

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

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

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

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

**Professional Qualifications and Relevant Project Experience (35% +25%)** - Bidders shall propose a project team that will be fully qualified to execute the entire scope of the Feasibility Study. The proposed staff should have strong qualifications in the hydropower segment with emphasis on run-of-the-river systems and international project development experience.

**(35%)** Ideally the proposed staff should consist of:

- A P.E. (Professional Engineer) Licensed project manager with at least 15 years of hydropower engineering, project development, team management and scheduling experience.
- A senior civil or hydrology engineer with at least 15 years of hydrology data collection and reduction experience, friction loss calculation, river diversion, weir, penstock, and pertinent civil/structural design experience for hydro-electric systems. The civil engineer is required to have relevant project experience designing and constructing RCC dams. A civil engineer who has designed RCC dams with hydropower integration is beneficial.
- A senior geotechnical engineer with at least 15 years water infrastructure and RCC dam experience.
- A senior mechanical engineer with at least 15 years of performance calculation, power block design and equipment sizing experience for hydro-electric plants, covering Kaplan and Francis type turbines.
- A senior electrical engineer with at least 15 years of power plant design and consulting experience with special emphasis on hydro-electric systems involving generators, power transformers, high and medium voltage switchgear, power transmission and substation tie-in.
- Multi-disciplines of engineering including civil/structural, mechanical, electrical, environmental, instrumentation/controls and draftsmen to work under the senior engineers, as required,
- Specialists to cover Cost Estimating and Scheduling, Economic Analysis and Project Finance. Specialists who can assist in sourcing OPIC and Exim bank finance as well as a network of international private equity is beneficial.

(25%) The qualified bidder will be expected to provide evidence of satisfactorily executing at least six (6) similar projects within the past 10 years either as an A/E (Architect/Engineer) or O/E (Owners' Engineer). The reference projects should be of similar dollar size (i.e., \$50mil or larger) and complexity (i.e. multi-tasks, addressing all critical conceptual design and project development steps) to the proposed project. Track record on similar projects that have been taken from design through construction is preferable.

**Proposed Work Plan (25%)** - Bidders shall demonstrate good understanding of all the TOR tasks. Their proposed approach to the tasks should be in agreement with the generally accepted engineering methods used in the energy and power sector. The work plan should be detailed and responsive to the requirements presented in the Terms of Reference and should prove value-added in the implementation phase of the Project.

**Comparable Project Experience (15%)** - Bidders are encouraged to list their international energy project and consulting experience. The ideal Bidder will have successfully completed at least two (2) similar projects overseas by the time of bid evaluations, preferably one of them being in sub-Saharan Africa. Preference is given to Bidders who have experience in similar projects designed for private equity and or non-recourse project financing.

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

Price will not be a factor in contractor selection.

## **ANNEX 1**

Ian Curry  
Managing Director  
Basil Read Energy (Pty) Ltd  
Level 2  
No. 4 The High Street  
Melrose Arch, 2196  
SOUTH AFRICA  
Tel: +27 11 581 7674

USTDA Activity No. 2014-11031A: Meerkat Run-of-River Hydropower Project

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. Meerkat Run-of-River Hydropower Project. The Grantee invites submission of qualifications and proposal data (collectively referred to as the "Proposal") from interested U.S. firms that are qualified on the basis of experience and capability to develop a feasibility study to determine the technical feasibility, economic viability, and financeability of the Meerkat Run-of-River Hydropower Project.

Basil Read Energy (Pty) Ltd. (the Grantee) is developing the Meerkat run-of-river hydropower plant (Project), which will be located on South Africa's Orange River between the towns of Douglas and Hopetown. The Grantee intends to bid in the South African Renewable Energy Independent Power Producer Program with this Project.

The Feasibility Study shall include components including but not limited to: site assessment; site-specific technical guidance; front end engineering and design; review of environmental impact assessment; development impact assessment; cost estimation, economic analysis and implementation schedule; legal, regulatory and institutional review; U.S. sources of supply and implementation financing; final report and presentation.

The U.S. firm selected will be paid in U.S. dollars from a \$681,000 grant to the Grantee from the U.S. Trade and Development Agency (USTDA).

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

Please check your internal fax verification receipt. Because of the large number of RFP requests, USTDA cannot respond to requests for fax verification. Requests for RFPs received before 4:00 PM will be mailed the same day. Requests received after 4:00 PM will be mailed the following day. Please check with your courier and/or mail room before calling USTDA.

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

Interested U.S. firms should submit their Proposal in English directly to the Grantee by 5:00 P.M. local time (South Africa, GMT +2), November 21, 2014 at the above address. Evaluation criteria for the Proposal are included in the RFP. Price will not be a factor in contractor selection, and therefore, cost proposals should NOT be submitted. The Grantee reserves the right to reject any and/or all Proposals. The Grantee also reserves the right to contract with the selected firm for subsequent work related to the project. The Grantee is not bound to pay for any costs associated with the preparation and submission of Proposals.

## ANNEX 2

**DEFINITIONAL MISSION**  
**S. AFRICA RENEWABLE ENERGY SECTOR PROJECTS**  
**DM - CO201311293**



**REPORT**  
**February 21, 2014**

**(Business Confidential Material  
Redacted for Public Distribution)**

Prepared by  
**EnerconAmerica, Inc.**  
1250 N. LaSalle Drive, Suite 1112 Chicago, IL 60610  
Phone: (312) 337-1518 e-mail: [admin@enerconamerica.com](mailto:admin@enerconamerica.com)  
Contact Person: Walter I. Serbetci



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

**Mailing and Delivery Address: 1000 Wilson Blvd., Suite 1600, Arlington, VA 22209-3901**  
**Phone: 703-875-4357 • Fax: 703-875-4009 • Web site: [www.ustda.gov](http://www.ustda.gov) • email: [info@ustda.gov](mailto:info@ustda.gov)**

## Meerkat Run-of- River Hydropower Project

### Sector Background

**Renewable Energy Regulations and the Evolution of the REIPP Program:** South Africa’s Integrated Resource Plan of 2010 proposes that about 42% of electricity generated must come from renewable resources by 2030.

In 2009, NERSA introduced a Feed-in Tariff (FiT) Program for renewables as a part of its efforts to encourage investment in renewable energy by providing regulatory certainty. The FiT Program was designed to guarantee the price paid for electricity from renewable sources, incentivizing these technologies versus the more conventional power plants, and therefore encouraging the development of renewable facilities. However, in in third quarter of 2011 the government decided to suspend the FiT Program after looking at the results of similar programs in other countries, and instead implemented an auction system based on competitive price bidding, resulting in the current REIPP Program. The new program covers the procurement of projects in five different rounds subject to the availability of capacity, initially targeting 3,725 MW of generation capacity, using only renewable energy resources. The DoE established project priority per technology as follows;

1) On-shore Wind, 2) P-V Solar, 3) Concentrated Solar, 4) Small-hydro, 5) Landfill Gas, 6) Biomass, 7) Biogas, and 8) Small (less than 5 MW) Generation.

The DoE’s initial megawatt (MW) allocation in 2011 for each technology category is tabulated below:

Technology	MW
Onshore wind	1 850 MW
Concentrated solar thermal	200 MW
Solar photovoltaic	1 450 MW
Biomass	12,5 MW
Biogas	12,5 MW
Landfill Gas	25 MW
Small hydro	75 MW
Small Projects	100 MW

The first bidding round of the REIPPP was held in 2011, resulting in 634 MW of wind (8 projects), 631.5 MW of PV (18 projects) and 150 MW of CSP (2 projects). In 2012, the second-round resulted in 562.5 MW of wind (7 projects), 417.1 MW of Solar PV (9 projects), 50 MW of CSP (1 project) and 14.3 MW of small hydro (2 projects). All “preferred bidders” have signed 20 year power purchase agreements (PPA) with the national power utility ESKOM which serves as

the guaranteed off-taker in the REIPPP. Consequently, the Program was expanded by another 3,200 MW of generation capacity in late 2012.

The third bidding stage has closed in August 2013 and the results were publicized in November 2013. Out of some 93 bid submissions 17 projects were granted preferred bidder status. These include 787 MW for wind projects among which the Mainstream Renewables (Ireland) and its local partners are the biggest winners with three projects totaling over 300 MW. There were six preferred bidders for solar photovoltaic project totaling 450 MW, and two preferred bidders for 200 MW of concentrated solar power (CSP) projects. Both CSP bidders are joint-ventures of Abengoa (Spain). In addition there was a preferred bidder for 16.5 MW of biomass and a preferred bidder for 18 MW of landfill gas power.

**The REIPPP Mechanism:** Typically in May of each calendar year the DoE issues a three part Request for Proposals for the upcoming round of the REIPPP. The RFP consists of Part A: Requirements and Rules, Part B: Qualifications, and Part C: The Comparative Evaluation.

The interested bidders submit their bid packages to the DoE by the REIPPP deadline which is typically set to be in mid-August of each calendar year, along with a \$10,000 per-proposed-megawatt bid bond. The bids are evaluated by four evaluation teams namely, 1) The Independent Reviewer Team consisting of multi-discipline contractors, 2) The Legal Evaluation Team consisting four renowned law firms in the country, 3) The Technical Evaluation Team, an internationally renowned engineering firm, and 4) the Financial Evaluation Firm, consisting of Price Waterhouse Coopers and Ernst &Young. Currently, the weighted evaluation criteria is 70% for price (ZAR /kwh) and 30% for social and economic development, yet the latter is expected to be raised by the DOE in the subsequent rounds. The winning parties, i.e. the so-called “preferred bidders” are announced in November of the subject calendar year. The financial close is achieved by signing a 20 year PPA between the preferred bidder and Eskom in July of the next calendar year.

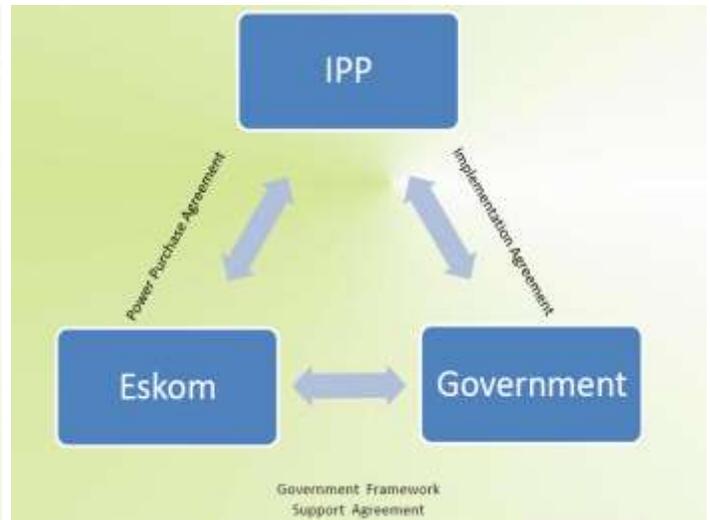
The critical components of the REIPPP process are depicted in the following diagrams:



**The REIPPP Project Evaluation Process**



**REIPPP Weighted Evaluation Factors**



**REIPPP Contracting Structure**

It is now a general consensus in South Africa that the REIPPP has been successful at encouraging private investment into the energy sector. However, delays have been a common occurrence; the original government-set dates for the financial close of round one and two delayed by at least three months. Similarly in the third round, even though the DoE has officially announced the third round winders in November, it still reserves the right to announce additional preferred bidders by December 31 2013. Such uncertainties are now accepted as part of the operating procedure of the REIPPP and are being anticipated in the upcoming rounds of the program.

