

REQUEST FOR PROPOSALS

FEASIBILITY STUDY FOR THE

SOLAFRICA 100MW CSP PLANT

Submission Deadline: **10:00 AM**
SOUTH AFRICA STANDARD TIME
APRIL 7, 2014

Submission Via Email: INFO@SOLAFRICA.CO.ZA

PROPOSALS SHALL BE SUBMITTED TO SOLAFRICA VIA EMAIL AT INFO@SOLAFRICA.CO.ZA PRIOR TO THE TIME AND DATE SPECIFIED ABOVE. PROPOSALS RECEIVED AFTER SAID TIME AND DATE WILL NOT BE ACCEPTED OR CONSIDERED.

REQUEST FOR PROPOSALS

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Section 1: INTRODUCTION

The U.S. Trade and Development Agency (USTDA) has provided a grant in the amount of US\$800,000 to Solafrica Photovoltaic Energy (Pty) Ltd. (the “Grantee”) in accordance with a grant agreement dated February 21, 2014 (the “Grant Agreement”) to fund the cost of goods and services required for a feasibility study (“Feasibility Study”) to examine the technical, financial, legal, environmental, and other critical aspects of the proposed Solafrica 100 megawatt (“MW”) concentrated solar power (“CSP”) plant (“Project”) in South Africa (“Host Country”). In particular, the Feasibility Study will provide the Grantee with the necessary documentation to secure financial support for the implementation and operation of the proposed Project. The purpose of the Feasibility Study is to determine the cost effectiveness and profitability of bidding, constructing, and operating a CSP plant project with thermal energy storage capacity through South Africa’s Renewable Energy Independent Power Producer (“REIPP”) Procurement Program. 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

South Africa’s Department of Energy released the Integrated Resource Plan for Electricity 2010-2030 (“IRP”) in March 2011. The IRP indicated that renewable energy will make up a substantial 42% of all new electricity generation (totaling 17,800 MW) from 2010-2030. Under the IRP the South African Department of Energy committed to produce 1,200 MW of power from CSP through the REIPP Procurement Program. A draft update to the IRP was released for comment in November 2013. The updated IRP proposes an increased allocation for solar power for the 2010-2030 period, with a notable increase in CSP capacity to 3,300 MW.

Under the REIPP Procurement Program, prospective project developers submit bids to South Africa’s Department of Energy to construct and operate renewable energy projects and sell power to Eskom, South Africa’s national electricity utility. The bidding process is organized into several bidding rounds, the first of which was completed in December 2011. The REIPP Procurement Program includes the following technologies: onshore wind, small hydro, landfill gas, solid biomass, biogas, photovoltaic, and CSP.

CSP is a renewable energy source suitable for South Africa. The technology is relatively new to South Africa, but five CSP projects have been approved during the first three rounds of the REIPP Procurement Program. CSP systems use mirrors or lenses to concentrate a large volume of sunlight onto a small receiving device. The concentrated light is converted to heat, which drives a heat engine (usually a steam turbine) connected to an electrical power generator. CSP power stations consist of two parts: one that collects solar energy and converts it to heat; and another that converts heat energy to electricity. These systems can include capacity for thermal energy storage (such as heat transfer fluid or molten salts); this stored energy can be utilized to generate power during evening hours. A number of CSP technology variations are available and will be assessed under this Feasibility Study.

The Grantee’s Project site is located on the northeast end of an existing farm in the Northern Cape Province of South Africa. The Grantee recently signed with the site’s landowners a letter of

intent that outlines the procedures and terms for the parties to enter into a long-term lease agreement for the specific area where the CSP plant will be developed.

The Grantee previously worked in a joint venture to develop the 50MW Bokpoort CSP project through the REIPP Procurement Program in 2011. This project has since reached financial close.

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

1.2 OBJECTIVE

The objective of the Feasibility Study is to provide the Grantee with analyses and recommendations that will determine the cost effectiveness and profitability of bidding, constructing, and operating a CSP plant project with thermal energy storage capacity through South Africa's REIPP Procurement Program. The Terms of Reference ("TOR") for the 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\$800,000. **The USTDA grant of US\$800,000 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\$800,000 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 Solafrica 100MW CSP Plant.

2.2 DEFINITIONS

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

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

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

2.3 DESK STUDY REPORT

USTDA sponsored a Desk Study to address technical, financial, sociopolitical, environmental, and other aspects of the proposed Project. 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\$800,000.

2.6 RESPONSIBILITY FOR COSTS

Offerors 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

An electronic copy of your proposal must be submitted to the Grantee via email at info@solafrica.co.za no later than 10:00 AM (South Africa Standard Time), on April 7, 2014. The Grantee will promptly notify Offerors upon its receipt of proposals. Any proposals received after the deadline will not be accepted or considered. 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 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.

2.15 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.

2.16 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.

2.17 EXCEPTIONS

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

2.18 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.

2.19 RIGHT TO REJECT PROPOSALS

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

2.20 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.

2.21 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.

2.22 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.

2.23 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\$800,000, which is a fixed amount.

Offerors shall submit an electronic copy of the proposal to the Grantee via email at info@solafrica.co.za. Proposals received by mail, courier, hand delivery, or 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:

Criteria	Weighting	
1	Demonstrated expertise in concentrated solar thermal power plant design, engineering, performance modelling, costing, implementation, operation, and maintenance.	25%
2	Demonstrated expertise in feasibility analysis and project development support considering: <ul style="list-style-type: none"> • Technical/Economical/Location feasibility analysis • Administrative permitting and licensing (in the South African context) • Independent and Owner’s engineering • Technical, legal and financial due diligence • Network/Interconnection integration analysis • Project-specific RFP development, bid evaluation, negotiation support • Host country development impact analysis • Other (as per the Terms of Reference) 	30%
3	Demonstrated relevant experience in legal advisory and documentation for energy projects	15%
4	Demonstrated experience in project financing, financial advisory, and development of financial models for energy projects	15%
5	Demonstrated familiarity with South African legislation and regulation of the independent power producer sector	5%
6	A clear organisational/consortium structure and management plan for the feasibility study	10%

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

Price will not be a factor in contractor selection.

ANNEX 1

Solafrica Photovoltaic Energy (Pty) Ltd., info@solafrica.co.za

B—South Africa: Feasibility Study for the Solafrica 100MW CSP Plant

POC: Jennifer Van Renterghem, USTDA, 1000 Wilson Boulevard, Suite 1600, Arlington, VA 22209-3901, Tel: (703) 875-4357, Fax: (703) 875-4009, Email: RFPQuestions@ustda.gov. Solafrica 100MW CSP Plant. The Grantee invites submission of qualifications and proposal data (collectively referred to as the "Proposal") from interested U.S. firms that are qualified on the basis of experience and capability to develop a feasibility study that examines the technical, financial, legal, environmental, and other critical aspects of the proposed Solafrica 100 megawatt (MW) concentrated solar power (CSP) plant in South Africa. In particular, the feasibility study will provide the Grantee with the necessary documentation to secure financial support for the implementation and operation of the proposed CSP plant.

The purpose of the feasibility study is to determine the cost effectiveness and profitability of bidding, constructing, and operating a CSP plant project with thermal energy storage capacity through South Africa's Renewable Energy Independent Power Producer ("REIPP") Procurement Program. Under the REIPP Procurement Program, prospective project developers submit bids to South Africa's Department of Energy to construct and operate renewable energy projects and sell power to Eskom, South Africa's national electricity utility. The bidding process is organized into several bidding rounds, the first of which was completed in December 2011.

The Grantee's project site for the proposed 100MW CSP plant is located on the northeast end of an existing farm in the Northern Cape Province of South Africa. The Grantee recently signed with the site's landowners a letter of intent that outlines the procedures and terms for the parties to enter into a long-term lease agreement for the specific area where the CSP plant will be developed. The Grantee previously worked in a joint venture to develop the 50MW Bokpoort CSP project through the REIPP Procurement Program in 2011. This project has since reached financial close.

The U.S. firm selected will be paid in U.S. dollars from a US\$800,000 grant to the Grantee from the U.S. Trade and Development Agency (USTDA).

A detailed Request for Proposals (RFP), which includes requirements for the Proposal, the Terms of Reference, and portions of a background desk study report are available from USTDA, at 1000 Wilson Boulevard, Suite 1600, Arlington, VA 22209-3901. To request the RFP in PDF format, please go to: <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 via email at info@solafrika.co.za no later than 10:00 AM (South Africa Standard Time), on April 7, 2014. 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



Solafrica 100 MW CSP [REDACTED]

1.1 Executive Summary

The desk study reviewed a proposed Feasibility Study by Solafrica Photovoltaic Energy (Proprietary) Limited (“Solafrica”) for a 100 MW Concentrated Solar Power (CSP) plant in the Northern Cape of South Africa. Solafrica proposes a feasibility study to evaluate the technical, economic, financial, and environmental of a 100 MW CSP plant. Solafrica also requested activities to support a tender in South Africa’s Renewable Energy Independent Power Producer Procurement Program (REIPP). The REIPP is a manifestation of South Africa’s commitment to add 4,360 MW of renewable energy generation capacity by 2030.

Green Powered Technology LLC, the desk study contractor, recommends the project because of the likelihood of success of Solafrica to bring the project to financial closure based on previous experience with the REIPP, the developmental impact of the project, access to U.S. firms to the South Africa REIPP and the estimated U.S. export potential of \$8-212 million. At first view, the project meets United States – Africa Clean Energy Finance Initiative (ACEF) project requirements. In the case of the Solafrica 100MW CSP plant, ACEF funding provides project acceleration and barrier removal. [REDACTED]

1.2 Project Description

1.2.1 Energy Sector Overview

South Africa's energy sector is critical to the South African economy as the country relies heavily on its large-scale, energy-intensive mining industry. In 2010, almost 74 percent of South Africa's total energy supply came from coal, followed by oil (14 percent) and solid biomass and waste (10 percent).¹ South Africa's energy balance also includes relatively small shares of natural gas, nuclear, and hydroelectricity. South Africa uses its large coal deposits for most of its energy needs, particularly in the electricity sector. In 2010, South Africa generated 94% of its electricity using coal.²

The U.S. Energy Information Administration (EIA) estimates show that South Africa's total electricity consumption grew by 20 percent from 2000 to 2010, while installed capacity grew at a slower rate of 7 percent during that same time period.³ In late 2007 and early 2008, as a result of high economic growth and growing electricity demand, combined with any new power generation coming online, the country experienced a power crisis that resulted in several blackouts and threatened the power supply to many businesses, including the mining industry. Gold, diamond, platinum, and coal producers had to temporally shut down underground mining

¹ International Energy Agency, “South Africa: Indicators for 2010.” International Energy Agency, <http://www.iea.org/statistics/statisticssearch/report/?country=SOUTHAFRIC&product=Indicators&year=2010> (accessed October 15, 2013).

² U.S. Energy Information Administration, “South Africa: Analysis.” U.S. Energy Information Administration, <http://www.eia.gov/countries/cab.cfm?fips=SF> (accessed October 15, 2013).

³ Ibid.



activities for nearly a week since Eskom could not guarantee electricity supplies.⁴ The country also had to ration its electricity exports to neighboring countries, which it sends through the Southern African Power Pool (SAPP). Electricity supply constraints are expected to remain a feature of South Africa's economic landscape for several years to come, and the introduction of additional capacity will be required for at least the next 20 years.

To meet generation targets, and as a demand-side measure, electricity rates have been gradually increasing for all sectors. South Africa has traditionally had low electricity costs; however, Eskom requested a tariff increase in 2008 to help finance new projects and meet rising equipment costs. The National Energy Regulator of South Africa (NERSA), the energy sector regulator, partially approved Eskom's request in 2008 and has approved increases in electricity tariffs until 2018.