*In summary, despite its minor glitches and uncertainties in practice, the current regulatory framework in place in South Africa is a major facilitator for the proposed renewable energy projects.*

[Sources: Esi-Africa; South African DoE website; Integrated Resource Plan of 2010; South Africa White Paper on Renewable Energy of 2033]

## 22 MW Rooikat and 18 MW Meerkat Run-of- the River Hydropower Projects

### The Proposed RoR Hydropower Projects; Rooikat and Meerkat

The Project Sponsor for the proposed RoR hydro plants is the Basil Read/Sidala Energy Partnership (Partnership). The Partnership has been developing two small hydro plants on the Orange River, namely the 22 MW Rooikat Plant and the Meerkat Plant (15MW-22MW). Long term flow measurements at both locations have already been compiled by Aecom Inc., the Owner's Engineer to estimate the power generation potential. Consequently the Partnership established Special Purpose Vehicle (SPV) companies bearing the respective project names. Recently they have extended the incumbent Owner Engineer's contract to cover the FEED (Front End Engineering and Design) activities for this project. The Meerkat Project on the other hand, is only in the prefeasibility stage, and it shall be bid in the REIPPP. The Partnership is requesting an USTDA grant for the full feasibility of this project starting with a detailed review of the existing hydrology data, condition assessment at site, FEED for the plant, and ending with feedback on Environmental Impact study, strategic help with U.S sources supply and project implementation finance.

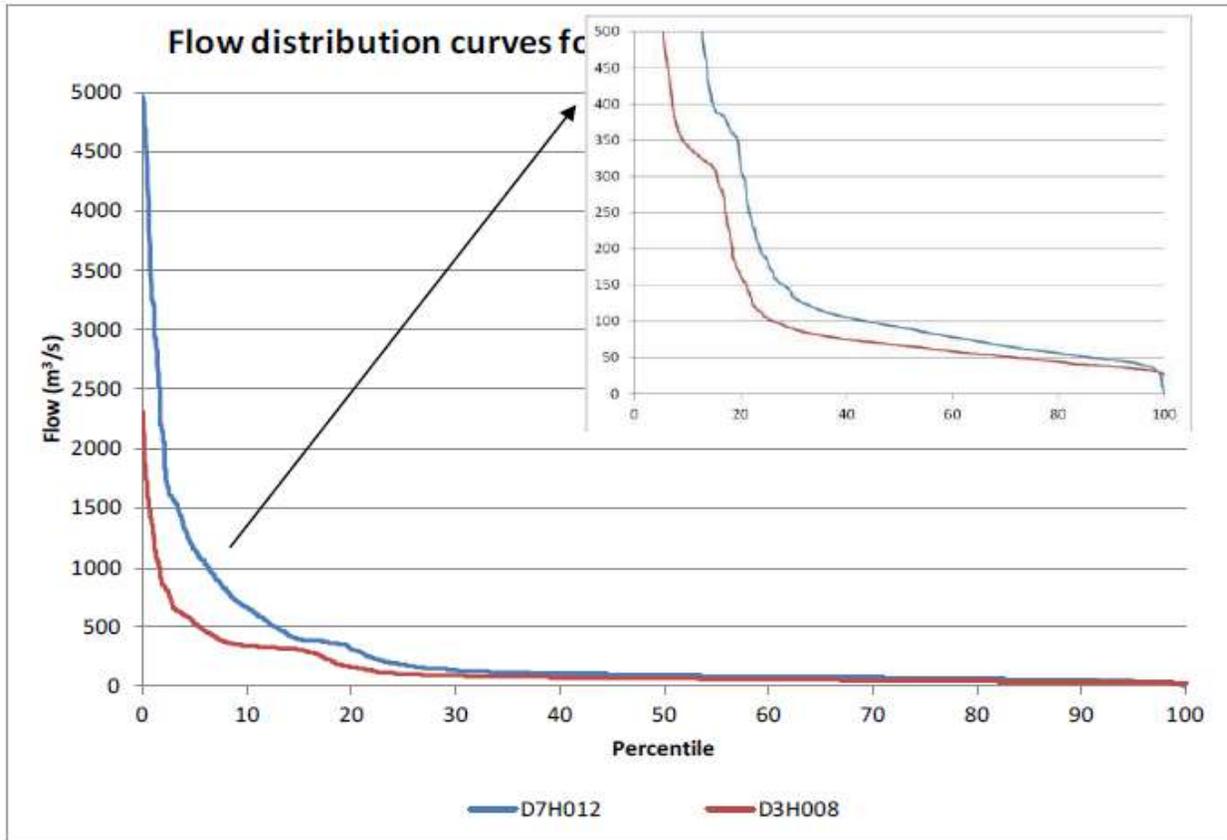
### Meerkat Hydropower Project Specifics:

Rooikat and Meerkat RoR plants are being planned to be sited nearly 20-25km apart on a stretch of the Orange River between the towns of Douglas and Hopetown. The Meerkat will be sited upstream, at the Tullochgorum location which is 50 km from Douglas travelling on the Route 385-South. From R385-S a farm road can be used to access the site. The Tullochgorum site is situated in a flatter valley of the Orange River and has a very low river slope

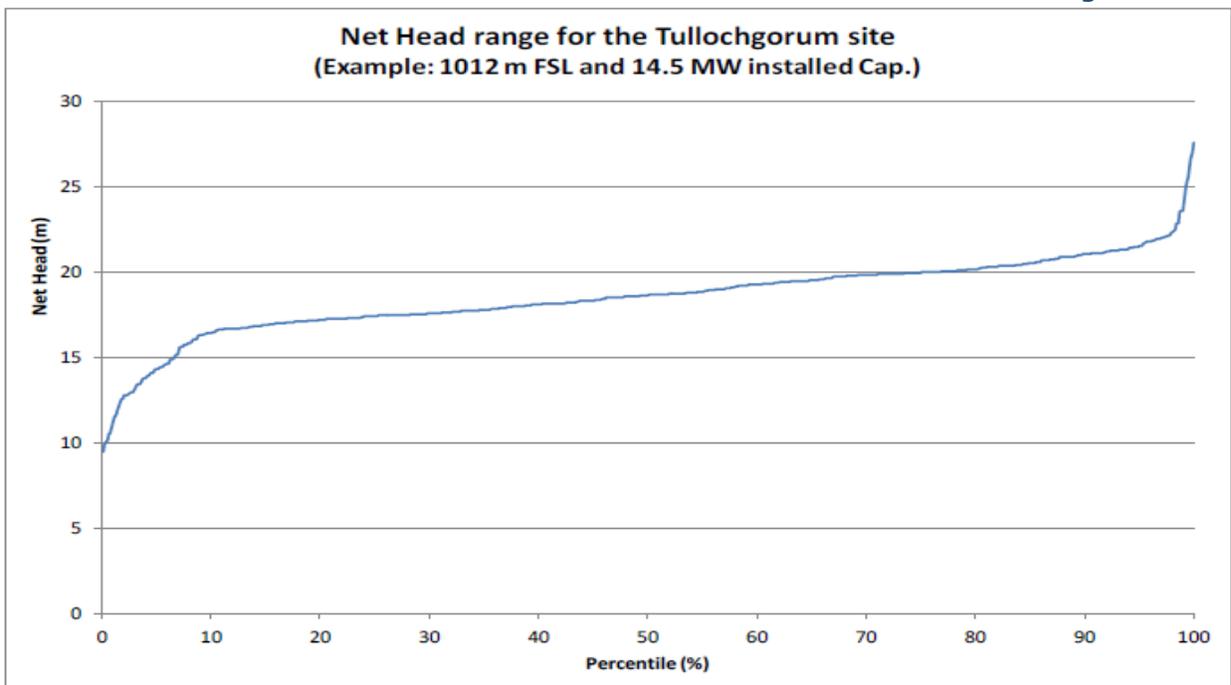


**Proposed Tullochgorum site for the Meerkat RoR Plant; Lateral and Downstream Views**

The seven year historical hydrology data for Orange River exhibits large fluctuations both due to typical seasonal changes and flood/drought cycles. The data is presented below;



**The 2005-2015 Historical Flow Data taken with two flow meters in the Orange River**



**Net Flow Head Distribution for the Tullochgorum Site ( w/ weir)**

The data compiled and reduced by the Owner’s Engineer indicates that the Meerkat RoR plant could generate 15-22 MW of power with multiple low-head Kaplan type turbines employed in a parallel configuration provided that a 20-25 meter weir is built for pondage. This power would be transmitted at 132 kV to an existing substation 23 kilometers away. This establishes technical feasibility for the project.

As the next step, the Project Sponsor would like to proceed with a full FEED to prepare the Tender documents and consequently, utilize the FEED as the main engineering input during the EPC Phase.

The Rooikat RoR that will be built at the Eskdale site is estimated to produce 22 MW of power with a similar multiple Kaplan turbine configuration. The FEED for this plant is outside the scope of the proposed Feasibility Study.

**Project Economics for the Proposed RoR Plants:** : RoR hydro-plants are significantly less expensive to build than conventional hydro power plants due to smaller physical size and simpler civil works. However they do not enjoy the economies of scale that comes with a large hydro-plant. In addition, the project development cost is almost the same regardless of the physical and MW size. Installed cost could be between \$ 2.5 and 3 million per MW capacity depending on the planned pondage. Using industry averages for equipment and installation costs and based on the following design parameters, a high level EPC cost estimate for the size of the Meerkat Hydro plant could be calculated as follows:

**PRO-FORMA COST ESTIMATE FOR A15 MW PLANT**

<b>Design Parameters</b>	
Flow rate	110 m <sup>3</sup> /sec
Weir Size	+25 meters
Flow Head (Net)	+14 meters
Turbine Type	Multiple Kaplan
Plant Efficiency	85%
Turbine Power Output MW	15 MW
<b>Component Costs (\$ US)</b>	
Civil Works	\$ 28 Million
Turbines and Hydro-Mechanical Equipment	\$ 12 Million
Electrical Equipment	\$ 4 Million
EPC Fee for Equipment Installation	\$ 5 Million
<b>Supplementary Costs (\$US)</b>	

Project Development and Owners Engineer	\$4 Million
Licensing/Permitting	\$ 2 Million
Access Roads	\$3 Million
Financing Costs	\$ 2.5 Million
<b>INSTALLED COST w/10% CONTINGENCY</b>	<b>\$60.5 Million</b>
Installed Cost per MW	\$4.03 Million/MW

## Developmental and Environmental Impacts

The proposed hydropower plants will be the latest addition to South Africa’s hydroelectric generation capacity. They will help diversify the country’s energy portfolio and help lower the environmental emissions associated with conventional fossil fuel power plants.

The developmental impacts of this project would be:

**Impact on Infrastructure:** When implemented, the proposed plants will add another 40 MW generation capacity to the existing power infrastructure. At 60% availability, 40 MW of power would provide electricity for more than 165,000 households, generating in excess of \$17 Million in revenues for the project developer every year. These revenues are likely to get reinvested in other renewable energy projects in the future.

**Human Capacity Building:** During the construction of the both plant about 400 new jobs in planning, technical services, engineering, material handling, construction and landscaping will be created in South Africa for 4 years. When the plants are in operation, about 20 full-time operations and maintenance personnel will have long terms jobs tending both plants. The plant personnel will receive special training to operate and maintain the plants.

**Impact on the Environment:** Hydropower is truly a green and renewable energy source. Every 1 MW of electricity generated from hydro sources replaces around 700 metric tons of oil consumption every year. This corresponds to significant emission reductions for CO<sub>2</sub>, CO, NO<sub>x</sub> and SO<sub>x</sub> and soot/particulate discharge to the environment which would otherwise be released from a typical fuel-oil or coal-fired plant.

On the down-side, hydropower plants would inundate large amounts of land upstream of the dam, necessitating relocation of local people and wild life. Storage and controlled release water might interfere with irrigation of the agricultural fields downstream. Accidental discovery of historical or fossil sites is another possibility during excavation. This may require re-siting of the historical site prior to flooding. The plants under consideration here are RoR plants with minimal pondage, therefore they will be much less disruptive to the neighboring communities than a large hydropower plant. Special spill ways could also be required to project the existing aquatic life in these waters.

Since OPIC, or U.S. Ex-Im Bank funding is a strong possibility for this project, an Environmental Impact Assessment (EIA) is stipulated in the Terms of Reference to identify and mitigate the potential negative impacts mentioned above. The Project Sponsor is already in the process of developing an EIA for Project Rooikaat which is scheduled to be finalized in the September-October 2014 time frame.

**Technology Transfer and Market Oriented Reforms:** The RoR hydropower is not a new concept in South Africa. Some electro-mechanical components that will be employed in these plants are already being manufactured locally. However, hydro-turbines, the largest plant components need to be procured from by foreign manufacturers per custom order.

The Project Sponsor is one of the pioneers of private hydropower producers in South Africa. Depending on their success, other private sector companies are likely to follow suit helping to reduce government monopoly in this segment and contributing to price stability for electricity.

### Project Sponsor's Qualifications

The project Sponsor is a value-added partnership between the Basil Read Group and the Sidala Energy Ltd. Established in 1932, Basil Read is a sizeable EPC contractor in South Africa with project implementation experience in Mining, Chemicals, Civil Works and Power Generation. It is a publically traded company in the Johannesburg Stock Exchange, with offices in Johannesburg, Durbin and Cape Town.

Basil Read is already involved in the REIPP Program with to on-going projects;

- 1) The Metrowind Van Stadens is a 27MW wind power project located on the outskirts of Port Elizabeth. This is one of eight wind energy Independent Power Producers (IPPs) authorized in the first round of the REIPPP. Basil Read Energy is the EPC Contractor on the \$55 Million project with 23% equity share. Construction is estimated to take 14 months and the plant is scheduled to begin commercial operation in 2014.
- 2) The Boshof Solar Power Plant is a 60 MW P-V solar field project at Boshof, in the Free State. Developed by Sun Power of South Africa, it is one of the nine solar projects that were authorized in the second round of the REIPPP. Basil Read with its the joint venture partner Ingenieria of Spain will build the plant and make the interconnection to the Eskom's 132kV substation. The project is scheduled to come on-line by September 2014.

With 30% black ownership Basil Read meets the REIPP program requirements for "Black Economic Empowerment".

Sidala Energy Ltd., on the other hand is a fairly new company established by two engineers who previously prepared a pre-feasibility study for a 4 MW hydropower in Bethlehem, South Africa. With 35% ownership in the proposed projects, Sidala Energy will provide the project development support to the Partnership.

## Project Finance Options

For the turn-key implementation of the two hydropower projects, the Project Sponsor will need nearly 85 million USD. Given Basil Read Limited's financial prowess and strong collateral position, a significant amount of debt financing could be available from international financial institutions and domestic commercial banks. Both Basil Read Limited and Sidala Hydropower are looking to dilute their equity shares as the projects progress. This would open up an equity partnership opportunity for domestic and overseas investors.

The Project Sponsor is interested in investigating OPIC funding and the involvement of a U.S. company, be it a technology provider or a venture capital firm, as an equity partner in the project. Therefore they requested guidance via the subject Feasibility Study as to how to reach out to potential U.S. investors. Both projects are renewable energy projects and meet the OPIC and US-ACEF funding criteria.

Through the Definitional Mission, the Project Sponsor has also been aware of long term (i.e. up to 18 year tenor) and low interest direct loans offered by the U.S. Ex-Im Bank for the U.S. manufactured portion of the plant equipment.

Among the in-country commercial banks, the Project Sponsor has worked with the Standard Bank of South Africa in the past, and is very familiar with their loan application procedure. The Project Sponsor however finds this option more expensive than international sources of finding and wants reserve as a fallback position.

*All project finance sources mentioned above would provide long term debt financing with tenors longer than the projected pay-back period for each project. In conclusion, the Consultant does not foresee any difficulty for the Project Sponsor obtaining project financing from the potential lenders.*

## **ANNEX 3**



**U.S. TRADE AND DEVELOPMENT AGENCY**  
**Arlington, VA 22209-3901**

**NATIONALITY, SOURCE, AND ORIGIN REQUIREMENTS**  
*[As of January 17, 2014]*

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*

## **ANNEX 4**

DIA(L2) SOU 2014-11031A



**AMENDMENT NO. 1  
TO  
GRANT AGREEMENT  
BETWEEN  
THE GOVERNMENT OF THE UNITED STATES OF AMERICA  
ACTING THROUGH  
THE U.S. TRADE AND DEVELOPMENT AGENCY  
AND  
BASIL READ ENERGY (PTY) LTD**

Re: South Africa: US-ACEF Meerkat 18 Megawatt Small Hydropower Project  
USTDA Activity No. 2014-11031A

Appropriation: 11 14/15 1001  
Activity No.: 2014-11031A  
Reservation No.: 2014224  
Grant No.: GH201411224

The Grant Agreement, dated June 6, 2014, between the Government of the United States of America, acting through the U.S. Trade and Development Agency ("USTDA"), and Basil Read Energy (Pty) Ltd ("Grantee") ("Grant Agreement"), for a feasibility study ("Study") on the Meerkat 18 megawatt small hydropower plant ("Project"), is hereby amended as follows:

**1. Terms of Reference**

Annex I (Terms of Reference) to the Grant Agreement is hereby deleted in its entirety and replaced with a new Annex I (Terms of Reference), in the form attached hereto.

**2. USTDA Funding**

Under the Grant Agreement, USTDA agreed to provide a US\$587,000 grant for the Study. USTDA hereby agrees to provide the Grantee an additional US\$94,000 to fund the cost of goods and services required to perform the Study as amended. The total USTDA funding available to the Grantee for the full Study is US\$681,000.

In all other respects and to the extent not amended by this Amendment No. 1, the terms of the Grant Agreement shall remain in full force and effect.

**[SIGNATURE PAGE FOLLOWS]**

**IN WITNESS WHEREOF, the U.S. Trade and Development Agency and Basil Read Energy (Pty) Ltd, each acting through its duly authorized representative, have caused this Agreement to be signed in the English language in their names and delivered as of the day and year written below.**

**For the U.S. Trade and Development Agency**

**For Basil Read Energy (Pty) Ltd**

By: Peggy Phelan

By: Tom Cunningham

Date: 9/16/14

Date: 17/09/2014

## Annex I

### Terms of Reference

#### Objective

The objective of the Feasibility Study ("FS") is to evaluate the technical feasibility, economic viability, and financeability of the Meerkat 18 megawatt small hydropower project ("Project") that Basil Read Energy (Pty) Ltd ("Grantee") is developing with the intent of bidding in the fifth round of the South Africa Renewable Energy Independent Power Producer ("REIPP") Program.

#### General considerations for deliverables and documents:

In all steps of the FS, the U.S. firm selected by the Grantee to perform the FS ("Contractor") will work closely with the Grantee to advance the Project to the implementation phase. In carrying out the FS, the Contractor must be detail-oriented in reviewing and analyzing all critical issues related to technology and equipment selection, economic viability, negative environmental impacts, regulatory issues, and financing options regarding the Project. The deliverables specified in this Terms of Reference ("TOR") shall serve to keep the Grantee informed about the Contractor's work and to ensure that the Contractor's findings are acceptable to the Grantee before critical decisions are made based on the FS findings. The Contractor shall undertake a quality control review process, including a technical and editorial review, of all deliverables and documents submitted to the Grantee to ensure accuracy, consistency, and readability. The Contractor shall utilize the International System ("SI") of Units as the system of measurement for the FS.

#### Task 1: Project Inception, Site Assessment and Technical Review

##### *Subtask 1(a): Project Inception*

The Contractor shall travel to Johannesburg, South Africa for kick-off meetings with the Grantee to (a) review, discuss, and refine overall strategy, scope, objectives, and deliverables of the FS, (b) define and clarify the Grantee's and Contractor's roles and responsibilities with respect to the FS, and (c) discuss the Grantee's short- and long-term objectives for the Project.

During the meetings, the Grantee shall provide the Contractor with all currently available information and data regarding the Project including all hydrology data, existing prefeasibility reports and design information. The information and documentation provided by the Grantee to the Contractor shall include, but is not limited to, the following:

1. Design documents for the Project prepared in connection with the Grantee's prefeasibility study;
2. Topographical contour surveys of the Orange River at the Project site;

3. Hydrology Study and Energy Yield Assessment for the Project prepared in connection with the Grantee's pre-feasibility study;
4. Environmental Scoping Report for the Project;
5. All relevant documentation prepared in connection with the Grantee's development of the Rooikat hydropower project including, but not limited to the Environmental Impact Assessment ("EIA"), design documents, and operations and management documents;
6. Prefeasibility Study for the Project;
7. Financial Model for the Project;
8. ESKOM (public utility) grid connection guidelines; and
9. Information on the fourth round of REIPP Program.

The Contractor shall, in conjunction with the Grantee, review and assess the Project process milestones and deadlines for the fifth round of the REIPP Program. The Contractor shall review and analyze all information and documentation provided by the Grantee and determine what information and documentation is needed in order for the Contractor to effectively complete this TOR. The Contractor shall work with the Grantee to ensure that the Contractor has all information and documentation needed to proceed with the tasks listed in this TOR.

The Contractor and the Grantee shall also review the following tasks of the FS: the Contractor's approach and methodology for specific tasks under this TOR; the Contractor's documentation and project management reporting requirements under this TOR; and the Contractor's complete work plan for the FS. The Contractor's complete work plan shall include all FS activities, milestones, deliverables, and schedule. The Contractor's detailed work plan for the FS shall be reviewed with the Grantee in a kick-off meeting and the Contractor shall obtain the Grantee's concurrence on timelines and the work plan for the FS. This work plan shall be used by the Contractor to assess the FS's progress and accomplishments on a monthly basis and report to the Grantee any deviation or delays from the timeline.

***Subtask 1(b): Project Site Assessment***

The Contractor and the Grantee<sup>1</sup> shall travel to the proposed Project site (i.e. Tullochgorum) for a field inspection to assess the general suitability of the Project site. The Contractor shall identify and assess any site specific problems or irregularities that could potentially preclude the Project from progressing per the Grantee's intent.

***Subtask 1(c): Technical Review of Rooikat Hydropower Plant***

The Contractor shall conduct a technical review and analysis of the feasibility work and design plans for the Grantee's Rooikat Hydropower Plant (Rooikat). The Contractor shall use this technical review and analysis of Rooikat to provide lessons learned for the

---

<sup>1</sup> The Grantee shall be solely responsible for all Grantee travel costs to the proposed Project site.