The South African economy has grown rapidly since the end of the apartheid era in 1994 and is now one of the most developed nations in Sub-Saharan Africa. Despite this rapid growth, economic problems from the apartheid era remain, principally poverty and lack of economic participation among the disadvantaged groups. The South African government has committed to ensuring that black-owned companies have access to the energy sector under its black economic empowerment (BEE) program.⁵

One of the major issues facing South Africa is the need to reduce Green House Gas (GHG) emissions from the power sector, primarily by reducing reliance on coal. South Africa's dependence on hydrocarbons, particularly coal, has led the country to become the leading carbon dioxide emitter in Africa and the 12th largest in the world.⁶ South Africa is already taking steps to expand the use of both renewable and nuclear energy, to explore the use of carbon capture and storage (CCS) technologies, and to reduce energy demand through a nationwide energy efficiency program. South Africa's public utility, Eskom, also has a target to reduce dependence on conventional coal to 70% by 2025 and reduce GHG emissions in absolute terms by 2050 (including increasing capacity from renewable). South Africa's current target is to reach 17.8 GW of generation capacity from renewables by 2030.⁷

1.2.2 Energy Governing Bodies

The Department of Energy is the primary government institution responsible for energy regulation. The Department of Energy was established in 2009 through the Energy Act 2008, which merged the Department of Minerals and Energy. The aim of the Department of Energy is to formulate energy policies, regulatory frameworks and legislation; oversee their implementation to ensure energy security; promote environmentally-friendly energy carriers and provide access to affordable and reliable energy for all South Africans.

⁴ Ibid.

⁵ Ibid.

⁶ Ibid

⁷ Eskom. "Integrated Results Presentation for the year ended 31 March 2013," http://www.eskom.co.za/OurCompany/MediaRoom/Documents/Results_presentation31March2013f.pdf (accessed October 23, 2013).

The National Energy Regulator of South Africa (NERSA), established in 2004, is responsible for regulating the electricity, natural gas and petroleum industries. NERSA regulates electricity prices and promotes private sector participation by encouraging investment on the part of independent power producers (IPPs), as well as promotes off-grid technologies to meet rural energy needs. NERSA is the industry regulator and is responsible for implementing South Africa's energy plan. The energy plan is centered on diversifying energy sources, securing energy supplies, and pushing forward new energy projects across sectors.

Eskom, (the state electricity company) is responsible for electricity transmission and generates 95 percent of South Africa's electricity.

1.2.3 Laws and Regulations

Table 1 reflects the primary legislation that govern Energy in South Africa.

Table 1: South Africa Energy Legislation

Act	Description
<p>The National Energy Act, 2008 (Act No. 34 of 2008)</p>	<p>The Act empowers the Minister of Energy to ensure that diverse energy resources are available in sustainable quantities and at affordable prices in the South African economy to support economic growth and poverty alleviation, while also taking into account environmental considerations. The Act also covers the following areas:</p> <ul style="list-style-type: none"> ▪ energy planning; ▪ increased generation and consumption of renewable energy; ▪ contingency energy supply; ▪ the holding of strategic energy feedstock and carriers; ▪ adequate investment in appropriate upkeep and access to energy infrastructure; ▪ measures for the furnishing of certain data and information regarding energy demand; ▪ supply and generation; and ▪ the establishment of an institution to be responsible for the promotion of efficient generation and consumption of energy and energy research.
<p>The Electricity Regulation Act, 2006 (Act No. 4 of 2006), as amended</p>	<p>The Act repealed the Electricity Act, 1987 as amended (Act No. 41 of 1987), with the exception of section 5B, which provides for the funds of the Energy Regulator for the purpose of regulating the electricity industry.</p> <p>The Act establishes a national regulatory framework for the electricity supply industry and it introduces the National Energy Regulator as the custodian and enforcer of the national electricity regulatory framework.</p> <p>The Act also provides for licenses and registration as the manner in which generation, transmission, distribution, trading and the import and export of electricity are regulated.</p> <p>Section 34(1) empowers the Minister of Energy to make determinations for the establishment of Independent Power Producers (IPP) for the purpose of creating greater competition in the electricity generation sector, so as to increase the supply of electricity</p>



The following Acts provide a mandate to the Energy Sector and are also administered by the Department:

- The Petroleum Products Act, 1977 (Act No. 120 of 1977), as amended;
- The Central Energy Fund Act, 1977 (Act No. 38 of 1977), as amended;
- The Nuclear Energy Act, 1999 (Act No. 46 of 1999);
- The National Nuclear Regulator Act, 1999 (Act No. 47 of 1999);
- The National Radioactive Waste Disposal Institute Act, 2008 (Act No. 53 of 2008);
- The Petroleum Pipelines Act, 2003 (Act No. 60 of 2003);
- The Petroleum Pipelines Levies Act, 2004 (Act No. 28 of 2004);
- The Gas Act, 2001 (Act No. 48 of 2001);
- The Gas Regulator Levies Act, 2002 (Act No. 75 of 2002);
- The National Energy Regulator Act, 2004 (Act No. 40 of 2004);
- The Abolition of the National Energy Council Act, 1991 (Act 95 of 1991);
- The Electricity Act, 1987 (act no. 41 of 1987), as amended;
- The Liquid Fuel And Oil Act Repeal Act, 1993 (Act 20 of 1993); and
- The Coal Act Repeal Act, 1991 (Act 124 of 1991).

DOE also has mandates from the National Environmental Management Act, 1999 (Act No. 107 of 1999), the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), the Disaster Management Act, 2002, (Act No. 57 of 2002), the Hazardous Substances Act, 1973, (Act No. 16 of 1973), the National Ports Act, 2005 (Act No. 12 of 2005).

Policy Mandates

A number of policy documents have been produced governing energy development, including: White Paper on the Energy Policy of the Republic of South Africa, 1998, which describes the government's general policy for the supply and consumption of energy until the year 2010. This policy sets out the path for development of renewable energy and improvement of energy efficiency with the ultimate goal of reaching a more sustainable energy mix, in order to achieve South Africa's macro-economic goals. A successor to this policy was released in September 2009 and aims to overhaul the fiscal, legislative and regulatory regimes in the energy sector, to further promote renewable energy development, and reduce carbon emissions.

White Paper on Renewable Energy, 2003, lays the foundation for the widespread implementation of renewable energy and sets a target (currently not mandatory, only a policy objective) of ten thousand (10,000) GW of renewable energy contribution to final energy demand by 2013.

Energy Efficiency Strategy of the Republic of South Africa, 2005 (reviewed 2008), sets out a national target (currently not mandatory, only a policy objective) for energy efficiency improvement of 12% by 2015 and provides for a number of "enabling instruments".

Biofuels Industrial Strategy of the Republic of South Africa, 2007, proposes the adoption of a 5 year pilot program to achieve a 2% penetration level of biofuels in the national liquid fuel supply. It further proposes the utilization of certain crops for the production of biofuels, and



excludes others on the grounds of food security. It recommends the use of a fuel levy exemption for biodiesel and bioethanol.

National Cleaner Production Strategy, 2004, seeks to “enable SA society and industry to develop its long term, full potential by... adopting the principles of Cleaner Production... and promoting the practices of sustainable consumption.”

An Integrated Resource Plan (IRP) 2010 – 2030, which contemplated the addition of over 55GW of energy generation by 2030 (an increase of more than 170% on existing levels), 42% of which was to be sourced from renewable energy sources.

1.2.4 Renewable Energy Independent Power Producer Procurement Program

Under the Renewable Energy Independent Power Producer (REIPP) Procurement Program, South Africa aims to add 4,360 MW of generation capacity by 2030. REIPP is a competitive bid scheme with tariff caps. Electricity generated by successful bidders will be purchased by the national utility, Eskom, and supplied to the national grid. The REIPP program includes the following technologies: onshore wind, small hydro, Landfill Gas (LFG), biomass (solid), biogas, photovoltaic systems and Concentrated Solar Power (CSP).

In March 2010 and revised on March 2011, DOE finalized details of the IRP, a 20-year blueprint that showed the government’s commitment to energy from renewable sources. The IRP indicated that renewable energy will make up a substantial 42% of all new electricity generation (totaling 17,800MW) from 2010-2030, and gave strong backing to Wind, Solar Photovoltaics (PV) and CSP within a proposed future energy mix. Portions of renewable energy generation will come through the REIPP program.

Under the REIPP program, bidders submit bids to construct and operate renewable energy projects and sell power to Eskom. The following are Key features of the REIPP Program:

- A competitive bid process with five rounds (phases), with selection on price and non-price criteria;
- Bidders must meet minimum thresholds in respect of economic development requirements in order for their bid to be compliant;
- In addition to minimum thresholds, there is a strong weighting on criteria relating to job creation, local content and ownership, social development, preferential procurement and management control for black South Africans;
- Bidders bid the price (tariff) that will be payable by Eskom (as buyer) pursuant to the power purchase agreement (PPA), with the price not to exceed the price cap for each technology for each phase;
- Bidders required to submit the detailed heads of terms⁸ of material contracts, including financing agreements and construction and operation contracts (generally an engineer, procurement and construction (EPC) contract and an operating and maintenance (O&M) contract); and
- Successful (preferred) bidders required to reach financial close and commercial operation of the project within specified time-frames.

⁸ A non-binding document outlining the main issues relevant to a tentative partnership agreement. The first step to a full legally binding agreement



Preferred bidders under the REIPP Program are required to enter into the following (non-negotiable) documents in order to reach financial close:

- A PPA with Eskom;
- An implementation agreement (IA) with the DOE;
- Transmission agreement or distribution agreement with Eskom and
- Direct agreements.

1.2.4.1 REIPP Round 1

By December 2011, DOE closed on 1,416MW of capacity in 28 projects in the first round of the REIPP. DOE received 53 bids across all the different technologies, awarding 28 projects to independent power producers made up of 19 solar PV projects with a combined capacity of 632MW, two CSP projects of 150MW and 7 wind projects of 634MW.

1.2.4.2 REIPP Round 2

The bidding for second round of the REIPP closed in March 2012 with a total of 79 bids received. The total capacity of bids amounted to 3,255MW, far exceeding the cap that was set at 1,275MW across all technologies. The second round bid featured nine solar PV projects with a combined capacity of 417.1MW, seven wind projects of 562.6MW, two mini-hydro projects of 14.3MW each and one CSP of 50MW. The 19 projects together represent 1,043.9MW of a total of 1,225MW allocated for the second round.

1.2.4.3 REIPP Round 3

The bidding for third round closed on August 19, 2013 and DOE announced 17 preferred bidders in November 2013. The Department of Energy received 93 bids in the third window for 6,023MW of capacity and allocated 1,456MW. The third round bid featured six solar PV projects of 450MW, seven wind projects of 787MW, two CSP of 200MW, one landfill gas of 18MW and one biomass of 16.5MW.

The third round version of the REIPP RFP was released in May 2013 bringing with it material changes to the procurement framework for CSP projects targeting submission in August 2013. Due to the complexity of making design changes to CSP configurations, a slew of comments were sent to the Independent Power Producer (IPP) Renewables office from CSP developers motivating for a delay in the August 2013 submission date. In response, the IPP Renewables office announced an additional bidding round specific to CSP in March 2014.

The third round includes a special window for CSP technology. The bidding for the CSP third round closes on March 31, 2014 with preferred bidders to be announced by June 10, 2014

1.2.4.4 REIPP Future Rounds

Eskom hopes to connect 3,725MW of extra capacity to the national grid following the first REIPP three rounds. On October 29 2012, the DOE announced that it intended to procure an additional 3,200MW of renewable energy capacity between 2017 and 2020, in addition to the 3,725MW currently being procured to 2016 under the REIPP Program.



Renewable energy is a priority for the South African government which has implemented the REIPP Procurement Program to achieve renewable energy mandates. The REIPP Program provides a procurement process with a minimum threshold of South African entity participation.

1.2.5 Project Details

Solafrica Photovoltaic Energy (Proprietary) Limited (“Solafrica”) proposes a 100 MW CSP plant, based on a technology to be selected after the technical assessment of a feasibility study, with options to add, under subsequent phases, an additional 100 MW [REDACTED] CSP plant and 75 MW PV facility in build-out of the project site in the Northern Cape province of South Africa. Solafrica’s intends to develop a CSP plant with significant amounts of thermal storage.

[REDACTED]
The technical analysis will advise the most appropriate CSP technology on the basis of site, market, and technology considerations. Solafrica intends to have the project ready for bid in DOE’s REIPP by March 2015.