Project. Based on its technical review of Rooikat, the Contractor shall (a) identify and describe any areas in the Project that may have higher risks for cost increases or reductions in power output of the plant design and (b) utilize value engineering methodology to prepare an optimization report that recommends potential Project cost savings in the design plans, tender documents, project construction and related infrastructure. The Contractor's technical review of Rooikat shall address, but is not limited to the following:

- the data resources, methodology and conclusions of the Rooikat forecast energy sales report;
- the geotechnical conditions of the Rooikat project site and proposed infrastructure, the proposed station layout and related structures, the hydro-mechanical plant, and the operating parameters as per the user requirement specification of 22MW; and
- the proposed construction methodology of the Rooikat scheme, the proposed construction program and capital costs and operating and maintenance costing.

**Task 1 Deliverables:** The Contractor shall deliver to the Grantee a report that contains all findings and detailed account of work performed under Task 1, including, but not limited to: i) detailed meeting minutes covering the Grantee's future plans and Grantee's short- and long-term objectives for the Project; ii) a report on the Contractor's field inspection of the Project site; iii) a finalized work plan that details how the Contractor shall proceed with fulfilling this TOR; iv) a finalized schedule for the FS; and v) a technical review of the Rooikat Hydropower Project.

## **Task 2: Site Specific Technical Guidance**

### ***Subtask 2(a): Optimal Location of the Dam Wall***

The Grantee has selected a site for the Project based on a pre-feasibility study conducted by the Grantee's engineer. Based on a review of the pre-feasibility study and the Contractor's field inspection performed in Task 1, the Contractor shall make a final determination of the suitability of the Project site. The Contractor shall assess the Project site to determine whether a concept hydropower station that will provide the highest annual energy yield at the lowest cost (e.g. capital and operating cost) can be developed at such site. The Contractor shall also identify and analyze all potential problems or irregularities that are specific to the Project site. The Contractor shall provide the Grantee with options on how to avoid or mitigate any such potential problems or irregularities.

Based on the pre-feasibility study and all other information provided by the Grantee, the Contractor shall determine the optimal dam location at the Project site and optimal height of the dam for optimal energy yield.

### ***Subtask 2(b): Construction Materials and Foundations Investigations***

The Contractor shall perform a geotechnical investigation on the Project site for the dam design. The Contractor shall investigate the soil and geologic conditions of the Project site and provide recommendations and design criteria for construction of the Project. The

geotechnical investigation shall include, but is not limited to, a review of publically available information; a review of all information and documentation provided by the Grantee (including, but not limited to, the Environmental Management Program ("EMPR") for the geotechnical investigations for the Project), conducting on-site exploration, mapping/logging and sampling soil, sand, aggregates and rocks found at the Project site; and laboratory testing of samples obtained at the Project site.

Based on the results of the geotechnical investigation, the Contractor shall investigate and advise on usability of the surface and excavation materials in foundations and concrete works for the Project. The Contractor shall prepare a report presenting the results of the of the geotechnical investigation, its conclusions regarding the geotechnical impacts of the Project site, and its recommendations for the most geotechnically suitable construction of the Project.

**Task 2 Deliverables:** The Contractor shall deliver to the Grantee a report that contains all findings and provides a detailed account of all work performed under Task 2, including, but not limited to a recommendation on the specific dam construction location for optimum energy yield and the results of the geotechnical investigation for the dam design.

### **Task 3: Front End Engineering and Design**

As a critical Tender and Engineering, Procurement and Construction ("EPC") input, the Contractor shall prepare a Front End Engineering and Design ("FEED") package for the Project. The FEED package shall determine the annual energy yield accurately, identify all electro-mechanical components and civil works, and be the basis for an accurate cost estimate and schedule for the Project. The objective of the FEED package is to develop a concept hydropower station that will provide the highest annual energy yield at the lowest cost (e.g. capital and operating cost). The FEED package shall target the "highest power output -to- installed cost" ratio. In designing the FEED package and to ensure that the Project has a high level of constructability, the Contractor shall take into account factors such as the requirements of the REIPP Program, risks related to the construction of the Project, critical design requirements for the dam and hydropower structures, design requirements for the river diversion, hydro-mechanical equipment installation, and access during Project construction.

The FEED package for the Project shall give the Grantee all necessary information required to size the plant equipment and accurately determine the plant performance as Tender input. The FEED package shall also provide critical engineering and procurement input and information for the EPC phase.

The FEED package shall include but is not limited to the following activities:

- i) A review of the existing hydrology data to produce estimates for low frequency and high frequency floods and hydrographs;

- ii) A river diversion strategy and related civil works planning, including flood risk assessment, pertinent hydraulic calculations and sizing of coffer walls;
- iii) Optimum turbine configuration (i.e. number of turbines and axis configuration to achieve the highest "Megawatt-to-Installed Cost" ratio);
- iv) Dam design including the foundation, banks, spillway(s), retaining wall(s) and the stilling basin with pertinent static/dynamic load calculations and recommendations on the roller-compacted-concrete. The Grantee shall provide the Contractor with a technically qualified individual who will assess whether the Contractor's dam design is in compliance with South African National Committee of Large Dams ("SANCOLD") standards. The Contractor, working in conjunction with such technically qualified individual, shall ensure that such dam design is in compliance with SANCOLD standards.
- v) Back water/tail water calculations and hydraulic friction loss calculations through the flow inlet, penstock and the turbine(s). For the assessment of tail water levels at varying flow rates, the Contractor shall use a proven numerical model such as HEC-RAS or commercial equivalent approved by the Grantee;
- vi) Design of the construction phase and permanent access roads;
- vii) Recommendations for the selection and/or sizing of all critical plant equipment for the Project, including, but not limited to:
  - Inlet gates
  - Trash racks
  - Turbine and auxiliary equipment
  - Generators
  - Control system
  - Auxiliary power and reticulation system
  - Medium Voltage protection per ESKOM's embedded generation requirements)
  - Power transformers
  - Overhead cranes and gantries
  - Pumps
  - Overhead power lines
  - Heating, Ventilation and Air Conditioning systems
  - Area lighting
- viii) Review of the existing ESKOM substations that the 132 kV transmission line can potentially terminate. The Contractor will provide the Grantee with a recommendation of the optimal substation for such transmission line's termination.
- ix) Design of the 132 kV transmission line inclusive of the switchgear and medium voltage ("MV") protection equipment, terminating at the ESKOM substation recommended by the Contractor;
- x) Two-dimensional (2-D) plan and elevation lay-out drawing showing all concrete details, the flow inlet, penstock, spillway(s), turbine configuration, power house, and access roads;

- xi) Power house lay-out drawing showing dry-end of the turbine shafts, generators, corresponding couplings, control system, power transformers, and switchgear;
- xii) Single-line diagram for the 132 Kilovolt ("kV") transmission line showing the conductor size and all MV protection equipment, terminating the ESKOM substation recommended by the Contractor;
- xiii) A power plant narrative (i.e. Design Basis Document) including a major mechanical, electrical and instrumentation/controls ("I&C") equipment list;
- xiv) Design and servitude drawings as well as all reports required for completion of the EIA, including but not limited to: transportation and traffic management plan; erosion control report; stormwater management report; quarry siting; and access route maps; and
- xv) Operations and maintenance documents for the Project.

In the FEED package, the Contractor shall adhere to internationally accepted design standards. The Contractor shall ensure that the FEED package is prepared in such way so that U.S. equipment manufacturers and service providers will be able to readily bid on the implementation of the Project.

The Contractor shall also adhere to any relevant South African standards, (e.g. SANS, SANCOLD, Department of Water Affairs Standards, ESKOM Grid Connection Requirements, etc.) when preparing the FEED package.

**Task 3 Deliverables:** The Contractor shall provide the Grantee with a report that contains all findings and detailed account of work performed under Task 3, including, but not limited to, the FEED package, inclusive of the design drawings. All drawings prepared in CAD, AutoCAD, or Bentley MicroStation format shall be submitted both in the source format and pdf format.

**Task 4: Review of Environmental Impact Assessment and Development Impact Assessment**

***Subtask 4(a): Review of Grantee's Environmental Impact Assessment ("EIA")***

The Contractor shall review the EIA provided by the Grantee to ensure that such EIA adheres to OPIC standards, including environmental due diligence requirements for OPIC consideration. The Contractor shall make any necessary recommendations to the EIA to facilitate potential OPIC and Ex-Im Bank financing. In reviewing the EIA, the Contractor will adhere to the International Finance Corporation ("IFC") and OPIC EIA guidelines, covering at minimum the following environmental aspects:

- i) Long-term site specific environmental impacts on land use, landscape, soils and geology, irrigation, visual impacts and impacts on neighboring flora, fauna and human populations;
- ii) Environmental impacts across the design, construction, operation, and decommissioning phases;
- iii) Natural disaster, and accident risk assessment;

- iv) Waste management;
- v) Long term far-field upstream and downstream impacts on soils and geography, watershed, water table and marine environment;
- vi) Air quality and liquid discharges; and
- vii) Archaeology, historical and cultural heritage.

If the Contractor determines that the EIA provided by the Contractor is incomplete or inadequate according to OPIC standards, the Contractor shall revise the EIA to comply with OPIC standards.

***Task 4(b): Development Impact Assessment ("DIA")***

The Contractor shall report on the potential development impact in the Host Country if the Project is implemented according to the FS recommendations.

While there may be immediate impacts resulting from the completion of the Project, the Contractor's development impact report shall focus on the long-term outcomes that would result from the implementation of the Project.

The Contractor's analysis of potential impacts (negative and positive) shall be as concrete and detailed as possible and shall be based on the data and information collected during the performance of the FS. The development impact factors are intended to provide decision makers and relevant parties with a broader view of the potential effects of the Project on the Host Country. The Contractor shall report on the indicators listed below for the Project:

- **Infrastructure:** An itemized statement listing the physical infrastructure created or improved. The summary shall indicate the anticipated timeline for implementation of the infrastructure:
  - i) Quantity of operational renewable electricity generation capacity added as a result of the Project, measured in megawatts. It was estimated at the time of funding that 18 megawatts of hydropower generation capacity would be developed through implementation of the proposed Project. The Contractor shall confirm whether this is still anticipated or whether and why this may have changed as a result of the FS findings.
- **Human Capacity Building:** An itemized statement listing jobs created and other human capacity building impacts:
  - i) Job creation: a description of the number and type of new jobs by number and type that would be created to implement and operate the proposed Project.
  - ii) Training and human capacity building: a description of individuals by number and type that would receive training, skills development or other human capacity building, as well as a description of the training program.

- **Environmental Impacts:** An itemized statement, backed-up by measurable data and analysis from the EIA of subtask 4(a), summarizing how the Project will impact the Host Country environment, and the expected timeline during which such impacts may occur:
  - i) Emissions avoided: In comparison to a typical fossil power plant of the same size, the Contractor shall quantify the reductions for greenhouse gas (“GHG”) emissions in CO<sub>2</sub> equivalent units, and for SO<sub>x</sub>, NO<sub>x</sub>, acidic and particulate matter emissions in absolute weight units, if the Project is implemented. The Contractor shall calculate GHG emissions using publically available tools from the United Nations Framework Convention on Climate Change or an equivalent approved by the Grantee and USTDA.
  - ii) Emissions produced: The Contractor shall also quantify any emissions and discharges that may be produced if the Project is implemented.
- **Market Oriented Reforms:** A description of any regulations, laws or institutional changes that are recommended and the effect they would have if implemented.

The Grantee shall provide the Contractor with a socio-economic impact study for the Project. The Contractor shall review the socio-economic impact study and incorporate any relevant findings of such study into the DIA.

**Task 4 Deliverables:** The Contractor shall deliver to the Grantee a report that contains all findings and detailed account of working performed under Task 4, including, but not limited to the Environmental Impact Assessment Review and Development Impact Assessment for the Project.

#### **Task 5: Cost Estimation, Economic Analysis, and Implementation Schedule**

Based on Tasks 1-4, the Contractor shall work closely with the Grantee to prepare a budgetary-level, EPC-type cost estimates for the implementation of the Project. The cost estimate shall include a detailed breakdown for all major components of the Project, including, but not limited to, major equipment, balance of plant, instrumentation and controls, and mechanical and electrical systems. The Contractor shall estimate operations and maintenance (“O&M”) costs, which shall include a Project site review. The Contractor shall also develop an annual energy yield for the Project. The Contractor shall also provide an O&M optimization strategy that recommends how to optimize the annual energy yield for the Project.

For the civil works, the Contractor shall develop a bill of materials inclusive of cement, rebar and structural steel and, in consultations with the Grantee, develop an estimation of local pricing for such items. The Contractor shall ensure that (i) the bill of materials is comprehensive and detailed and allows for ± 5% accuracy and (ii) the estimation of local pricing for such items in the bill of materials allows for ± 5% accuracy. Using the bill of materials and the estimated pricing, the Contractor shall prepare a cost estimate with around ± 5% accuracy.

The Contractor shall review any economic or financial analyses that have been previously prepared by the Grantee. Based on this review and on Tasks 1-4, the Contractor shall perform a base case economic evaluation as well as sensitivity analyses related to possible changes in all major external factors, such as fuel costs, electricity costs, interest rates, investment costs, and any other factors that may impact the profitability of the Project. The Contractor shall include in its evaluation a cash flow analysis, life cycle cost analysis ("LCCA"), market conditions, raw material availability, costs of owner's engineer services, land acquisition, supply agreements, off-take agreements, and competing alternative methods of achieving the same or similar objectives for the Project. The Contractor's LCCA shall consider all initial capital costs (plan, design, develop, and build) and long-term operational costs (warranties, O&M, acquisition, installation, refurbishment, disposal, etc.). The Contractor shall also complete a net present value analysis.

Adhering to the Grantee's REIPP Program imposed deadlines, the Contractor shall also prepare a detailed implementation schedule for the Project. The Project implementation plan shall include a comprehensive plan, schedule, and timeline required for Project implementation. The Contractor shall include a critical path analysis and detailed implementation milestone descriptions.

**Task 5 Deliverables:** The Contractor shall deliver to the Grantee a report that contains all information collected and detailed account of work performed under Task 5, including, but not limited to an EPC cost estimate, bill of materials for civil works, energy yield analysis, and implementation schedule for the Project.

#### **Task 6: Legal, Regulatory, and Institutional Review**

The legal, regulatory, and institutional review shall be sufficient to support the implementation plan (which was developed in Task 5) that details all of the steps that the Grantee will need to take to comply with all relevant Host Country legal, regulatory, and institutional requirements for the implementation of the Project, and shall include, but not be limited to, existing Host Country energy sector laws, the requirements of the REIPP Program, permitting requirements, local building requirements, constraints that include right-of-way and zoning ordinances, and other legal, regulatory, and institutional requirements, that the Grantee will need to comply with for the implementation of the Project. The Contractor shall also analyze the anticipated impacts of relevant Host Country legal, regulatory, and institutional requirements on the cost estimates and economic analysis (which was developed in Task 5) and provide recommendations for mitigating any anticipated negative impacts. If necessary, the Contractor shall revise the cost estimates and economic analysis developed in Task 5 to reflect any anticipated impacts of relevant Host Country legal, regulatory, and institutional requirements. In addition, the Contractor shall analyze the anticipated impacts of relevant Host Country legal, regulatory, and institutional requirements on the implementation schedule (which will be developed in Task 5) for the Project, ensure that these anticipated impacts are

incorporated into the implementation schedule, and provide recommendations for mitigating any anticipated negative impacts.

The Contractor shall provide a written report that includes (i) an analysis of the laws, legislation, and regulation reviewed, (ii) recommendations to address the concerns identified, and (iii) next steps needed to implement the Project.

The permitting and licensing ("L/P") requirements with the Department of Energy, local building and structural codes, local right-of-way, and residential zoning/re-zoning ordinances shall be identified in thorough discussions with the Grantee. The critical L/P applications shall be initiated by the Contractor during this Task 6. Payment for all licensing and permitting fees to local and national authorities shall be the Grantee's sole responsibility.

**Task 6 Deliverables:** The Contractor shall prepare and deliver to the Grantee a report that contains all findings and detailed account of work performed under Task 6, including, but not limited to, an analysis of legal, regulatory, and institutional aspects relevant to the Project implementation.

#### **Task 7: U.S. Sources of Supply and Implementation Financing**

**Subtask 7(a): U.S. Sources of Supply:** Based on the design that was developed in Task 3, the Contractor shall identify the likely U.S. suppliers for equipment procurement and U.S. service providers for the Project and prepare a qualified and interested vendors list. The list shall be complete with company names, contact name(s), physical and e-mail addresses and phone numbers. To the greatest extent practicable, for each recommended U.S. supplier and service provider, the Contractor shall identify the sourcing location and percentage of U.S.-sourced content so that the Grantee can determine the Project's potential to receive U.S. Ex-Im Bank financing.

**Subtask 7(b): Financing Review:** The Contractor shall contact OPIC and U.S. Ex-Im Bank (in the given order) to investigate financing options for the Project. The Contractor shall identify potential U.S. private sources of equity in addition to significant involvement of U.S. brand name franchisers, operators, or contractors that would help the Grantee have a meaningful connection to the U.S. private sector so that the Grantee may access financing and/or risk insurance from OPIC. For this purpose, the Contractor shall develop a "Project Prospectus", not exceeding five pages, that can be shared with potential investors. This document shall be approved by the Grantee prior to distribution and shall address:

- Project Overview
- Brief Technical Description
- Implementation Stages (per REIPP Program)
- Project Cost and Equity Partnership Opportunities

The Grantee shall provide the Contractor with the contact information of the OPIC administrator in South Africa and the short-listed potential U.S. investors.

The Contractor shall, in conjunction with the Grantee's financial advisors, develop a comprehensive financing plan for the Project, and shall assist the Grantee in finding a source suitable for funding and insuring all components of the Projects from entities including, but not limited to, OPIC, U.S. Ex-Im Bank, the World Bank, regional multilateral development banks, and debt and equity markets. In this regard, the Contractor shall meet with potential sources of implementation financing for the Project and evaluate their interest and capability to provide debt and/or equity financing and/or insurance for the Projects. The Contractor shall also verify current terms and conditions as well as review and analyze any applicable legal requirements for each of the potential sources of implementation financing that are identified pursuant to this subtask 7(b). The Contractor shall provide the Grantee with contact information for each potential source of implementation financing identified, including, but not limited to: name of financier, point of contact, address, telephone number, fax number, and e-mail address.

Specifically, the Contractor shall investigate U.S. Ex-Im Bank and OPIC options for the U.S. manufactured equipment and the terms and conditions of such financing. The Contractor shall provide a financial model and report that is sufficient to meet the requirements of potential sources of implementation financing for the Project, such as OPIC and U.S. Ex-Im Bank. The financial model and report shall include, but not be limited to, net present value, payback time, internal rate of return, cash flow, and an LCCA for the base case and all sensitivities. If requested by the Grantee, the Contractor shall also assist the Grantee in obtaining a Letter of Intent from OPIC (or U.S. Ex-Im Bank) for project finance.

**Task 7 Deliverables:** The Contractor shall prepare and submit to the Grantee a report that contains all finds and detailed account of work performed under Task 7, including, but not limited to an identification of U.S. sources of supply and review of financing options for the Project.

#### **Task 8 - Final Report and Presentation**

The Contractor shall prepare and deliver to the Grantee a substantive and comprehensive draft final report of all work performed pursuant to this TOR ("Draft Final Report").

After the Grantee has reviewed the Draft Final Report, the Contractor shall conduct a final report meeting with the Grantee at the Grantee's facilities in South Africa or at another appropriate venue agreed upon by the Contractor and the Grantee. The Grantee shall identify appropriate personnel and other relevant stakeholders to participate in the final report meeting.

During the final report meeting, the Contractor shall: review all work performed under this TOR; present the findings and recommendations from the Draft Final Report; and gather feedback from the Grantee on the Draft Final Report and Grantee requests for changes to the Draft Final Report, if any. The Grantee shall provide written comments to

the Contractor within two weeks of the Contractor's presentation. The Contractor shall promptly make the necessary changes and modifications to the Draft Final Report.

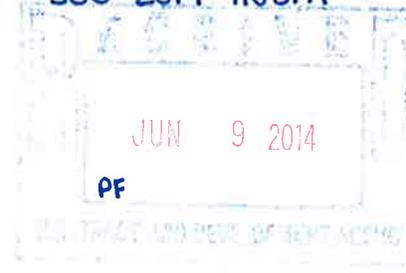
Consequently, the Contractor shall prepare and deliver to the Grantee and USTDA a substantive and comprehensive final report of all work performed under this TOR ("Final Report"). The Final Report shall be organized according to the above tasks, and shall include all deliverables and documents that have been provided to the Grantee. The Final Report shall also contain an Executive Summary in addition to the other required deliverables, and shall be prepared in accordance with Clause I of Annex II of the Grant Agreement.

The Contractor shall prepare and deliver the Final Report to USTDA in the manner set forth in Clause I of Annex II hereof. The Contractor will provide the Grantee with six (6) copies of the Final Report on CD-ROM. The CD-ROM version of the final report shall include:

- Adobe Acrobat readable copies of all documents;
- Source files for all drawings in AutoCAD, Visio, or Bentley MicroStation format;
- Source files for any analytical tools used to complete the TOR; and
- Source files for all documents in Microsoft Office 2000 or later formats.

DIA  
LZ

SOU 2014-11031A



RegDir(LF)  
RegAffs(MS)  
ChMng(BM)  
Exec(KK)  
GrantsAdmin  
(PD)  
GrantsSite(SW)  
IRCSpec(JV)  
ExAssK(SU)  
GC(EE)  
COS(CA)  
FinSpec(BB)  
DEPCCFOMB

## 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 Basil Read Energy (Pty) Ltd (“Grantee”). USTDA agrees to provide the Grantee under the terms of this Grant Agreement US\$587,000 (“USTDA Grant”) to fund the cost of goods and services required for a feasibility study (“Study”) on the proposed Meerkat 18 megawatt small hydropower project (“Project”) in South Africa (“Host Country”).