Solafrica proposes permitting the site for a 100 MW CSP plant, primary option, as well as secondary options consisting of a 100 MW [REDACTED] CSP plant and 75 MW PV power plants. The secondary options create development optionality for future developments or easy priority shuffling if the market or opportunity calls for it. Solafrica proposes options to the extent that they do impair the primary option nor attract significant additional expenses.

1.2.5.1 Technology

The technical analysis provides economic and financial analyses in evaluating the commercial viability of the various technology options within the South African capital markets.

CSP is a renewable energy source suitable for South Africa. CSP plants are new to South Africa, and in the last year three CSP projects are underway. The projects under construction are a parabolic trough with synthetic oil heat transfer fluid (“HTF”) and central receiver with direct steam HTF. In November 2013, the DOE announced preferred bidder status for 2 additional CSP projects. Grid-connected solar thermal power when combined with thermal energy storage can provide large volumes of utility-scale, schedulable capacity, comparable to coal-fired power plants.

The proposed feasibility study will conduct a technical analysis of the following CSP technologies:

- Parabolic trough with synthetic oil HTF
- Parabolic trough with molten salt HTF
- Central receiver with direct steam HTF
- Central receiver with molten salt HTF
- Linear Fresnel with direct steam HTF
- Linear Fresnel with molten salt HTF

[REDACTED]



[REDACTED]

CSP works on the same principle as a conventional power station, but instead of using coal as the source of fuel to generate electricity, CSP uses the energy from the sun. CSP systems use mirrors or lenses to concentrate a large area of sunlight, or solar thermal energy, onto a small area. The concentrated light is converted to heat, which drives a heat engine (usually a steam turbine) connected to an electrical power generator. CSP power stations consist of two parts: one that collects solar energy and converts it to heat; and another that converts heat energy to electricity. Because CSP uses thermal energy, it can also incorporate thermal energy storage (TES), fossil-fuel backup/hybridization, or both for higher levels of stability and dispatchability and increased duration of energy output.

The following paragraph describes the three proposed CSP project technologies:

Parabolic Trough

Parabolic trough-shaped mirror reflectors are used to concentrate sunlight on to thermally efficient receiver tubes placed in the trough's focal line. The troughs are usually designed to track the sun along one axis, predominantly north-south. A thermal transfer fluid, such as synthetic thermal oil, is circulated in these tubes. The fluid is heated to approximately 400°C by the sun's concentrated rays and then pumped through a series of heat exchangers to produce superheated steam. The steam is converted to electrical energy.

Central Receiver

A circular array of heliostats (large mirrors with sun-tracking motion) concentrates sunlight on to a central receiver mounted at the top of a tower. A heat transfer medium in this central receiver absorbs the highly concentrated radiation reflected by the heliostats and converts it into thermal energy, which is used to generate superheated steam for the turbine. Some commercial tower plants now in operation use direct steam generation in the receiver; others use molten salts as both the heat transfer fluid and storage medium.

Linear Fresnel reflector

Linear Fresnel reflector approximate the parabolic shape of trough systems but by using long rows of flat or slightly curved mirrors to reflect the sun's rays onto a downward-facing linear, fixed receiver. A more recent design, known as compact linear Fresnel reflectors (CLFRs), uses two parallel receivers for each row of mirrors and thus needs less land than parabolic troughs to produce a given output. The receiver consists of a long, selectively-coated absorber tube. Unlike parabolic trough collectors, the focal line of Fresnel collectors is distorted by astigmatism. This requires a mirror above the tube (a secondary reflector) to refocus the rays missing the tube, or several parallel tubes forming a multi-tube receiver that is wide enough to capture most of the focused sunlight without a secondary reflector

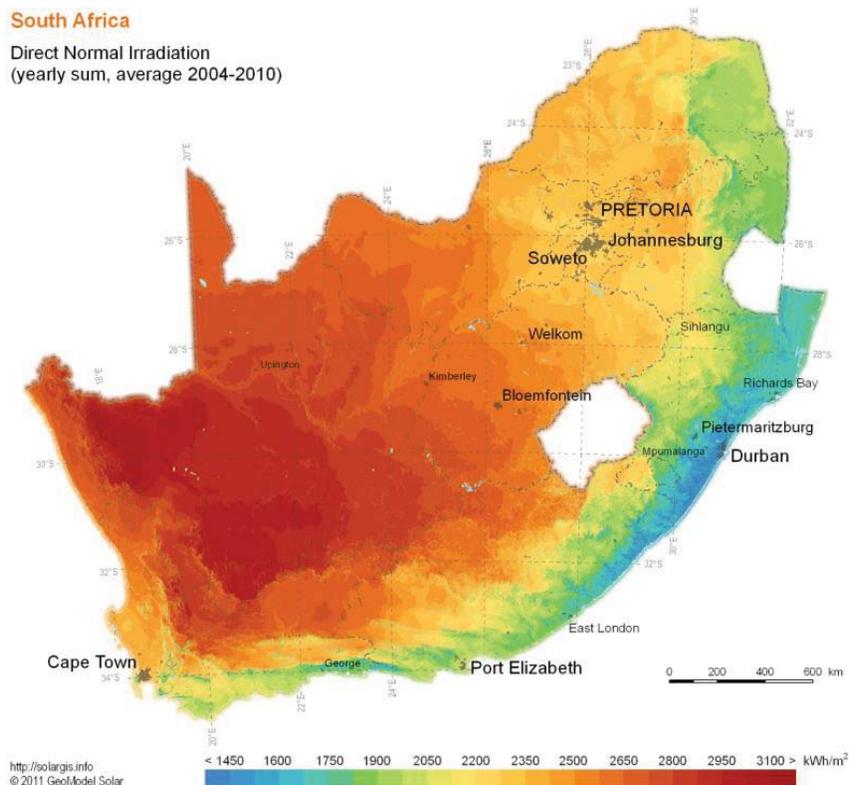
Two parabolic trough and one central receiver projects are currently under construction in South Africa. The DOE announce in November 2013 the preferred bidder selection of a parabolic trough and an unidentified CSP technology. Parabolic and central receiver CSP projects have a precedent in South Africa and the REIPP.

1.2.5.2 Location

The project sites for the CSP plants are located in the Northern Cape province of South Africa. CSP plants require abundant direct solar radiation in order to generate electricity, given that only strong direct sunlight can be concentrated to the temperatures required for electricity generation. The generation potential of a solar CSP plant is largely determined by the direct normal irradiance (DNI), which is the energy received on a surface tracked perpendicular to the sun's rays. Figure 2 provides the solar resource of South Africa for CSP measured in DNI.

CSP plants in areas with high DNI will have a lower Levelised Cost of Energy (LCOE), all else being equal, than one located in an area with a lower DNI. The solar resource in the Northern Cape is very good, although not as good as in the north western parts of the country.

Figure 1: DNI Solar Resource in South Africa

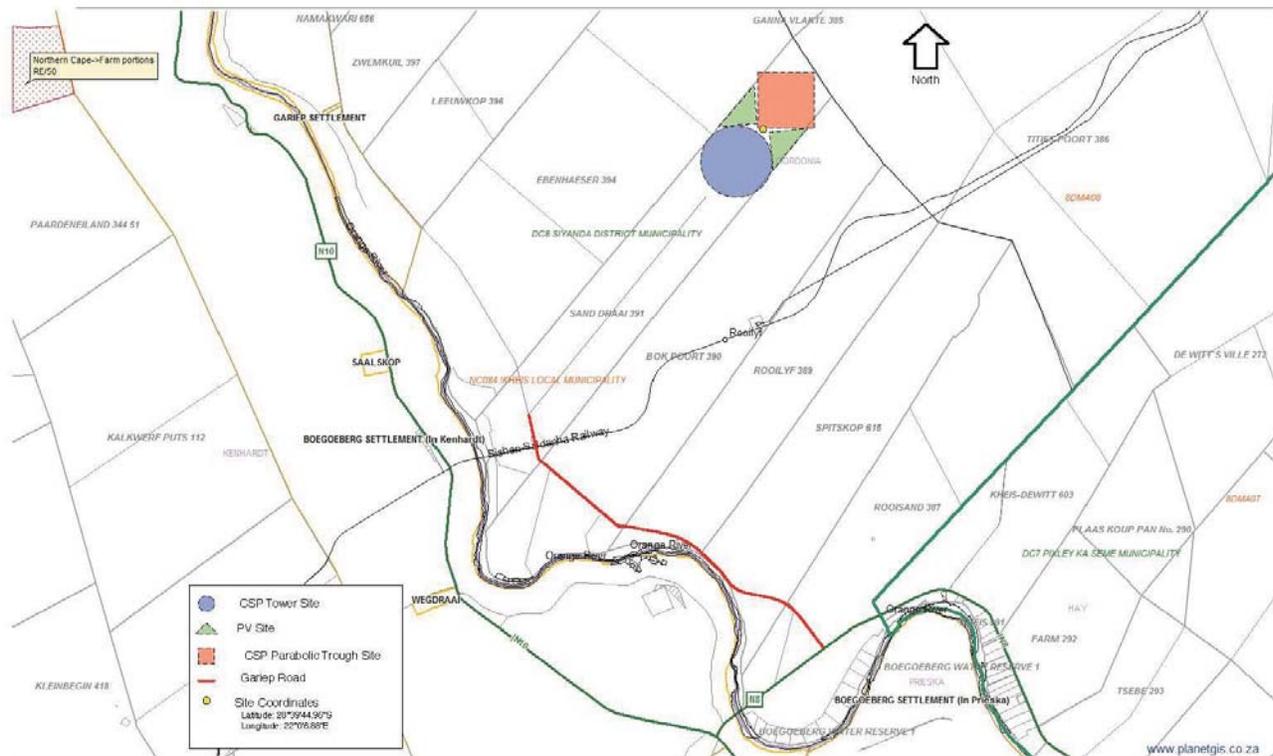


Project Site

USTDA Desk Study for South Africa CSP Solar Power Projects

The project site is located on the north-east end of an existing farm near a town called Groblershoop in the Northern Cape province of South Africa. The exact plant location is accessible across the farm property via gravel roads. A provincial gravel road (The MR874 Gariep Road) runs through the farm property connecting with the N8 (national road). The N8 is accessible from Kimberley or via the N10 (national road) running from Britstown to Upington where it interfaces with the N14. Broadly the project site is easily accessible from major South African hubs and ports.

Figure 2: Project Site Layout



Land use arrangement

Solafrica executed a Letter of Intent (LOI) with the landowner on November 14, 2013. The LOI provides for a 120 day exclusivity period to enter into a Short Term Lease Agreement and Option Agreement. By early 2014, Solafrica aims to execute a short-term lease agreement for the required access to the property for the development stage activities. This agreement will include options to enter into either: (1) a sale agreement for the specific land area(s); or (2) a long-term lease agreement for the specific land area(s).

Infrastructure

- The existing road infrastructure is sufficient for the transportation of all goods and services to the project site from major hubs and ports.
- The Eskom Garona transmission and Distribution substation is located on the neighboring farm property. A ± 6 km overhead power line will be required for interconnection.
- Water will be accessible from the Orange River. A ± 15 km pipeline, and associated pumping and storage infrastructure, will be constructed to transport raw water to the



project site.