### 1. USTDA Funding

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

### 2. Terms of Reference

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

### 3. Standards of Conduct

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

### 4. Grantee Responsibilities

The Grantee shall undertake its best efforts to provide reasonable support for the Contractor, such as local transportation, office space, and secretarial support. In addition, the Grantee shall be solely responsible for the following: (a) all costs relating to the Grantee’s travel costs to the proposed Project site (as detailed in Task 1 of the Terms of Reference), (b) providing the Contractor with a technically qualified individual who shall assess the Project’s compliance with South African National Committee of Large Dams (“SANCOLD”) standards (as detailed in Task 3 of the Terms of Reference), and (c) providing the Contractor with an Environmental Impact Assessment of the Project (as detailed in Task 4 of the Terms of Reference).

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

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

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

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

**(1) Contract**

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

**(2) Amendments and Assignments**

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

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

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

U.S. Government funds, and that any decision by USTDA to exercise or refrain from exercising these approval rights shall be made as a financier in the course of funding the Study and shall not be construed as making USTDA a party to the Contract. The parties hereto understand and agree that USTDA may, from time to time, exercise the foregoing approval rights, or discuss matters related to these rights and the Project with the parties to the Contract or any subcontract, jointly or separately, without thereby incurring any responsibility or liability to such parties. Any approval or failure to approve by USTDA shall not bar the Grantee or USTDA from asserting any right they might have against the Contractor, or relieve the Contractor of any liability which the Contractor might otherwise have to the Grantee or USTDA.

**(E) Grant Agreement Controlling**

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

**6. Disbursement Procedures**

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

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

**(B) Contractor Invoice Requirements**

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

**7. Effective Date**

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

**8. Study Schedule**

**(A) Study Completion Date**

The completion date for the Study, which is October 1, 2015, 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 Managing Director. 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: Basil Read Energy (Pty) Ltd  
P.O. Box 61232  
Marshalltown 2107  
South Africa

Phone: +27 11 581 7674  
E-mail: [icurry@brenergy.co.za](mailto:icurry@brenergy.co.za)

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

Phone: (703) 875-4357  
Fax: (703) 875-4009  
E-Mail: [africa@ustda.gov](mailto:africa@ustda.gov)

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

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

Appropriation No.: 11 14/15 1001  
Activity No.: 2014-11031A  
Reservation No.: 2014224  
Grant No.: GH201411224

## **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 Basil Read Energy (Pty) Ltd, each acting through its duly authorized representative, have caused this Grant Agreement to be signed in the English language in their names and delivered as of the day and year written below. In the event that this Grant Agreement is signed in more than one language, the English language version shall govern.

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

**For Basil Read Energy (Pty) Ltd**

By: *[Signature]*

By: *IAN CORRY*

Date: *June 6, 2017*

Date: *6 August 2017*

Witnessed:

Witnessed:

By: \_\_\_\_\_

By: \_\_\_\_\_

**Annex I -- Terms of Reference**

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

## 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 Basil Read Energy (Pty) Ltd ("Client"), dated \_\_\_\_\_ ("Grant Agreement"). The Client has selected \_\_\_\_\_ ("Contractor") to perform the feasibility study ("Study") for the Meerkat 18 megawatt small hydropower project ("Project") in South Africa ("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.

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

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

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

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

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

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

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

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

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

#### **G. Disbursement Procedures**

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

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

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

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

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

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

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

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

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

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

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

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

#### **(iii) For final payment:**

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

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

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

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

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

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

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

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

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

**H. Termination**

**(1) Method of Termination**

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

**(2) Ramifications of Termination**

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

**(3) Survivability**

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

**I. USTDA Final Report**

**(1) Definition**

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

**(2) Final Report Submission Requirements**

The Contractor shall provide the following to USTDA:

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

and

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

and

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

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

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

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

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

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

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

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

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

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

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

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

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

#### **J. Modifications**

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

#### **K. Study Schedule**

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

The completion date for the Study, which is October 1, 2015, is the date by which the Contract Parties estimate that the Study will have been completed.

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

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

#### **L. Business Practices**

The Contract Parties recognize the existence of standards of conduct for public officials and commercial entities in their respective countries. Therefore, the Contract Parties shall fully comply with all United States and Host Country laws relating to corruption or bribery. For example, the Contractor and its subcontractors shall fully comply with the

requirements of the Foreign Corrupt Practices Act, as amended (15 U.S.C. §§ 78dd-1 et seq.). Each Contract Party agrees that it shall require that any agent or representative hired to represent it in connection with the Study will comply with this paragraph and all laws which apply to activities and obligations of that Contract Party, including, but not limited to, those laws and obligations referenced above.

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

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

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

Phone: (703) 875-4357

Fax: (703) 875-4009

#### **Fiscal Data:**

Appropriation No.: 11 14/15 1001

Activity No.: 2014-11031A

Reservation No.: 2014224

Grant No.: GH201411224

#### **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:

Ian Curry  
Managing Director

Basil Read Energy (Pty) Ltd  
P.O. Box 61232  
Marshalltown 2107, South Africa  
Phone: +27 11 581 7674  
E-mail: icurry@brenergy.co.za

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

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

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

#### **Q. Liability**

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

#### **R. Arbitration**

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

**S. Reporting Requirements** *[Note: This Clause is not applicable if there is a cost share agreement with the U.S. Contractor.]*

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.

**T. Cost Share** *[Note: This Clause is only applicable if there is a cost share agreement with the U.S. Contractor.]*

The Contractor agrees that, in addition to the funding provided by the USTDA Grant, it shall be responsible for ensuring that it and/or its subcontractors cover at least US\$ \_\_\_\_\_ of costs to complete the full Terms of Reference as set forth in Annex I to the Grant Agreement and this Contract. In order to receive final payment of USTDA Grant funds, a financial officer of the Contractor must provide a final invoice to USTDA accompanied by a cost share certification and a detailed breakdown of direct labor and/or other direct costs. If such certification and breakdown are not provided or are inaccurate, USTDA shall be entitled to a refund from Contractor of the total amount of the USTDA-disbursed Grant funds.

## ANNEX 5

## **Terms of Reference**

### Objective

The objective of the Feasibility Study (“FS”) is to evaluate the technical feasibility, economic viability, and financeability of the Meerkat 18 megawatt small hydropower project (“Project”) that Basil Read Energy (Pty) Ltd (“Grantee”) is developing with the intent of bidding in the fifth round of the South Africa Renewable Energy Independent Power Producer (“REIPP”) Program.

### General considerations for deliverables and documents:

In all steps of the FS, the U.S. firm selected by the Grantee to perform the FS (“Contractor”) will work closely with the Grantee to advance the Project to the implementation phase. In carrying out the FS, the Contractor must be detail-oriented in reviewing and analyzing all critical issues related to technology and equipment selection, economic viability, negative environmental impacts, regulatory issues, and financing options regarding the Project. The deliverables specified in this Terms of Reference (“TOR”) shall serve to keep the Grantee informed about the Contractor’s work and to ensure that the Contractor’s findings are acceptable to the Grantee before critical decisions are made based on the FS findings. The Contractor shall undertake a quality control review process, including a technical and editorial review, of all deliverables and documents submitted to the Grantee to ensure accuracy, consistency, and readability. The Contractor shall utilize the International System (“SI”) of Units as the system of measurement for the FS.

### **Task 1: Project Inception, Site Assessment and Technical Review**

#### ***Subtask 1(a): Project Inception***

The Contractor shall travel to Johannesburg, South Africa for kick-off meetings with the Grantee to (a) review, discuss, and refine overall strategy, scope, objectives, and deliverables of the FS, (b) define and clarify the Grantee’s and Contractor’s roles and responsibilities with respect to the FS, and (c) discuss the Grantee’s short- and long-term objectives for the Project.

During the meetings, the Grantee shall provide the Contractor with all currently available information and data regarding the Project including all hydrology data, existing prefeasibility reports and design information. The information and documentation provided by the Grantee to the Contractor shall include, but is not limited to, the following:

1. Design documents for the Project prepared in connection with the Grantee’s pre-feasibility study;
2. Topographical contour surveys of the Orange River at the Project site;

3. Hydrology Study and Energy Yield Assessment for the Project prepared in connection with the Grantee's pre-feasibility study;
4. Environmental Scoping Report for the Project;
5. All relevant documentation prepared in connection with the Grantee's development of the Rooikat hydropower project including, but not limited to the Environmental Impact Assessment ("EIA"), design documents, and operations and management documents;
6. Prefeasibility Study for the Project;
7. Financial Model for the Project;
8. ESKOM (public utility) grid connection guidelines; and
9. Information on the fourth round of REIPP Program.

The Contractor shall, in conjunction with the Grantee, review and assess the Project process milestones and deadlines for the fifth round of the REIPP Program. The Contractor shall review and analyze all information and documentation provided by the Grantee and determine what information and documentation is needed in order for the Contractor to effectively complete this TOR. The Contractor shall work with the Grantee to ensure that the Contractor has all information and documentation needed to proceed with the tasks listed in this TOR.

The Contractor and the Grantee shall also review the following tasks of the FS: the Contractor's approach and methodology for specific tasks under this TOR; the Contractor's documentation and project management reporting requirements under this TOR; and the Contractor's complete work plan for the FS. The Contractor's complete work plan shall include all FS activities, milestones, deliverables, and schedule. The Contractor's detailed work plan for the FS shall be reviewed with the Grantee in a kick-off meeting and the Contractor shall obtain the Grantee's concurrence on timelines and the work plan for the FS. This work plan shall be used by the Contractor to assess the FS's progress and accomplishments on a monthly basis and report to the Grantee any deviation or delays from the timeline.

***Subtask 1(b): Project Site Assessment***

The Contractor and the Grantee<sup>1</sup> shall travel to the proposed Project site (i.e. Tullochgorum) for a field inspection to assess the general suitability of the Project site. The Contractor shall identify and assess any site specific problems or irregularities that could potentially preclude the Project from progressing per the Grantee's intent.

***Subtask 1(c): Technical Review of Rooikat Hydropower Plant***

The Contractor shall conduct a technical review and analysis of the feasibility work and design plans for the Grantee's Rooikat Hydropower Plant (Rooikat). The Contractor shall use this technical review and analysis of Rooikat to provide lessons learned for the

---

<sup>1</sup> The Grantee shall be solely responsible for all Grantee travel costs to the proposed Project site.

Project. Based on its technical review of Rooikat, the Contractor shall (a) identify and describe any areas in the Project that may have higher risks for cost increases or reductions in power output of the plant design and (b) utilize value engineering methodology to prepare an optimization report that recommends potential Project cost savings in the design plans, tender documents, project construction and related infrastructure. The Contractor's technical review of Rooikat shall address, but is not limited to the following:

- the data resources, methodology and conclusions of the Rooikat forecast energy sales report;
- the geotechnical conditions of the Rooikat project site and proposed infrastructure, the proposed station layout and related structures, the hydro-mechanical plant, and the operating parameters as per the user requirement specification of 22MW; and
- the proposed construction methodology of the Rooikat scheme, the proposed construction program and capital costs and operating and maintenance costing.

**Task 1 Deliverables:** The Contractor shall deliver to the Grantee a report that contains all findings and detailed account of work performed under Task 1, including, but not limited to: i) detailed meeting minutes covering the Grantee's future plans and Grantee's short- and long-term objectives for the Project; ii) a report on the Contractor's field inspection of the Project site; iii) a finalized work plan that details how the Contractor shall proceed with fulfilling this TOR; iv) a finalized schedule for the FS; and v) a technical review of the Rooikat Hydropower Project.

## **Task 2: Site Specific Technical Guidance**

### ***Subtask 2(a): Optimal Location of the Dam Wall***

The Grantee has selected a site for the Project based on a pre-feasibility study conducted by the Grantee's engineer. Based on a review of the pre-feasibility study and the Contractor's field inspection performed in Task 1, the Contractor shall make a final determination of the suitability of the Project site. The Contractor shall assess the Project site to determine whether a concept hydropower station that will provide the highest annual energy yield at the lowest cost (e.g. capital and operating cost) can be developed at such site. The Contractor shall also identify and analyze all potential problems or irregularities that are specific to the Project site. The Contractor shall provide the Grantee with options on how to avoid or mitigate any such potential problems or irregularities.

Based on the pre-feasibility study and all other information provided by the Grantee, the Contractor shall determine the optimal dam location at the Project site and optimal height of the dam for optimal energy yield.

### ***Subtask 2(b): Construction Materials and Foundations Investigations***

The Contractor shall perform a geotechnical investigation on the Project site for the dam design. The Contractor shall investigate the soil and geologic conditions of the Project site and provide recommendations and design criteria for construction of the Project. The

geotechnical investigation shall include, but is not limited to, a review of publically available information; a review of all information and documentation provided by the Grantee (including, but not limited to, the Environmental Management Program (“EMPR”) for the geotechnical investigations for the Project), conducting on-site exploration, mapping/logging and sampling soil, sand, aggregates and rocks found at the Project site; and laboratory testing of samples obtained at the Project site.

Based on the results of the geotechnical investigation, the Contractor shall investigate and advise on usability of the surface and excavation materials in foundations and concrete works for the Project. The Contractor shall prepare a report presenting the results of the of the geotechnical investigation, its conclusions regarding the geotechnical impacts of the Project site, and its recommendations for the most geotechnically suitable construction of the Project.

**Task 2 Deliverables:** The Contractor shall deliver to the Grantee a report that contains all findings and provides a detailed account of all work performed under Task 2, including, but not limited to a recommendation on the specific dam construction location for optimum energy yield and the results of the geotechnical investigation for the dam design.

### **Task 3: Front End Engineering and Design**

As a critical Tender and Engineering, Procurement and Construction (“EPC”) input, the Contractor shall prepare a Front End Engineering and Design (“FEED”) package for the Project. The FEED package shall determine the annual energy yield accurately, identify all electro-mechanical components and civil works, and be the basis for an accurate cost estimate and schedule for the Project. The objective of the FEED package is to develop a concept hydropower station that will provide the highest annual energy yield at the lowest cost (e.g. capital and operating cost). The FEED package shall target the “highest power output -to- installed cost” ratio. In designing the FEED package and to ensure that the Project has a high level of constructability, the Contractor shall take into account factors such as the requirements of the REIPP Program, risks related to the construction of the Project, critical design requirements for the dam and hydropower structures, design requirements for the river diversion, hydro-mechanical equipment installation, and access during Project construction.

The FEED package for the Project shall give the Grantee all necessary information required to size the plant equipment and accurately determine the plant performance as Tender input. The FEED package shall also provide critical engineering and procurement input and information for the EPC phase.

The FEED package shall include but is not limited to the following activities:

- i) A review of the existing hydrology data to produce estimates for low frequency and high frequency floods and hydrographs;

- ii) A river diversion strategy and related civil works planning, including flood risk assessment, pertinent hydraulic calculations and sizing of coffer walls;
- iii) Optimum turbine configuration (i.e. number of turbines and axis configuration to achieve the highest “ Megawatt-to-Installed Cost” ratio);
- iv) Dam design including the foundation, banks, spillway(s), retaining wall(s) and the stilling basin with pertinent static/dynamic load calculations and recommendations on the roller-compacted-concrete. The Grantee shall provide the Contractor with a technically qualified individual who will assess whether the Contractor’s dam design is in compliance with South African National Committee of Large Dams (“SANCOLD”) standards. The Contractor, working in conjunction with such technically qualified individual, shall ensure that such dam design is in compliance with SANCOLD standards.
- v) Back water/tail water calculations and hydraulic friction loss calculations through the flow inlet, penstock and the turbine(s). For the assessment of tail water levels at varying flow rates, the Contractor shall use a proven numerical model such as HEC-RAS or commercial equivalent approved by the Grantee;
- vi) Design of the construction phase and permanent access roads;
- vii) Recommendations for the selection and/or sizing of all critical plant equipment for the Project, including, but not limited to:
  - Inlet gates
  - Trash racks
  - Turbine and auxiliary equipment
  - Generators
  - Control system
  - Auxiliary power and reticulation system
  - Medium Voltage protection per ESKOM’s embedded generation requirements)
  - Power transformers
  - Overhead cranes and gantries
  - Pumps
  - Overhead power lines
  - Heating, Ventilation and Air Conditioning systems
  - Area lighting
- viii) Review of the existing ESKOM substations that the 132 kV transmission line can potentially terminate. The Contractor will provide the Grantee with a recommendation of the optimal substation for such transmission line’s termination.
- ix) Design of the 132 kV transmission line inclusive of the switchgear and medium voltage (“MV”) protection equipment, terminating at the ESKOM substation recommended by the Contractor;
- x) Two-dimensional (2-D) plan and elevation lay-out drawing showing all concrete details, the flow inlet, penstock, spillway(s), turbine configuration, power house, and access roads;

- xi) Power house lay-out drawing showing dry-end of the turbine shafts, generators, corresponding couplings, control system, power transformers, and switchgear;
- xii) Single-line diagram for the 132 Kilovolt (“kV”) transmission line showing the conductor size and all MV protection equipment, terminating the ESKOM substation recommended by the Contractor;
- xiii) A power plant narrative (i.e. Design Basis Document) including a major mechanical, electrical and instrumentation/controls (“I&C”) equipment list;
- xiv) Design and servitude drawings as well as all reports required for completion of the EIA, including but not limited to: transportation and traffic management plan; erosion control report; stormwater management report; quarry siting; and access route maps; and
- xv) Operations and maintenance documents for the Project.

In the FEED package, the Contractor shall adhere to internationally accepted design standards. The Contractor shall ensure that the FEED package is prepared in such way so that U.S. equipment manufacturers and service providers will be able to readily bid on the implementation of the Project.

The Contractor shall also adhere to any relevant South African standards, (e.g. SANS, SANCOLD, Department of Water Affairs Standards, ESKOM Grid Connection Requirements, etc.) when preparing the FEED package.

**Task 3 Deliverables:** The Contractor shall provide the Grantee with a report that contains all findings and detailed account of work performed under Task 3, including, but not limited to, the FEED package, inclusive of the design drawings. All drawings prepared in CAD, AutoCAD, or Bentley MicroStation format shall be submitted both in the source format and pdf format.

#### **Task 4: Review of Environmental Impact Assessment and Development Impact Assessment**

##### ***Subtask 4(a): Review of Grantee’s Environmental Impact Assessment (“EIA”)***

The Contractor shall review the EIA provided by the Grantee to ensure that such EIA adheres to OPIC standards, including environmental due diligence requirements for OPIC consideration. The Contractor shall make any necessary recommendations to the EIA to facilitate potential OPIC and Ex-Im Bank financing. In reviewing the EIA, the Contractor will adhere to the International Finance Corporation (“IFC”) and OPIC EIA guidelines, covering at minimum the following environmental aspects:

- i) Long-term site specific environmental impacts on land use, landscape, soils and geology, irrigation, visual impacts and impacts on neighboring flora, fauna and human populations;
- ii) Environmental impacts across the design, construction, operation, and decommissioning phases;
- iii) Natural disaster, and accident risk assessment;

- iv) Waste management;
- v) Long term far-field upstream and downstream impacts on soils and geography, watershed, water table and marine environment;
- vi) Air quality and liquid discharges; and
- vii) Archaeology, historical and cultural heritage.

If the Contractor determines that the EIA provided by the Contractor is incomplete or inadequate according to OPIC standards, the Contractor shall revise the EIA to comply with OPIC standards.

***Task 4(b): Development Impact Assessment (“DIA”)***

The Contractor shall report on the potential development impact in the Host Country if the Project is implemented according to the FS recommendations.

While there may be immediate impacts resulting from the completion of the Project, the Contractor’s development impact report shall focus on the long-term outcomes that would result from the implementation of the Project.

The Contractor’s analysis of potential impacts (negative and positive) shall be as concrete and detailed as possible and shall be based on the data and information collected during the performance of the FS. The development impact factors are intended to provide decision makers and relevant parties with a broader view of the potential effects of the Project on the Host Country. The Contractor shall report on the indicators listed below for the Project:

- **Infrastructure:** An itemized statement listing the physical infrastructure created or improved. The summary shall indicate the anticipated timeline for implementation of the infrastructure:
  - i) Quantity of operational renewable electricity generation capacity added as a result of the Project, measured in megawatts. It was estimated at the time of funding that 18 megawatts of hydropower generation capacity would be developed through implementation of the proposed Project. The Contractor shall confirm whether this is still anticipated or whether and why this may have changed as a result of the FS findings.
- **Human Capacity Building:** An itemized statement listing jobs created and other human capacity building impacts:
  - i) Job creation: a description of the number and type of new jobs by number and type that would be created to implement and operate the proposed Project.
  - ii) Training and human capacity building: a description of individuals by number and type that would receive training, skills development or other human capacity building, as well as a description of the training program.

- **Environmental Impacts:** An itemized statement, backed-up by measureable data and analysis from the EIA of subtask 4(a), summarizing how the Project will impact the Host Country environment, and the expected timeline during which such impacts may occur:
  - i) Emissions avoided: In comparison to a typical fossil power plant of the same size, the Contractor shall quantify the reductions for greenhouse gas (“GHG”) emissions in CO<sub>2</sub> equivalent units, and for SO<sub>x</sub>, NO<sub>x</sub>, acidic and particulate matter emissions in absolute weight units, if the Project is implemented. The Contractor shall calculate GHG emissions using publically available tools from the United Nations Framework Convention on Climate Change or an equivalent approved by the Grantee and USTDA.
  - ii) Emissions produced: The Contractor shall also quantify any emissions and discharges that may be produced if the Project is implemented.
  
- **Market Oriented Reforms:** A description of any regulations, laws or institutional changes that are recommended and the effect they would have if implemented.

The Grantee shall provide the Contractor with a socio-economic impact study for the Project. The Contractor shall review the socio-economic impact study and incorporate any relevant findings of such study into the DIA.

**Task 4 Deliverables:** The Contractor shall deliver to the Grantee a report that contains all findings and detailed account of working performed under Task 4, including, but not limited to the Environmental Impact Assessment Review and Development Impact Assessment for the Project.

**Task 5: Cost Estimation, Economic Analysis, and Implementation Schedule**

Based on Tasks 1-4, the Contractor shall work closely with the Grantee to prepare a budgetary-level, EPC-type cost estimates for the implementation of the Project. The cost estimate shall include a detailed breakdown for all major components of the Project, including, but not limited to, major equipment, balance of plant, instrumentation and controls, and mechanical and electrical systems. The Contractor shall estimate operations and maintenance (“O&M”) costs, which shall include a Project site review. The Contractor shall also develop an annual energy yield for the Project. The Contractor shall also provide an O&M optimization strategy that recommends how to optimize the annual energy yield for the Project.