- Auxiliary power requirements can be sourced from the Garona substation (on a net-metering basis).
- The construction staff will likely be split in the ratio of 33:33:33 between highly-skilled, medium-skilled, and unskilled labor with the unskilled portion being sourced predominantly from the local communities. Construction equipment, training, housing, and labor relations will likely be managed through subcontracts/partnerships with South African civil construction firms that have extensive experience of constructing large-scale infrastructure projects such as mines in remote areas of the country.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]



USTDA Desk Study for South Africa CSP Solar Power Projects

Annex III

No	TOR Task Name		Contractor Labor		Total Cost
			Total Person Days	Daily Rate*	
1	Data Collection	Project Manager	5	\$1,250	\$6,250
		Senior Power Specialist(s)	4	\$1,050	\$4,200
		Senior Discipline Engineer(s)	4	\$1,050	\$4,200
		Environmental Specialist	4	\$1,025	\$4,100
		Economics/Finance Specialist	2	\$1,025	\$2,050
		Legal/Development Specialist	2	\$1,100	\$2,200
		Estimating/Planning Specialist(s)	4	\$1,025	\$4,100
		Engineer/Specialist	4	\$700	\$2,800
		Administrative	8	\$500	\$4,000
		TOTALS		37	
2	Technical Assessment	Project Manager	10	\$1,250	\$12,500
		Senior Power Specialist(s)	6	\$1,050	\$6,300
		Senior Discipline Engineer(s)	23	\$1,050	\$24,150
		Environmental Specialist	8	\$1,025	\$8,200
		Economics/Finance Specialist	8	\$1,025	\$8,200
		Legal/Development Specialist	4	\$1,100	\$4,400
		Estimating/Planning Specialist(s)	10	\$1,025	\$10,250
		Engineer/Specialist	16	\$700	\$11,200
		Administrative	10	\$500	\$5,000
		TOTALS		95	
3	Conceptual Plant Design	Project Manager	10	\$1,250	\$12,500
		Senior Power Specialist(s)	19	\$1,050	\$19,950
		Senior Discipline Engineer(s)	19	\$1,050	\$19,950
		Environmental Specialist	2	\$1,025	\$2,050
		Economics/Finance Specialist	4	\$1,025	\$4,100
		Legal/Development Specialist	2	\$1,100	\$2,200
		Estimating/Planning Specialist(s)	10	\$1,025	\$10,250
		Engineer/Specialist	38	\$700	\$26,600
		Administrative	10	\$500	\$5,000
		TOTALS		114	
4	Cost Estimate and Economic Analysis	Project Manager	6	\$1,250	\$7,500
		Senior Power Specialist(s)	4	\$1,050	\$4,200
		Senior Discipline Engineer(s)	6	\$1,050	\$6,300
		Environmental Specialist	2	\$1,025	\$2,050
		Economics/Finance Specialist	18	\$1,025	\$18,450
		Legal/Development Specialist	4	\$1,100	\$4,400
		Estimating/Planning Specialist(s)	18	\$1,025	\$18,450
		Engineer/Specialist	8	\$700	\$5,600
		Administrative	10	\$500	\$5,000
		TOTALS		76	
5	Tender Documents Preparation	Project Manager	7	\$1,250	\$8,750
		Senior Power Specialist(s)	10	\$1,050	\$10,500
		Senior Discipline Engineer(s)	15	\$1,050	\$15,750
		Environmental Specialist	1	\$1,025	\$1,025
		Economics/Finance Specialist	8	\$1,025	\$8,200
		Legal/Development Specialist	16	\$1,100	\$17,600
		Estimating/Planning Specialist(s)	5	\$1,025	\$5,125
		Engineer/Specialist	5	\$700	\$3,500
		Administrative	4	\$500	\$2,000
		TOTALS		71	
6	Legal, Regulatory, and Institutional Review	Project Manager	4	\$1,250	\$5,000
		Senior Power Specialist(s)	1	\$1,050	\$1,050
		Senior Discipline Engineer(s)	2	\$1,050	\$2,100
		Environmental Specialist	2	\$1,025	\$2,050
		Economics/Finance Specialist	1	\$1,025	\$1,025
		Legal/Development Specialist	14	\$1,100	\$15,400
		Estimating/Planning Specialist(s)	3	\$1,025	\$3,075
		Engineer/Specialist	5	\$700	\$3,500
		Administrative	4	\$500	\$2,000
		TOTALS		36	



USTDA Desk Study for South Africa CSP Solar Power Projects

7	Financial Analysis	Project Manager	4	\$1,250	\$5,000
		Senior Power Specialist(s)	4	\$1,050	\$4,200
		Senior Discipline Engineer(s)	0	\$1,050	\$0
		Environmental Specialist	0	\$1,025	\$0
		Economics/Finance Specialist	15	\$1,025	\$15,375
		Legal/Development Specialist	4	\$1,100	\$4,400
		Estimating/Planning Specialist(s)	0	\$1,025	\$0
		Engineer/Specialist	0	\$700	\$0
		Administrative	4	\$500	\$2,000
		TOTALS	31		\$30,975
		8	Environmental Impact Assessment	Project Manager	6
Senior Power Specialist(s)	2			\$1,050	\$2,100
Senior Discipline Engineer(s)	4			\$1,050	\$4,200
Environmental Specialist	15			\$1,025	\$15,375
Economics/Finance Specialist	2			\$1,025	\$2,050
Legal/Development Specialist	7			\$1,100	\$7,700
Estimating/Planning Specialist(s)	0			\$1,025	\$0
Engineer/Specialist	11			\$700	\$7,700
Administrative	4			\$500	\$2,000
TOTALS	51				\$48,625
9	Host Country Development Impact Assessment			Project Manager	2
		Senior Power Specialist(s)	0	\$1,050	\$0
		Senior Discipline Engineer(s)	0	\$1,050	\$0
		Environmental Specialist	0	\$1,025	\$0
		Economics/Finance Specialist	8	\$1,025	\$8,200
		Legal/Development Specialist	4	\$1,100	\$4,400
		Estimating/Planning Specialist(s)	0	\$1,025	\$0
		Engineer/Specialist	0	\$700	\$0
		Administrative	4	\$500	\$2,000
		TOTALS	18		\$17,100
		10	Implementation Plan	Project Manager	2
Senior Power Specialist(s)	2			\$1,050	\$2,100
Senior Discipline Engineer(s)	4			\$1,050	\$4,200
Environmental Specialist	1			\$1,025	\$1,025
Economics/Finance Specialist	2			\$1,025	\$2,050
Legal/Development Specialist	1			\$1,100	\$1,100
Estimating/Planning Specialist(s)	2			\$1,025	\$2,050
Engineer/Specialist	0			\$700	\$0
Administrative	5			\$500	\$2,500
TOTALS	19				\$17,525
11	Final Report Preparation and Presentation			Project Manager	6
		Senior Power Specialist(s)	3	\$1,050	\$3,150
		Senior Discipline Engineer(s)	6	\$1,050	\$6,300
		Environmental Specialist	2	\$1,025	\$2,050
		Economics/Finance Specialist	4	\$1,025	\$4,100
		Legal/Development Specialist	2	\$1,100	\$2,200
		Estimating/Planning Specialist(s)	2	\$1,025	\$2,050
		Engineer/Specialist	8	\$700	\$5,600
		Administrative	8	\$500	\$4,000
		TOTALS	41		\$36,950
		TOTAL CONTRACTOR LABOR		589	



USTDA Desk Study for South Africa CSP Solar Power Projects

No	TOR Task Name	Position	Non-employee Labor		TOTAL COST
			Total Person Days	Daily Rate	
1	Conduct a Kickoff Meeting	Local Specialist	10	\$400	\$4,000
2	Technical Assessment and Preliminary Design	Local Specialist	30	\$400	\$12,000
3	Conceptual Plant Design	Local Specialist	46	\$400	\$18,400
4	Cost Estimate and Economic Analysis	Local Specialist	10	\$400	\$4,000
5	Tender Documents Preparation	Local Specialist	40	\$400	\$16,000
6	Legal, Regulatory, and Institutional Review	Local Specialist	40	\$400	\$16,000
7	Financial Advisory	Local Specialist	10	\$400	\$4,000
8	Environmental Impact Assessment	Local Specialist	15	\$400	\$6,000
9	Host Country Development Impact Assessment	Local Specialist	5	\$400	\$2,000
10	Implementation Plan	Local Specialist	20	\$400	\$8,000
11	Final Report Preparation and Presentation	Local Specialist	15	\$400	\$6,000
TOTAL HOST COUNTRY LABOR			241		\$96,400
Travel					
			Trips	Trip Cost	Total Cost
International Air Travel			11	\$2,650	\$29,150
Domestic Air Travel			11	\$500	\$5,500
Ground Transportation			11	\$200	\$2,200
			Trip Days	Rate	Total Cost
Meals and Incidental (M & IE)			110	\$80	\$8,800
Lodging - Johannesburg			110	\$188	\$20,680
Other Costs			0	\$0	\$0
TOTAL TRAVEL					\$66,330
Other Costs					
					Total Cost
Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP)					\$64,000
Reproduction					\$7,500
Binding and Final Report					\$750
Postage					\$750
Communications					\$3,000
TOTAL OTHER COSTS					\$76,000
TOTAL PROJECT COSTS					\$796,205



USTDA Desk Study for South Africa CSP Solar Power Projects

Annex IV

No	Task Name	Month:	1	2	3	4	5	6	7	8
		Week:	1	2	3	4	5	6	7	8
1	Data Collection	2								
2	Technical Assessment	6								
3	Conceptual Plant Design	8								
4	Cost Estimate and Economic Analysis	8								
5	Tender Documents Preparation	3								
6	Legal, Regulatory, and Institutional Review	3								
7	Financial Analysis	4								
8	Environmental Impact Assessment	7								
9	Host Country Development Impact Asmt	2								
10	Implementation Plan	2								
11	Final Report Preparation and Presentation	3								



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

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 Solafrica Photovoltaic Energy (Pty) Ltd. ("Grantee"). USTDA agrees to provide the Grantee under the terms of this Grant Agreement US\$800,000 ("USTDA Grant") to fund the cost of goods and services required for a feasibility study ("Study") on the proposed Solafrica 100 megawatt concentrated solar power ("CSP") plant ("Project") in the Republic of 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.

5. Contract Matters and USTDA's Rights as Financier

(A) Grantee Competitive Selection Procedures

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

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

(B) USTDA's Right to Approve Contractor Selection

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

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

(1) Contract

The Grantee and the Contractor shall enter into a Contract for performance of the Study. The Grantee (or the Contractor on the Grantee's behalf) shall transmit to USTDA, at the address set forth in Article 16 below, a 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 December 1, 2014, is the date by which the parties estimate that the Study will have been completed.

(B) Time Limitation on Disbursement of USTDA Grant Funds

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

9. USTDA Mandatory Contract Clauses

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

10. Use of U.S. Carriers

(A) Air

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

(B) Marine

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

11. Nationality, Source and Origin

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

- (a) the Contractor must be a U.S. firm;
- (b) the Contractor may use U.S. subcontractors without limitation;
- (c) employees of U.S. Contractor or U.S. subcontractor firms shall be U.S. citizens, 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 Project 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: Solafrica Photovoltaic Energy (Pty) Ltd.
39 Rivonia Road
Sandhurst 2196
Johannesburg
SOUTH AFRICA

Phone: +27 (0) 11 268 4074
Fax: +27 (0) 86 648 1006
E-Mail: nasi@solafrica.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: grantnotices@ustda.gov and
africa@ustda.gov

All such communications shall be in English, unless the parties otherwise agree in writing. In addition, the Grantee shall provide the USTDA Africa Business Development Office of the U.S. Consulate General in Johannesburg, South Africa, 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.: 2014-11004A
Reservation No.: 2014064
Grant No.: GH201411064

17. Implementation Letters

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

18. Grant Agreement Amendments

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

19. Termination Clause

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

20. Non-waiver of Rights and Remedies

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

21. U.S. Technology and Equipment

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

22. Governing Law

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

23. Counterparts

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

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IN WITNESS WHEREOF, the Government of the United States of America and Solafrica Photovoltaic 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 Solafrica Photovoltaic Energy (Pty) Ltd.

By: 

By: 

Date: February 21, 2014

Date: 21/02/2014

Annex I -- Terms of Reference

Annex II -- USTDA Mandatory Contract Clauses

Annex I

Terms of Reference

This Study shall provide the Grantee with the necessary documentation to secure financing support for implementing and operating a concentrated solar power (“CSP”) plant with optimized thermal energy storage capacity. The purpose of the Study is to determine the cost effectiveness and profitability of bidding, constructing, and operating a CSP plant with storage through the South Africa’s Renewable Energy Independent Power Producer (“REIPP”) Procurement Program.