For the civil works, the Contractor shall develop a bill of materials inclusive of cement, rebar and structural steel and, in consultations with the Grantee, develop an estimation of local pricing for such items. The Contractor shall ensure that (i) the bill of materials is comprehensive and detailed and allows for ± 5% accuracy and (ii) the estimation of local pricing for such items in the bill of materials allows for ± 5% accuracy. Using the bill of materials and the estimated pricing, the Contractor shall prepare a cost estimate with around ± 5% accuracy.

The Contractor shall review any economic or financial analyses that have been previously prepared by the Grantee. Based on this review and on Tasks 1-4, the Contractor shall perform a base case economic evaluation as well as sensitivity analyses related to possible changes in all major external factors, such as fuel costs, electricity costs, interest rates, investment costs, and any other factors that may impact the profitability of the Project. The Contractor shall include in its evaluation a cash flow analysis, life cycle cost analysis (“LCCA”), market conditions, raw material availability, costs of owner’s engineer services, land acquisition, supply agreements, off-take agreements, and competing alternative methods of achieving the same or similar objectives for the Project. The Contractor’s LCCA shall consider all initial capital costs (plan, design, develop, and build) and long-term operational costs (warranties, O&M, acquisition, installation, refurbishment, disposal, etc.). The Contractor shall also complete a net present value analysis.

Adhering to the Grantee’s REIPP Program imposed deadlines, the Contractor shall also prepare a detailed implementation schedule for the Project. The Project implementation plan shall include a comprehensive plan, schedule, and timeline required for Project implementation. The Contractor shall include a critical path analysis and detailed implementation milestone descriptions.

**Task 5 Deliverables:** The Contractor shall deliver to the Grantee a report that contains all information collected and detailed account of work performed under Task 5, including, but not limited to an EPC cost estimate, bill of materials for civil works, energy yield analysis, and implementation schedule for the Project.

#### **Task 6: Legal, Regulatory, and Institutional Review**

The legal, regulatory, and institutional review shall be sufficient to support the implementation plan (which was developed in Task 5) that details all of the steps that the Grantee will need to take to comply with all relevant Host Country legal, regulatory, and institutional requirements for the implementation of the Project, and shall include, but not be limited to, existing Host Country energy sector laws, the requirements of the REIPP Program, permitting requirements, local building requirements, constraints that include right-of-way and zoning ordinances, and other legal, regulatory, and institutional requirements, that the Grantee will need to comply with for the implementation of the Project. The Contractor shall also analyze the anticipated impacts of relevant Host Country legal, regulatory, and institutional requirements on the cost estimates and economic analysis (which was developed in Task 5) and provide recommendations for mitigating any anticipated negative impacts. If necessary, the Contractor shall revise the cost estimates and economic analysis developed in Task 5 to reflect any anticipated impacts of relevant Host Country legal, regulatory, and institutional requirements. In addition, the Contractor shall analyze the anticipated impacts of relevant Host Country legal, regulatory, and institutional requirements on the implementation schedule (which will be developed in Task 5) for the Project, ensure that these anticipated impacts are

incorporated into the implementation schedule, and provide recommendations for mitigating any anticipated negative impacts.

The Contractor shall provide a written report that includes (i) an analysis of the laws, legislation, and regulation reviewed, (ii) recommendations to address the concerns identified, and (iii) next steps needed to implement the Project.

The permitting and licensing (“L/P”) requirements with the Department of Energy, local building and structural codes, local right-of-way, and residential zoning/re-zoning ordinances shall be identified in thorough discussions with the Grantee. The critical L/P applications shall be initiated by the Contractor during this Task 6. Payment for all licensing and permitting fees to local and national authorities shall be the Grantee’s sole responsibility.

**Task 6 Deliverables:** The Contractor shall prepare and deliver to the Grantee a report that contains all findings and detailed account of work performed under Task 6, including, but not limited to, an analysis of legal, regulatory, and institutional aspects relevant to the Project implementation.

### **Task 7: U.S. Sources of Supply and Implementation Financing**

***Subtask 7(a): U.S. Sources of Supply:*** Based on the design that was developed in Task 3, the Contractor shall identify the likely U.S. suppliers for equipment procurement and U.S. service providers for the Project and prepare a qualified and interested vendors list. The list shall be complete with company names, contact name(s), physical and e-mail addresses and phone numbers. To the greatest extent practicable, for each recommended U.S. supplier and service provider, the Contractor shall identify the sourcing location and percentage of U.S.-sourced content so that the Grantee can determine the Project’s potential to receive U.S. Ex-Im Bank financing.

***Subtask 7(b): Financing Review:*** The Contractor shall contact OPIC and U.S. Ex-Im Bank (in the given order) to investigate financing options for the Project. The Contractor shall identify potential U.S. private sources of equity in addition to significant involvement of U.S. brand name franchisers, operators, or contractors that would help the Grantee have a meaningful connection to the U.S. private sector so that the Grantee may access financing and/or risk insurance from OPIC. For this purpose, the Contractor shall develop a “Project Prospectus”, not exceeding five pages, that can be shared with potential investors. This document shall be approved by the Grantee prior to distribution and shall address:

- Project Overview
- Brief Technical Description
- Implementation Stages (per REIPP Program)
- Project Cost and Equity Partnership Opportunities

The Grantee shall provide the Contractor with the contact information of the OPIC administrator in South Africa and the short-listed potential U.S. investors.

The Contractor shall, in conjunction with the Grantee's financial advisors, develop a comprehensive financing plan for the Project, and shall assist the Grantee in finding a source suitable for funding and insuring all components of the Projects from entities including, but not limited to, OPIC, U.S. Ex-Im Bank, the World Bank, regional multilateral development banks, and debt and equity markets. In this regard, the Contractor shall meet with potential sources of implementation financing for the Project and evaluate their interest and capability to provide debt and/or equity financing and/or insurance for the Projects. The Contractor shall also verify current terms and conditions as well as review and analyze any applicable legal requirements for each of the potential sources of implementation financing that are identified pursuant to this subtask 7(b). The Contractor shall provide the Grantee with contact information for each potential source of implementation financing identified, including, but not limited to: name of financier, point of contact, address, telephone number, fax number, and e-mail address.

Specifically, the Contractor shall investigate U.S. Ex-Im Bank and OPIC options for the U.S. manufactured equipment and the terms and conditions of such financing. The Contractor shall provide a financial model and report that is sufficient to meet the requirements of potential sources of implementation financing for the Project, such as OPIC and U.S. Ex-Im Bank. The financial model and report shall include, but not be limited to, net present value, payback time, internal rate of return, cash flow, and an LCCA for the base case and all sensitivities. If requested by the Grantee, the Contractor shall also assist the Grantee in obtaining a Letter of Intent from OPIC (or U.S. Ex-Im Bank) for project finance.

**Task 7 Deliverables:** The Contractor shall prepare and submit to the Grantee a report that contains all finds and detailed account of work performed under Task 7, including, but not limited to an identification of U.S. sources of supply and review of financing options for the Project.

### **Task 8 - Final Report and Presentation**

The Contractor shall prepare and deliver to the Grantee a substantive and comprehensive draft final report of all work performed pursuant to this TOR ("Draft Final Report").

After the Grantee has reviewed the Draft Final Report, the Contractor shall conduct a final report meeting with the Grantee at the Grantee's facilities in South Africa or at another appropriate venue agreed upon by the Contractor and the Grantee. The Grantee shall identify appropriate personnel and other relevant stakeholders to participate in the final report meeting.

During the final report meeting, the Contractor shall: review all work performed under this TOR; present the findings and recommendations from the Draft Final Report; and gather feedback from the Grantee on the Draft Final Report and Grantee requests for changes to the Draft Final Report, if any. The Grantee shall provide written comments to

the Contractor within two weeks of the Contractor's presentation. The Contractor shall promptly make the necessary changes and modifications to the Draft Final Report.

Consequently, the Contractor shall prepare and deliver to the Grantee and USTDA a substantive and comprehensive final report of all work performed under this TOR ("Final Report"). The Final Report shall be organized according to the above tasks, and shall include all deliverables and documents that have been provided to the Grantee. The Final Report shall also contain an Executive Summary in addition to the other required deliverables, and shall be prepared in accordance with Clause I of Annex II of the Grant Agreement.

The Contractor shall prepare and deliver the Final Report to USTDA in the manner set forth in Clause I of Annex II hereof. The Contractor will provide the Grantee with six (6) copies of the Final Report on CD-ROM. The CD-ROM version of the final report shall include:

- Adobe Acrobat readable copies of all documents;
- Source files for all drawings in AutoCAD, Visio, or Bentley MicroStation format;
- Source files for any analytical tools used to complete the TOR; and
- Source files for all documents in Microsoft Office 2000 or later formats.

## **ANNEX 6**



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

### U.S. Firm Information Form

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

USTDA Activity Number [To be completed by USTDA]

Activity Type [To be completed by USTDA]	<input type="checkbox"/> Feasibility Study	<input type="checkbox"/> Technical Assistance	<input type="checkbox"/> Other (specify)
--	--	---	--

Activity Title [To be completed by USTDA]

Full Legal Name of U.S. Firm

Business Address (street address only)

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

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

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

Please provide a list of directors and principal officers as detailed in Attachment A. Attached?  Yes  
(Not Applicable for U.S. Publicly Traded Company)

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

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

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

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

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

#### Project Manager

Name	Surname	
	Given Name	

Address

Telephone

Fax

Email

#### Negotiation Prerequisites

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

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

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

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

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

1. U.S. Firm is a [check one]  Corporation  LLC  Partnership  Sole Proprietor  Other:  .  
 duly organized, validly existing and in good standing under the laws of the State of:  .  
 The U.S. Firm has all the requisite corporate power and authority to conduct its business as presently conducted, to submit this proposal, and if selected, to execute and deliver a contract to the Grantee for the performance of the USTDA Activity. The U.S. Firm is not debarred, suspended, or to the best of its knowledge or belief, proposed for debarment or ineligible for the award of contracts by any federal or state governmental agency or authority.
2. The U.S. Firm has included herewith, a copy of its Articles of Incorporation (or equivalent charter or document issued by a designated authority in accordance with applicable laws that provides information and authentication regarding the legal status of an entity) and a Certificate of Good Standing (or equivalent document) issued within 1 month of the date of signature below by the State of:  .  
 The U.S. Firm commits to notify USTDA and the Grantee if it becomes aware of any change in its status in the state in which it is incorporated. USTDA retains the right to request an updated certificate of good standing. **(U.S. publicly traded companies need not include Articles of Incorporation or Good Standing Certificate)**
3. Neither the U.S. Firm nor any of its 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.

Name		Signature	
Title			
Full Legal Name of U.S. Firm		Date	







**ATTACHMENT C**

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

**Subcontractor Information Form**

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

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

Activity Title [*To be completed by USTDA*]

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

Full Legal Name of Subcontractor

Business Address of Subcontractor (street address only)

Telephone Number

Fax Number

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

**Subcontractor Point of Contact**

Name

Surname

Given Name

Address

Telephone

Fax

Email

**Subcontractor's Representations**

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

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

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

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

3. Neither the subcontractor nor any of its 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.

4. 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.

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

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

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

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

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

Name	<input type="text"/>	Signature	<input type="text"/>
Title	<input type="text"/>		
Full Legal Name of Subcontractor	<input type="text"/>	Date	<input type="text"/>