Task 1: Data Collection

The Contractor shall organize a kickoff meeting with the Grantee and other relevant stakeholders. The Contractor shall engage the Grantee to determine any particular preferences related to CSP technologies and storage options that the Grantee may have. The Grantee shall coordinate with the Contractor to identify appropriate personnel and any relevant stakeholders, which may include preferred technical partners and potential sources of implementation financing, to participate in the kickoff meeting. During the kickoff meeting, the Contractor shall introduce the Contractor's team; review the tasks to be performed under these Terms of Reference; and gather input from the Grantee regarding the Grantee's goals for the Study and salient issues surrounding the Grantee's plans for the Project.

The Contractor and the Grantee shall collect, review, and analyze available documents relevant to the Project, including, but not limited to:

- Water resource assessment;
- Environmental impact assessment report;
- Grid connection assessment;
- Site environmental assessment;
- Logistics evaluation;
- Basic topography of the site (publically available data such as a contour survey);
- Site environmental restrictions;
- Desktop geotechnical analysis;¹
- Solar resource and meteorological data;
- Electrical evacuation alternatives;²
- Interference with other power plant projects in the Northern Cape Province that are currently operational, under development, or in the advanced planning stages;

¹ The desktop geotechnical analysis shall include an early stage analysis of the earth materials at the Project site and shall be based on regional geological and geotechnical information that is available without requiring a field visit to the Project site.

² Electrical evacuation alternatives refer to the options for discharging or transferring electricity from the CSP plant onto the national electricity grid or other electricity offtakers.

- Fossil fuel availability;
- Water supply and effluent disposal alternatives.

Deliverables: The Contractor shall provide a report of all work performed under Task 1, including, but not limited to, the findings of the initial meetings and documentation of all gathered information and previous studies.

Task 2: Technical Assessment

Task 2(a) *CSP Technology Assessment*

The Contractor shall provide a detailed written description of each of the following CSP technologies and storage options, including their technological characteristics:

- Parabolic Trough with synthetic oil receiver and molten salt storage;
- Parabolic Trough with molten salt receiver and storage;
- Central Receiver with molten salt receiver and storage;
- Central Receiver with water/steam receiver and molten salt storage;
- Linear Fresnel with water/steam receiver and molten salt storage; and
- Linear Fresnel with molten salt receiver and storage.

For each CSP technology and storage option, the Contractor shall assess, at a minimum, the global usage, experience, and availability; ownership and licensing requirements; environmental considerations; economic assessment; and infrastructure requirements. The Contractor shall also provide a detailed description of technical and commercial risks of each CSP technology and storage option.

The Contractor shall collect, analyze, and consider the following factors in its assessment of each of the CSP technologies and storage options, including, but not limited to:

- Basic topography of the site (publically available data such as a contour survey);
- First-phase geotechnical analysis, which shall build upon the desktop geotechnical analysis and include a field visit to the Project site;³
- Access roads and logistics evaluation;
- Interconnection with the national electricity grid and alternatives for meeting grid stability requirements;
- Water resource assessment;
- Solar resource and meteorological data;
- Electrical evacuation alternatives;
- Interference with other power plant projects in the Northern Cape Province that are currently operational, under development, or in the advanced planning stages;
- Fossil fuel availability;

³ This first-phase geotechnical analysis shall provide a sufficient foundation for the Contractor to proceed with the technical assessments required pursuant to these Terms of Reference

- Water supply and effluent disposal alternatives;
- General system architecture for CSP technology (i.e. parabolic trough, linear fresnel, central receiver);
- Equipment required for construction and maintenance;
- Performance, availability, and equipment warranties;
- Operations and maintenance (“O&M”) schedule and costs;
- Initial spare parts recommendation;
- Major overhaul requirements (for example, replacement of mirrors) and anticipated schedule of major overhaul requirements;
- Safety system design;
- Material disposal requirements during operation and at Project end of life (including solid, hazardous, non-hazardous, etc.);
- Auxiliary power requirements during construction and operation; and
- Auxiliary fossil fuel use for safe operation and plant startup/shutdown.

Task 2(b) *High-Level Cost Estimates*

The Contractor shall prepare high-level cost estimates that provide a rough total budget or budget range for each of the CSP technologies and storage options referenced in Task 2(a). The Contractor shall also prepare a Levelized Cost of Energy (“LCOE”) analysis for each CSP technology and storage option using the U.S. Department of Energy’s National Renewable Energy Laboratory’s publically available LCOE calculator, or an equivalent approved by the Grantee. The intent of the LCOE analysis is to provide the Grantee a high-level estimate of the anticipated capital, O&M, performance, and other LCOE cost factors for each of the CSP technologies and storage options referenced in Task 2(a).

Task 2(c) *Solar Resource Assessment*

Building upon the solar resource and meteorological data that was collected and analyzed pursuant to Task 2(a), the Contractor shall complete a solar resource assessment through the development of P50 and P90 typical meteorological year (“TMY”) weather files based on on-site measurements and long-term satellite data correlation. The findings from the solar resource assessment shall be incorporated into the performance models in Task 2(d).

Task 2(d) *Comparative Assessment*

The Contractor shall provide a comparative assessment of the six CSP technologies and storage options. As part of the comparative assessment, the Contractor shall run cost and performance models for each CSP technology and storage option using the U.S. Department of Energy’s National Renewable Energy Laboratory’s System Advisor Model, or an equivalent approved by the Grantee. The Contractor shall then rank each of

the CSP technologies and storage options in order of bankability⁴ and competitiveness under the REIPP Procurement Program. The Contractor shall also provide a separate bankability ranking of the six CSP technologies in case the Grantee decides to pursue its Project outside of the REIPP Procurement Program.

The Contractor's comparative assessment shall be based on the factors analyzed in Task 2(a), Task 2(b), and Task 2(c), as well as factors that include, but are not limited to, infrastructure requirements and other resources requirements (e.g., labor). The Contractor's comparative assessment shall also evaluate each technology against the evaluation criteria set forth under the REIPP Procurement Program, which include, but are not limited to, price and socio-economic development impact (e.g., job creation, socio-economic development). The Grantee shall facilitate obtaining the latest REIPP Procurement Program evaluation criteria for the Contractor.

Based on the comparative assessment of the six CSP technologies and storage options, the Contractor shall provide the Grantee with a recommended CSP technology and storage option for the Project. After receiving the Contractor's recommendation, the Grantee shall inform the Contractor of its selected CSP technology and storage option for the Project.

Deliverables: The Contractor shall provide a report of all work performed under Task 2, including, but not limited to, a technology assessment of each CSP technology and storage option, high-level cost estimates of each CSP technology and storage option, a comparative assessment for each of the CSP technologies and storage options, a solar resource assessment for the proposed Project site, and the Contractor's recommended CSP technology and storage option for the Project.

Task 3: Conceptual Engineering Design

Once the Grantee has selected a CSP technology and storage option for the Project, the Contractor shall prepare a conceptual design and preliminary technical specifications for the proposed CSP plant's requirements. The Contractor shall analyze plant design variables, including a CSP plant with approximately eight hours of thermal storage, both with and without a hybrid source of energy. The Contractor shall determine the optimal amount of thermal energy storage capacity for the Project, taking into consideration the time-of-day premium available to CSP technologies in the latest REIPP Procurement Program general requirements, rules and provisions, as well as other relevant variables, including, but not limited to, capital costs, O&M costs, and associated risks.

The Contractor shall provide a conceptual CSP plant design that includes, but is not limited to, the following items:

⁴ The analysis of the bankability of each of the six CSP technologies shall consider any interest from potential sources of implementation financing.

- Site plan and layout;
- Process flow diagrams;
- Energy and water balance;
- Electrical single line diagram;
- Instrumentation and control architecture;⁵
- Major equipment list with sizing;
- Major equipment specifications;
- Plant cost estimation (implementation and operation); and
- Energy production estimation.

After completing the conceptual design and preliminary technical specifications for the proposed CSP plant, the Contractor shall review and revise the performance model that was completed pursuant to Task 2(d) for the selected CSP technology and storage option. The revised performance model shall reflect any new and/or updated information gathered pursuant to Task 3.

Deliverables: The Contractor shall provide a report of all work performed under Task 3, including, but not limited to, a conceptual design and preliminary technical specifications for the Grantee-selected CSP technology and storage option.

Task 4: Detailed Cost Estimate Preparation and Economic Analysis

Once the Contractor has completed the conceptual engineering design in Task 3, it shall prepare a detailed engineering, procurement, and construction (“EPC”)-type cost estimate. The Contractor shall review and revise the estimated O&M costs that were completed pursuant to Task 2(a) for the selected CSP technology and storage option. The revised costs shall reflect any new and/or updated information gathered pursuant to Task 3 and 4. The Contractor's estimate shall include a detailed breakdown of equipment and materials for all major components, including, but not limited to, major equipment, balance of plant, instrumentation and controls, water treatment, electrical interconnection, and the cost of land acquisition/lease.

The Contractor shall identify prospective U.S. sources of supply. For each U.S. source of supply, the Contractor shall identify the capabilities, addresses, and principal points of contact for each of the U.S. suppliers.

Based on the information analyzed under previous tasks, the Contractor shall complete a net present value analysis and review and revise the LCOE (as prepared in Task 2(b)) and

⁵ Instrumentation and control architecture refers to all of the systems that will monitor and control the CSP plant (for example, the supervisory control and data acquisition (“SCADA”) system, distributed control systems, Fieldbus solutions, as well as other systems that ensure that all of the CSP plant’s systems are functioning and integrated, alert the plant manager of any problems, and allow a means of response to any such problems).

cost model (as prepared in Task 2(d)). The revised LCOE and cost model shall reflect any new and/or updated information gathered pursuant to Task 4. The Contractor shall include in its analysis a cash flow analysis, Life Cycle Cost Analysis ("LCCA"), market conditions, raw material availability, supply agreements, off-take agreements, and competing alternative methods of achieving the same or similar Project objectives. The Contractor's LCCA shall consider all initial capital costs (e.g. plan, design, develop, and build) and long-term operational costs (e.g. warranties, operation, maintenance, acquisition, installation, refurbishment, and disposal).

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

- Forecast financial statements and supporting information;
- Forecast sources and uses of funding;
- Forecast key financial ratios and financial covenants;
- Price and revenues;
- Inflation;
- Cost of capital (equity finance and external debt finance);
- Taxes; and
- Development fee and success payments.

The Contractor shall perform a sensitivity analysis related to Project risk, including, but not limited to, capital expenditure (from -20 percent to 20 percent, in increments of five percent), operating expenditure (from -20 percent to 20 percent in increments of five percent), inflation indices where appropriate, exchange rates, and funding terms. The Contractor shall provide a financial model and report prepared in accordance with the REIPP Procurement Program Volume 4, Appendix R5 requirements, including, but not limited to, net present value, payback time, Internal Rate of Return, cash flow, and LCCA for the base case and all sensitivity analysis.

Deliverables: The Contractor shall provide a report of all work performed under Task 4, including, but not limited to, budgetary-level cost estimates, an electronic financial model with detailed documentation prepared in accordance with the REIPP Procurement Program Volume 4, Appendix R5 requirements, and LCCA that allow the Grantee to present its business case to potential sources of implementation financing for the Project.

Task 5: Legal, Regulatory, and Institutional Review

In close collaboration with the Grantee, the Contractor shall conduct a review of the anticipated impact of Host Country laws, regulations, standards, and institutions on the implementation of the Project and provide the Grantee with draft project documents (listed below) that are sufficient to be used for initial negotiations with third-party Project stakeholders. At a minimum, the Contractor shall provide the Grantee with the following:

- A review of Host Country permitting requirements (environmental and land);

- A review the Grantee's existing land agreements and environmental permits, verification that such documents meet Host Country requirements, and identification of any gaps that need to be filled in order to meet Host Country requirements;
- A draft Project company shareholder agreement and memorandum of incorporation;
- Draft EPC Heads of Terms;
- Draft O&M Heads of Terms;
- Draft Heads of Terms for key contracts; and
- Draft financing term sheets.

Deliverables: The Contractor shall provide a report of all work performed under Task 5, including, but not limited to a review of the anticipated impact of Host Country laws, regulations, standards, and institutions on the implementation of the Project and the draft Project documents listed in Task 5.

Task 6: Financial Advisory

The Contractor shall reach out to potential sources of implementation financing and perform financial source optimization and market sounding to assess the interest of potential sources of implementation financing to the Project.

The Contractor shall reach out to the Host Country's leading development finance institutions, the Industrial Development Corporation of South Africa and the Development Bank of Southern Africa, as sources of debt and equity financing. The Contractor, in coordination with the Grantee, shall also reach out to the Grantee's parent company, Metier Investment & Advisory Services (Pty) Ltd., as well as its sister company, Lereko Metier Sustainable Capital Fund Trust, as potential investors in the Project.

In addition to these Host Country financing resources, the Contractor shall identify potential U.S. private sources of equity, in addition to 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 political risk insurance from the Overseas Private Investment Corporation ("OPIC").

The Contractor shall also help the Grantee identify likely sources of debt funding options from entities including the Export-Import Bank of the United States ("Exim Bank"), World Bank, regional multilateral development banks, and private sector source of financing, such as commercial loans, supplier credits, and bond markets. The Contractor shall advise on a Clean Development Mechanism approach as defined in the Kyoto Protocol.

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

Deliverables: The Contractor shall provide a report of all work performed under Task 6, including, but not limited to, an assessment of potential sources of implementation financing for the Project and recommendations for the financial structure and sources of financing for the Project.

Task 7: Environmental Impact Assessment

The Contractor shall perform a full environmental impact assessment (“EIA”) to ensure that the proposed Project shall comply with all relevant local environmental regulations and environmental permits secured by the Grantee, as well as with the criteria of OPIC, Exim Bank, and other relevant development finance institutions. The Contractor's EIA shall include, but not be limited to, the following:

- Environmental and regulatory considerations;
- Site environmental assessments;
- Site environmental restrictions;
- Environmental impacts across the design, construction, operation, and decommissioning phases;
- Environmental risk assessments;
- Public participation processes;
- Air/water quality and noise; and
- Waste management.

The EIA shall be performed in accordance with Host Country environmental regulations, most notably the National Environmental Management Act.

The Contractor shall assess the Grantee’s application for an integrated environmental authorization and waste management license. The Contractor shall provide an assessment on the land use and land agreements to include a subdivision of agricultural land permit process and a rezoning of municipal land permit process.

Deliverables: The Contractor shall provide a report of all work performed under Task 7, including but not limited to, a full EIA in accordance with all relevant Host Country environmental regulations, as well as the criteria of OPIC, Exim Bank, and other relevant development finance institutions, an assessment of the Grantee’s application for an integrated environmental authorization and waste management license, and an assessment of the land use and land agreements for the Project.

Task 8: Host Country Development Impact Assessment

The purpose of this Study is to increase access to clean energy and reduce greenhouse gas (“GHG”) emissions by stimulating increased investments in clean energy generating infrastructure. The outcomes of the Study and subsequent Project will be measured by

the performance indicators shown below. The Contractor shall provide an assessment of the potential development impact in the Host Country if the Project is implemented according to the Study recommendations. This is essential to the ability of USTDA to measure and monitor the impact of its funding for the Study in order to support the Project's implementation.

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

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

- The number of renewable energy generating facilities that may receive financing as a result of this Study. At the time of funding it was expected that the Project (a 100 megawatt CSP plant) would leverage approximately \$1 billion in funding after the completion of the Study.
- Clean Energy Generation: A description of the Host Country physical infrastructure developed as a result of the Project.
 - Quantity of operational renewable electric generation capacity as a result of the Project, measured in megawatts. It was estimated at the time of funding that 100 megawatts of solar generation capacity would be developed through this Project. The Contractor shall confirm whether this is still anticipated or whether and why this may have changed as a result of the Study findings.
- Human Capacity Building:
 - Job Creation: A description of the number and type of staff (anticipated level of education and/or skills should be included in the description) that would be needed to construct the Project. A description of the number and type of staff that would be needed to operate the Project should also be included.
- Environmental Impacts:
 - The Contractor shall quantify GHG emissions reduced or avoided, measured in metric tons of carbon dioxide ("CO2"), if the Project is implemented. The Contractor shall calculate GHG emissions using publically available tools from the United Nations Framework Convention on Climate Change or an equivalent approved by the Grantee and USTDA. It was estimated, at the time of funding, that Project implementation would obviate the need to bring other power plants on line that use coal, heavy fuel oil, or other emissions-intensive feedstocks.
 - The Contractor shall also quantify any CO2 that may be produced if the Project is implemented. It was estimated, at the time of funding, that an

auxiliary diesel-fired boiler may be needed to support Project operation during cold nights.

- **Market Oriented Reforms:** A description of any regulations, laws, or institutional changes that are recommended and the effect they would have if implemented.

Deliverables: The Contractor shall provide a report of all work performed under Task 8, including, but not limited to, an assessment of the potential development impact in the Host Country if the Project is implemented according to the Study recommendations.

Task 9 - Implementation Plan

The Contractor shall draft a project implementation plan that includes a comprehensive plan, schedule, and timeline required for Project implementation. The Contractor shall include in the schedule a Critical Path Analysis ("CPA") and detailed implementation milestone descriptions. The Contractor's implementation plan shall contain three scenarios: (a) one in which the Grantee submits a bid for a CSP plant in the upcoming fourth round of the Host Country's REIPP Procurement Program; (b) one in which the Grantee submits a bid for a CSP plant in a later round of the Host Country's REIPP Procurement Program, and; (c) one in which the Grantee pursues its Project outside of the REIPP Procurement Program.

Deliverables: The Contractor shall provide a report of all work performed under Task 9, including, but not limited to, a comprehensive implementation plan for the Project.

Task 10: Tender Documents Preparation

With the Grantee's input, the Contractor shall prepare tender documents for the EPC contract and O&M contract. The Contractor shall prepare the tender documents as an appendix under separate cover. The documents shall include, but not be limited to:

- Project background and information;
- Technical specifications, including basic engineering, drawing, and performance model simulation results; and
- Draft contract clauses that include all appropriate commercial terms for Project execution, including terms for performance guarantees and framework arrangements.

Deliverables: The Contractor shall provide a report of all work performed under Task 10, including, but not limited to, tender documents for the EPC contract and O&M contract.

Task 11: Final Report Preparation and Presentation

The Contractor shall prepare a Draft Final Report that includes all analyses and findings performed under the tasks described above. The Contractor shall present the complete

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findings of the Study to the Grantee and provide the Draft Final Report to the Grantee for review and discussion.

Once the Grantee has provided comments and revisions to the Draft Final Report, the Contractor shall make the necessary changes and modifications to the Draft Final Report. The Contractor shall prepare and deliver to the Grantee and USTDA a substantive and comprehensive Final Report of all work performed under these Terms of Reference ("Final Report"). The Final Report shall be organized according to the preceding tasks, and shall include all deliverables and documents that have been provided to the Grantee. The Final Report shall incorporate all of the findings, recommendations, and conclusions of the Study and shall incorporate all other documents and/ or reports provided pursuant to the tasks noted above. The Final Report shall also contain an Executive Summary in addition to the other required deliverables, and shall be in accordance with Clause I of Annex II of the Grant Agreement.

Deliverables: The Contractor shall prepare and deliver the Final Report to USTDA in the manner set forth in Clause I of Annex II hereof. The Final Report shall be organized according to the order of this Terms of Reference, and shall include all deliverables and documents that have been provided to the Grantee, plus an appendix of Draft Tender Documents shall be included under separate cover. The Contractor shall provide both the Grantee and USTDA with 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, Shapefile, or Visio format and
- Source files for all documents in MS Office 2000 or later formats
- Source files for any analytical tools used to complete the Terms of Reference such as the U.S. Department of Energy's National Renewable Energy Laboratory's LCOE calculator and/or the System Advisor Model

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 Solafrica Photovoltaic Energy (Pty) Ltd. ("Client"), dated _____ ("Grant Agreement"). The Client has selected _____ ("Contractor") to perform the feasibility study ("Study") for the Solafrica 100 megawatt concentrated solar power ("CSP") plant ("Project") in the Republic of 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.

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 USTDA Africa Business Development Office of the U.S. Consulate General in Johannesburg, South Africa 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 USTDA Africa Business Development Office of the U.S. Consulate General in Johannesburg, South Africa, 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 December 1, 2014, is the date by which the Contract Parties estimate that the Study will have been completed.

(2) Time Limitation on Disbursement of USTDA Grant Funds

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

L. Business Practices

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

M. USTDA Address and Fiscal Data

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

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

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

Fiscal Data:

Appropriation No.: 11 14/15 1001
Activity No.: 2014-11004A
Reservation No.: 2014064
Grant No.: GH201411064

N. Taxes

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

O. Export Licensing

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

P. Contact Persons

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

Name: Nasi Rwigema
Title: Project Director
Phone: +27 (0) 11 268 4074
Fax: +27 (0) 86 648 1006
E-Mail: nasi@solafrica.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

Annex I

Terms of Reference

This Study shall provide the Grantee with the necessary documentation to secure financing support for implementing and operating a concentrated solar power (“CSP”) plant with optimized thermal energy storage capacity. The purpose of the Study is to determine the cost effectiveness and profitability of bidding, constructing, and operating a CSP plant with storage through the South Africa’s Renewable Energy Independent Power Producer (“REIPP”) Procurement Program.

Task 1: Data Collection

The Contractor shall organize a kickoff meeting with the Grantee and other relevant stakeholders. The Contractor shall engage the Grantee to determine any particular preferences related to CSP technologies and storage options that the Grantee may have. The Grantee shall coordinate with the Contractor to identify appropriate personnel and any relevant stakeholders, which may include preferred technical partners and potential sources of implementation financing, to participate in the kickoff meeting. During the kickoff meeting, the Contractor shall introduce the Contractor's team; review the tasks to be performed under these Terms of Reference; and gather input from the Grantee regarding the Grantee's goals for the Study and salient issues surrounding the Grantee's plans for the Project.

The Contractor and the Grantee shall collect, review, and analyze available documents relevant to the Project, including, but not limited to:

- Water resource assessment;
- Environmental impact assessment report;
- Grid connection assessment;
- Site environmental assessment;
- Logistics evaluation;
- Basic topography of the site (publically available data such as a contour survey);
- Site environmental restrictions;
- Desktop geotechnical analysis;¹
- Solar resource and meteorological data;
- Electrical evacuation alternatives;²
- Interference with other power plant projects in the Northern Cape Province that are currently operational, under development, or in the advanced planning stages;

¹ The desktop geotechnical analysis shall include an early stage analysis of the earth materials at the Project site and shall be based on regional geological and geotechnical information that is available without requiring a field visit to the Project site.

² Electrical evacuation alternatives refer to the options for discharging or transferring electricity from the CSP plant onto the national electricity grid or other electricity offtakers.

- Fossil fuel availability;
- Water supply and effluent disposal alternatives.

Deliverables: The Contractor shall provide a report of all work performed under Task 1, including, but not limited to, the findings of the initial meetings and documentation of all gathered information and previous studies.

Task 2: Technical Assessment

Task 2(a) *CSP Technology Assessment*

The Contractor shall provide a detailed written description of each of the following CSP technologies and storage options, including their technological characteristics:

- Parabolic Trough with synthetic oil receiver and molten salt storage;
- Parabolic Trough with molten salt receiver and storage;
- Central Receiver with molten salt receiver and storage;
- Central Receiver with water/steam receiver and molten salt storage;
- Linear Fresnel with water/steam receiver and molten salt storage; and
- Linear Fresnel with molten salt receiver and storage.

For each CSP technology and storage option, the Contractor shall assess, at a minimum, the global usage, experience, and availability; ownership and licensing requirements; environmental considerations; economic assessment; and infrastructure requirements. The Contractor shall also provide a detailed description of technical and commercial risks of each CSP technology and storage option.

The Contractor shall collect, analyze, and consider the following factors in its assessment of each of the CSP technologies and storage options, including, but not limited to:

- Basic topography of the site (publically available data such as a contour survey);
- First-phase geotechnical analysis, which shall build upon the desktop geotechnical analysis and include a field visit to the Project site;³
- Access roads and logistics evaluation;
- Interconnection with the national electricity grid and alternatives for meeting grid stability requirements;
- Water resource assessment;
- Solar resource and meteorological data;
- Electrical evacuation alternatives;
- Interference with other power plant projects in the Northern Cape Province that are currently operational, under development, or in the advanced planning stages;
- Fossil fuel availability;

³ This first-phase geotechnical analysis shall provide a sufficient foundation for the Contractor to proceed with the technical assessments required pursuant to these Terms of Reference

- Water supply and effluent disposal alternatives;
- General system architecture for CSP technology (i.e. parabolic trough, linear fresnel, central receiver);
- Equipment required for construction and maintenance;
- Performance, availability, and equipment warranties;
- Operations and maintenance (“O&M”) schedule and costs;
- Initial spare parts recommendation;
- Major overhaul requirements (for example, replacement of mirrors) and anticipated schedule of major overhaul requirements;
- Safety system design;
- Material disposal requirements during operation and at Project end of life (including solid, hazardous, non-hazardous, etc.);
- Auxiliary power requirements during construction and operation; and
- Auxiliary fossil fuel use for safe operation and plant startup/shutdown.

Task 2(b) *High-Level Cost Estimates*

The Contractor shall prepare high-level cost estimates that provide a rough total budget or budget range for each of the CSP technologies and storage options referenced in Task 2(a). The Contractor shall also prepare a Levelized Cost of Energy (“LCOE”) analysis for each CSP technology and storage option using the U.S. Department of Energy’s National Renewable Energy Laboratory’s publically available LCOE calculator, or an equivalent approved by the Grantee. The intent of the LCOE analysis is to provide the Grantee a high-level estimate of the anticipated capital, O&M, performance, and other LCOE cost factors for each of the CSP technologies and storage options referenced in Task 2(a).

Task 2(c) *Solar Resource Assessment*

Building upon the solar resource and meteorological data that was collected and analyzed pursuant to Task 2(a), the Contractor shall complete a solar resource assessment through the development of P50 and P90 typical meteorological year (“TMY”) weather files based on on-site measurements and long-term satellite data correlation. The findings from the solar resource assessment shall be incorporated into the performance models in Task 2(d).

Task 2(d) *Comparative Assessment*

The Contractor shall provide a comparative assessment of the six CSP technologies and storage options. As part of the comparative assessment, the Contractor shall run cost and performance models for each CSP technology and storage option using the U.S. Department of Energy’s National Renewable Energy Laboratory’s System Advisor Model, or an equivalent approved by the Grantee. The Contractor shall then rank each of

the CSP technologies and storage options in order of bankability⁴ and competitiveness under the REIPP Procurement Program. The Contractor shall also provide a separate bankability ranking of the six CSP technologies in case the Grantee decides to pursue its Project outside of the REIPP Procurement Program.

The Contractor's comparative assessment shall be based on the factors analyzed in Task 2(a), Task 2(b), and Task 2(c), as well as factors that include, but are not limited to, infrastructure requirements and other resources requirements (e.g., labor). The Contractor's comparative assessment shall also evaluate each technology against the evaluation criteria set forth under the REIPP Procurement Program, which include, but are not limited to, price and socio-economic development impact (e.g., job creation, socio-economic development). The Grantee shall facilitate obtaining the latest REIPP Procurement Program evaluation criteria for the Contractor.

Based on the comparative assessment of the six CSP technologies and storage options, the Contractor shall provide the Grantee with a recommended CSP technology and storage option for the Project. After receiving the Contractor's recommendation, the Grantee shall inform the Contractor of its selected CSP technology and storage option for the Project.

Deliverables: The Contractor shall provide a report of all work performed under Task 2, including, but not limited to, a technology assessment of each CSP technology and storage option, high-level cost estimates of each CSP technology and storage option, a comparative assessment for each of the CSP technologies and storage options, a solar resource assessment for the proposed Project site, and the Contractor's recommended CSP technology and storage option for the Project.

Task 3: Conceptual Engineering Design

Once the Grantee has selected a CSP technology and storage option for the Project, the Contractor shall prepare a conceptual design and preliminary technical specifications for the proposed CSP plant's requirements. The Contractor shall analyze plant design variables, including a CSP plant with approximately eight hours of thermal storage, both with and without a hybrid source of energy. The Contractor shall determine the optimal amount of thermal energy storage capacity for the Project, taking into consideration the time-of-day premium available to CSP technologies in the latest REIPP Procurement Program general requirements, rules and provisions, as well as other relevant variables, including, but not limited to, capital costs, O&M costs, and associated risks.

The Contractor shall provide a conceptual CSP plant design that includes, but is not limited to, the following items:

⁴ The analysis of the bankability of each of the six CSP technologies shall consider any interest from potential sources of implementation financing.

- Site plan and layout;
- Process flow diagrams;
- Energy and water balance;
- Electrical single line diagram;
- Instrumentation and control architecture;⁵
- Major equipment list with sizing;
- Major equipment specifications;
- Plant cost estimation (implementation and operation); and
- Energy production estimation.

After completing the conceptual design and preliminary technical specifications for the proposed CSP plant, the Contractor shall review and revise the performance model that was completed pursuant to Task 2(d) for the selected CSP technology and storage option. The revised performance model shall reflect any new and/or updated information gathered pursuant to Task 3.

Deliverables: The Contractor shall provide a report of all work performed under Task 3, including, but not limited to, a conceptual design and preliminary technical specifications for the Grantee-selected CSP technology and storage option.

Task 4: Detailed Cost Estimate Preparation and Economic Analysis

Once the Contractor has completed the conceptual engineering design in Task 3, it shall prepare a detailed engineering, procurement, and construction (“EPC”)-type cost estimate. The Contractor shall review and revise the estimated O&M costs that were completed pursuant to Task 2(a) for the selected CSP technology and storage option. The revised costs shall reflect any new and/or updated information gathered pursuant to Task 3 and 4. The Contractor's estimate shall include a detailed breakdown of equipment and materials for all major components, including, but not limited to, major equipment, balance of plant, instrumentation and controls, water treatment, electrical interconnection, and the cost of land acquisition/lease.

The Contractor shall identify prospective U.S. sources of supply. For each U.S. source of supply, the Contractor shall identify the capabilities, addresses, and principal points of contact for each of the U.S. suppliers.

Based on the information analyzed under previous tasks, the Contractor shall complete a net present value analysis and review and revise the LCOE (as prepared in Task 2(b)) and

⁵ Instrumentation and control architecture refers to all of the systems that will monitor and control the CSP plant (for example, the supervisory control and data acquisition (“SCADA”) system, distributed control systems, Fieldbus solutions, as well as other systems that ensure that all of the CSP plant’s systems are functioning and integrated, alert the plant manager of any problems, and allow a means of response to any such problems).

cost model (as prepared in Task 2(d)). The revised LCOE and cost model shall reflect any new and/or updated information gathered pursuant to Task 4. The Contractor shall include in its analysis a cash flow analysis, Life Cycle Cost Analysis ("LCCA"), market conditions, raw material availability, supply agreements, off-take agreements, and competing alternative methods of achieving the same or similar Project objectives. The Contractor's LCCA shall consider all initial capital costs (e.g. plan, design, develop, and build) and long-term operational costs (e.g. warranties, operation, maintenance, acquisition, installation, refurbishment, and disposal).

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

- Forecast financial statements and supporting information;
- Forecast sources and uses of funding;
- Forecast key financial ratios and financial covenants;
- Price and revenues;
- Inflation;
- Cost of capital (equity finance and external debt finance);
- Taxes; and
- Development fee and success payments.

The Contractor shall perform a sensitivity analysis related to Project risk, including, but not limited to, capital expenditure (from -20 percent to 20 percent, in increments of five percent), operating expenditure (from -20 percent to 20 percent in increments of five percent), inflation indices where appropriate, exchange rates, and funding terms. The Contractor shall provide a financial model and report prepared in accordance with the REIPP Procurement Program Volume 4, Appendix R5 requirements, including, but not limited to, net present value, payback time, Internal Rate of Return, cash flow, and LCCA for the base case and all sensitivity analysis.

Deliverables: The Contractor shall provide a report of all work performed under Task 4, including, but not limited to, budgetary-level cost estimates, an electronic financial model with detailed documentation prepared in accordance with the REIPP Procurement Program Volume 4, Appendix R5 requirements, and LCCA that allow the Grantee to present its business case to potential sources of implementation financing for the Project.

Task 5: Legal, Regulatory, and Institutional Review

In close collaboration with the Grantee, the Contractor shall conduct a review of the anticipated impact of Host Country laws, regulations, standards, and institutions on the implementation of the Project and provide the Grantee with draft project documents (listed below) that are sufficient to be used for initial negotiations with third-party Project stakeholders. At a minimum, the Contractor shall provide the Grantee with the following:

- A review of Host Country permitting requirements (environmental and land);

- A review the Grantee's existing land agreements and environmental permits, verification that such documents meet Host Country requirements, and identification of any gaps that need to be filled in order to meet Host Country requirements;
- A draft Project company shareholder agreement and memorandum of incorporation;
- Draft EPC Heads of Terms;
- Draft O&M Heads of Terms;
- Draft Heads of Terms for key contracts; and
- Draft financing term sheets.

Deliverables: The Contractor shall provide a report of all work performed under Task 5, including, but not limited to a review of the anticipated impact of Host Country laws, regulations, standards, and institutions on the implementation of the Project and the draft Project documents listed in Task 5.

Task 6: Financial Advisory

The Contractor shall reach out to potential sources of implementation financing and perform financial source optimization and market sounding to assess the interest of potential sources of implementation financing to the Project.

The Contractor shall reach out to the Host Country's leading development finance institutions, the Industrial Development Corporation of South Africa and the Development Bank of Southern Africa, as sources of debt and equity financing. The Contractor, in coordination with the Grantee, shall also reach out to the Grantee's parent company, Metier Investment & Advisory Services (Pty) Ltd., as well as its sister company, Lereko Metier Sustainable Capital Fund Trust, as potential investors in the Project.

In addition to these Host Country financing resources, the Contractor shall identify potential U.S. private sources of equity, in addition to 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 political risk insurance from the Overseas Private Investment Corporation ("OPIC").

The Contractor shall also help the Grantee identify likely sources of debt funding options from entities including the Export-Import Bank of the United States ("Exim Bank"), World Bank, regional multilateral development banks, and private sector source of financing, such as commercial loans, supplier credits, and bond markets. The Contractor shall advise on a Clean Development Mechanism approach as defined in the Kyoto Protocol.

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

Deliverables: The Contractor shall provide a report of all work performed under Task 6, including, but not limited to, an assessment of potential sources of implementation financing for the Project and recommendations for the financial structure and sources of financing for the Project.

Task 7: Environmental Impact Assessment

The Contractor shall perform a full environmental impact assessment (“EIA”) to ensure that the proposed Project shall comply with all relevant local environmental regulations and environmental permits secured by the Grantee, as well as with the criteria of OPIC, Exim Bank, and other relevant development finance institutions. The Contractor's EIA shall include, but not be limited to, the following:

- Environmental and regulatory considerations;
- Site environmental assessments;
- Site environmental restrictions;
- Environmental impacts across the design, construction, operation, and decommissioning phases;
- Environmental risk assessments;
- Public participation processes;
- Air/water quality and noise; and
- Waste management.

The EIA shall be performed in accordance with Host Country environmental regulations, most notably the National Environmental Management Act.

The Contractor shall assess the Grantee’s application for an integrated environmental authorization and waste management license. The Contractor shall provide an assessment on the land use and land agreements to include a subdivision of agricultural land permit process and a rezoning of municipal land permit process.

Deliverables: The Contractor shall provide a report of all work performed under Task 7, including but not limited to, a full EIA in accordance with all relevant Host Country environmental regulations, as well as the criteria of OPIC, Exim Bank, and other relevant development finance institutions, an assessment of the Grantee’s application for an integrated environmental authorization and waste management license, and an assessment of the land use and land agreements for the Project.

Task 8: Host Country Development Impact Assessment

The purpose of this Study is to increase access to clean energy and reduce greenhouse gas (“GHG”) emissions by stimulating increased investments in clean energy generating infrastructure. The outcomes of the Study and subsequent Project will be measured by

the performance indicators shown below. The Contractor shall provide an assessment of the potential development impact in the Host Country if the Project is implemented according to the Study recommendations. This is essential to the ability of USTDA to measure and monitor the impact of its funding for the Study in order to support the Project's implementation.

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

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

- The number of renewable energy generating facilities that may receive financing as a result of this Study. At the time of funding it was expected that the Project (a 100 megawatt CSP plant) would leverage approximately \$1 billion in funding after the completion of the Study.
- Clean Energy Generation: A description of the Host Country physical infrastructure developed as a result of the Project.
 - Quantity of operational renewable electric generation capacity as a result of the Project, measured in megawatts. It was estimated at the time of funding that 100 megawatts of solar generation capacity would be developed through this Project. The Contractor shall confirm whether this is still anticipated or whether and why this may have changed as a result of the Study findings.
- Human Capacity Building:
 - Job Creation: A description of the number and type of staff (anticipated level of education and/or skills should be included in the description) that would be needed to construct the Project. A description of the number and type of staff that would be needed to operate the Project should also be included.
- Environmental Impacts:
 - The Contractor shall quantify GHG emissions reduced or avoided, measured in metric tons of carbon dioxide ("CO2"), if the Project is implemented. The Contractor shall calculate GHG emissions using publically available tools from the United Nations Framework Convention on Climate Change or an equivalent approved by the Grantee and USTDA. It was estimated, at the time of funding, that Project implementation would obviate the need to bring other power plants on line that use coal, heavy fuel oil, or other emissions-intensive feedstocks.
 - The Contractor shall also quantify any CO2 that may be produced if the Project is implemented. It was estimated, at the time of funding, that an

auxiliary diesel-fired boiler may be needed to support Project operation during cold nights.

- **Market Oriented Reforms:** A description of any regulations, laws, or institutional changes that are recommended and the effect they would have if implemented.

Deliverables: The Contractor shall provide a report of all work performed under Task 8, including, but not limited to, an assessment of the potential development impact in the Host Country if the Project is implemented according to the Study recommendations.

Task 9 - Implementation Plan

The Contractor shall draft a project implementation plan that includes a comprehensive plan, schedule, and timeline required for Project implementation. The Contractor shall include in the schedule a Critical Path Analysis ("CPA") and detailed implementation milestone descriptions. The Contractor's implementation plan shall contain three scenarios: (a) one in which the Grantee submits a bid for a CSP plant in the upcoming fourth round of the Host Country's REIPP Procurement Program; (b) one in which the Grantee submits a bid for a CSP plant in a later round of the Host Country's REIPP Procurement Program, and; (c) one in which the Grantee pursues its Project outside of the REIPP Procurement Program.

Deliverables: The Contractor shall provide a report of all work performed under Task 9, including, but not limited to, a comprehensive implementation plan for the Project.

Task 10: Tender Documents Preparation

With the Grantee's input, the Contractor shall prepare tender documents for the EPC contract and O&M contract. The Contractor shall prepare the tender documents as an appendix under separate cover. The documents shall include, but not be limited to:

- Project background and information;
- Technical specifications, including basic engineering, drawing, and performance model simulation results; and
- Draft contract clauses that include all appropriate commercial terms for Project execution, including terms for performance guarantees and framework arrangements.

Deliverables: The Contractor shall provide a report of all work performed under Task 10, including, but not limited to, tender documents for the EPC contract and O&M contract.

Task 11: Final Report Preparation and Presentation

The Contractor shall prepare a Draft Final Report that includes all analyses and findings performed under the tasks described above. The Contractor shall present the complete

Annex I-10

findings of the Study to the Grantee and provide the Draft Final Report to the Grantee for review and discussion.

Once the Grantee has provided comments and revisions to the Draft Final Report, the Contractor shall make the necessary changes and modifications to the Draft Final Report. The Contractor shall prepare and deliver to the Grantee and USTDA a substantive and comprehensive Final Report of all work performed under these Terms of Reference ("Final Report"). The Final Report shall be organized according to the preceding tasks, and shall include all deliverables and documents that have been provided to the Grantee. The Final Report shall incorporate all of the findings, recommendations, and conclusions of the Study and shall incorporate all other documents and/ or reports provided pursuant to the tasks noted above. The Final Report shall also contain an Executive Summary in addition to the other required deliverables, and shall be in accordance with Clause I of Annex II of the Grant Agreement.

Deliverables: The Contractor shall prepare and deliver the Final Report to USTDA in the manner set forth in Clause I of Annex II hereof. The Final Report shall be organized according to the order of this Terms of Reference, and shall include all deliverables and documents that have been provided to the Grantee, plus an appendix of Draft Tender Documents shall be included under separate cover. The Contractor shall provide both the Grantee and USTDA with 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, Shapefile, or Visio format and
- Source files for all documents in MS Office 2000 or later formats
- Source files for any analytical tools used to complete the Terms of Reference such as the U.S. Department of Energy's National Renewable Energy Laboratory's LCOE calculator and/or the System Advisor Model

ANNEX 6



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

U.S. Firm Information Form

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

USTDA Activity Number [To be completed by USTDA]

Activity Type [To be completed by USTDA]	Feasibility Study	Technical Assistance	Other (specify)
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Activity Title [To be completed by USTDA]

Full Legal Name of U.S. Firm

Business Address (street address only)

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

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

Please provide a list of directors and principal officers as detailed in Attachment A. Attached? (Not Applicable for U.S. Publicly Traded Company)	Yes
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If Private Company or Other (if applicable), provide a list of shareholders and the percentage of their ownership. In addition, for each shareholder that owns 15% or more shares in U.S. Firm, please complete Attachment B.

Is the U.S. Firm a wholly-owned or partially owned subsidiary?	Yes
	No

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

Is the U.S. Firm proposing to subcontract some of the proposed work to another firm?	Yes
	No

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

Project Manager

Name	Surname	
	Given Name	

Address

Telephone

Fax

Email

Negotiation Prerequisites

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

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

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

U.S. Firm's Representations

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

1. U.S. Firm is a [check one] Corporation LLC Partnership Sole Proprietor Other:

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

The U.S. Firm has all the requisite corporate power and authority to conduct its business as presently conducted, to submit this proposal, and if selected, to execute and deliver a contract to the Grantee for the performance of the USTDA Activity. The U.S. Firm is not debarred, suspended, or to the best of its knowledge or belief, proposed for debarment or ineligible for the award of contracts by any federal or state governmental agency or authority.
2. The U.S. Firm has included herewith, a copy of its Articles of Incorporation (or equivalent charter or document issued by a designated authority in accordance with applicable laws that provides information and authentication regarding the legal status of an entity) and a Certificate of Good Standing (or equivalent document) issued within 1 month of the date of signature below by the State of: .

The U.S. Firm commits to notify USTDA and the Grantee if it becomes aware of any change in its status in the state in which it is incorporated. USTDA retains the right to request an updated certificate of good standing. **(U.S. publicly traded companies need not include Articles of Incorporation or Good Standing Certificate)**
3. Neither the U.S. Firm nor any of its principal officers have, within the ten-year period preceding the submission of this proposal, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a federal, state or local government contract or subcontract; violation of federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, violating federal or state criminal tax laws, or receiving stolen property.
4. Neither the U.S. Firm, nor any of its principal officers, is presently indicted for, or otherwise criminally or civilly charged with, commission of any of the offenses enumerated in paragraph 3 above.
5. There are no federal or state tax liens pending against the assets, property or business of the U.S. Firm. The U.S. Firm, has not, within the three-year period preceding the submission of this proposal, been notified of any delinquent federal or state taxes in an amount that exceeds US\$3,000 for which the liability remains unsatisfied. Taxes are considered delinquent if (a) the tax liability has been fully determined, with no pending administrative or judicial appeals; and (b) a taxpayer has failed to pay the tax liability when full payment is due and required.
6. The U.S. Firm has not commenced a voluntary case or other proceeding seeking liquidation, reorganization or other relief with respect to itself of its debts under any bankruptcy, insolvency or other similar law. The U.S. Firm has not had filed against it an involuntary petition under any bankruptcy, insolvency or similar law.
7. The U.S. Firm certifies that it complies with USTDA Nationality, Source, and Origin Requirements and shall continue to comply with such requirements throughout the duration of the USTDA-funded activity. The U.S. Firm commits to notify USTDA and the Grantee if it becomes aware of any change which might affect U.S. Firm's ability to meet the USTDA Nationality, Source, and Origin Requirements.

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

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

Name		Signature	
Title			
Organization		Date	



ATTACHMENT B

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

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

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

USTDA Activity Number [To be completed by USTDA]	
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Activity Title [To be completed by USTDA]	
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Full Legal Name of U.S. Firm	
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Full Legal Name of Shareholder	
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Business Address of Shareholder (street address only)	
-------------------------------------------------------	--

Telephone number		Fax Number	
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Year Established (include any predecessor company(s) and year(s) established, if appropriate). Please attach additional pages as necessary.	
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Country of Shareholder’s Principal Place of Business	
------------------------------------------------------	--

Please provide a list of directors and principal officers as detailed in Attachment A. Attached?	Yes
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Type of Ownership	Publicly Traded Company
	Private Company
	Other

If applicable, provide a list of shareholders and the percentage of their ownership. In addition, for each shareholder that owns 15% or more shares in Shareholder, please complete Attachment B.	
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Is the Shareholder a wholly-owned or partially owned subsidiary?	Yes
	No

If so, please provide the name of the Shareholder’s parent(s). In addition, for any parent identified, please complete Attachment B.	
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Shareholder may attach additional sheets, as necessary.



ATTACHMENT C

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

Subcontractor Information Form

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

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

Activity Title [*To be completed by USTDA*]

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

Full Legal Name of Subcontractor

Business Address of Subcontractor (street address only)

Telephone Number

Fax Number

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

Subcontractor Point of Contact

Name	Surname	
	Given Name	

Address

Telephone

Fax

Email

Subcontractor's Representations

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

1. Subcontractor is a <i>[check one]</i>	<input type="checkbox"/> Corporation	<input type="checkbox"/> LLC	<input type="checkbox"/> Partnership	<input type="checkbox"/> Sole Proprietor	<input type="checkbox"/> Other
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duly organized, validly existing and in good standing under the laws of: .

2. The subcontractor has all the requisite corporate power and authority to conduct its business as presently conducted, to participate in this proposal, and if the U.S. Firm is selected, to execute and deliver a subcontract to the U.S. Firm for the performance of the USTDA Activity and to perform the USTDA Activity. The subcontractor is not debarred, suspended, or to the best of its knowledge or belief, proposed for debarment or ineligible for the award of contracts by any federal or state governmental agency or authority.
3. Neither the subcontractor nor any of its principal officers have, within the ten-year period preceding the submission of the Offeror's proposal, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a federal, state or local government contract or subcontract; violation of federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, violating federal or state criminal tax laws, or receiving stolen property.
4. Neither the subcontractor, nor any of its principal officers, is presently indicted for, or otherwise criminally or civilly charged with, commission of any of the offenses enumerated in paragraph 2 above.
5. There are no federal or state tax liens pending against the assets, property or business of the subcontractor. The subcontractor, has not, within the three-year period preceding this RFP, been notified of any delinquent federal or state taxes in an amount that exceeds \$3,000 for which the liability remains unsatisfied. Taxes are considered delinquent if (a) the tax liability has been fully determined, with no pending administrative or judicial appeals; and (b) a taxpayer has failed to pay the tax liability when full payment is due and required.
6. The subcontractor has not commenced a voluntary case or other proceeding seeking liquidation, reorganization or other relief with respect to itself or its debts under any bankruptcy, insolvency or other similar law. The subcontractor has not had filed against it an involuntary petition under any bankruptcy, insolvency or similar law.
7. The Subcontractor certifies that it complies with the USTDA Nationality, Source, and Origin Requirements and shall continue to comply with such requirements throughout the duration of the USTDA-funded activity. The Subcontractor commits to notify USTDA, the Contractor, and the Grantee if it becomes aware of any change which might affect U.S. Firm's ability to meet the USTDA Nationality, Source, and Origin Requirements.

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

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

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