

REQUEST FOR PROPOSALS

FEASIBILITY STUDY FOR THE

CHILE PUERTO NATALES 5 MW BIOMASS ENERGY PLANT

Submission Deadline: **4:00 PM**

LOCAL TIME – Punta Arenas, Chile

October 11, 2013

Submission Place: Joaquín Perea Muñoz
Gerente General
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SEALED PROPOSALS SHALL BE CLEARLY MARKED AND RECEIVED PRIOR TO THE TIME AND DATE SPECIFIED ABOVE. PROPOSALS RECEIVED AFTER SAID TIME AND DATE WILL NOT BE ACCEPTED OR CONSIDERED.

N.B.: Any and all questions pertaining to the RFP should be sent to:

RFPQuestions@ustda.gov

REQUEST FOR PROPOSALS

SECTION 1: INTRODUCTION	4
1.1 BACKGROUND SUMMARY.....	4
1.2 OBJECTIVE	5
1.3 PROPOSALS TO BE SUBMITTED	6
1.4 CONTRACT FUNDED BY USTDA.....	6
SECTION 2: INSTRUCTIONS TO OFFERORS	7
2.1 PROJECT TITLE.....	7
2.2 DEFINITIONS.....	7
2.3 DEFINITIONAL MISSION REPORT	7
2.4 EXAMINATION OF DOCUMENTS	7
2.5 PROJECT FUNDING SOURCE.....	8
2.6 RESPONSIBILITY FOR COSTS	8
2.7 TAXES.....	8
2.8 CONFIDENTIALITY.....	8
2.9 ECONOMY OF PROPOSALS	8
2.10 OFFEROR CERTIFICATIONS	8
2.11 CONDITIONS REQUIRED FOR PARTICIPATION	8
2.12 LANGUAGE OF PROPOSAL.....	9
2.13 PROPOSAL SUBMISSION REQUIREMENTS	9
2.14 PACKAGING	9
2.15 OFFEROR’S AUTHORIZED NEGOTIATOR	10
2.16 AUTHORIZED SIGNATURE	10
2.17 EFFECTIVE PERIOD OF PROPOSAL	10
2.18 EXCEPTIONS	10
2.19 OFFEROR QUALIFICATIONS	10
2.20 RIGHT TO REJECT PROPOSALS	10
2.21 PRIME CONTRACTOR RESPONSIBILITY	10
2.22 AWARD	11
2.23 COMPLETE SERVICES	11
2.24 INVOICING AND PAYMENT	11
SECTION 3: PROPOSAL FORMAT AND CONTENT	12
3.1 EXECUTIVE SUMMARY	12
3.2 U.S. FIRM INFORMATION.....	13
3.3 ORGANIZATIONAL STRUCTURE, MANAGEMENT, AND KEY PERSONNEL	13
3.4 TECHNICAL APPROACH AND WORK PLAN	13
3.5 EXPERIENCE AND QUALIFICATIONS	13
SECTION 4: AWARD CRITERIA	15

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

Section 1: INTRODUCTION

The U.S. Trade and Development Agency (USTDA) has provided a grant in the amount of US\$484,000 to Monte Alto Forestal S.A. (the “Grantee”) in accordance with a grant agreement dated July 31, 2013 (the “Grant Agreement”). This Grant will fund a feasibility study (“Feasibility Study”) on a 5 MW biomass energy plant project (“Project”) in or near Puerto Natales in Chile (“Host Country”). The Feasibility Study would entail the assessment of technical, economic, financial, and environmental viability of the biomass energy plant, considering the technology options of combined heat and power (CHP) and biomass gasification.

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

MAFSA and its predecessor company, Forestal Monte Alto Ltda., have operated as a forestry concern since 1929. In 2008, the Global Environment Fund (GEF, based in Chevy Chase, MD) made a significant capital contribution to MAFSA and is now actively involved in the management and strategic direction of the company. GEF is an investment management company dedicated to adding value to profitable companies that protect the environment and improve their surrounding communities. Consistent with this mission, MAFSA pursued and received Forest Stewardship Council (FSC) certification in 2011, which is valid for five years and subject to annual auditing. In addition to its forestry operations, MAFSA has recently provided services as an energy services company (ESCO) in a small-scale biomass-fueled generation project with a hotel in the Torres del Paine national park and is pursuing other similar ESCO contracts.

The Project, which has been under development by MAFSA since 2011, will either result in the construction of a biomass combined heat and power (CHP) plant or a biomass gasification plant. Regardless of the generation technology selected, the Project could sell extra wood chips to customers with boilers in the Puerto Natales area.

The current long-run marginal cost of electricity generation in Puerto Natales is presently 11 cents per kilowatt hour, which is based on a heavily subsidized price for natural gas (a subsidy of 50-60 percent), the fuel that the Magallanes Region currently relies upon. The Chilean government has signaled that this subsidy will not be continued and the electric utility has indicated they may switch to a different fuel. Moreover, within five years the supply of natural gas in the region is projected to fall to a level that will not be able to supply the needs of the region. It is uncertain that Puerto Natales will continue to generate electricity from natural gas given the difficulties Chile has had with procuring natural gas. In the place of natural gas, it is assumed Edelmag will generate electricity in Puerto Natales using small diesel, which the DM Contractor calculated to have a long-run marginal cost of 20 cents per kilowatt hour. The removal of the subsidy will significantly increase the price at which the project sponsor can sell electricity and heat, thereby raising the annual net revenue, internal rate of return and net present value of the Project.

With the intention of developing the Project, MAFSA has established a team of experts, conducted a preliminary assessment of the biomass resource and developed a basic financial model. In 2011, MAFSA hired Proyersa, a Chilean engineering firm, to conduct an initial feasibility assessment for the use of its biomass resource in an 11 MW electric generation plant (without a district heating component) in the Magallanes region. The study found that such a plant would be technically viable using MAFSA's forestry resources. Furthermore, the DM Contractor's analysis confirmed that the long-run marginal cost of a small biomass cogeneration plant in Puerto Natales is lower than that of unsubsidized conventional generation there.

The forest resource that MAFSA would use for biomass energy generation includes waste from the saw mill as well as biomass byproduct (e.g., underbrush) from harvesting premium trees for the saw mill's operations as well as thinning operations. At present, the waste not used in the ESCO project referenced above is either incinerated or MAFSA pays a third party for it to be removed and disposed of. MAFSA manages approximately 59,000 hectares of forest and conservation land, the majority of which is under direct ownership and the remainder under option to purchase. The land is comprised of lenga trees, deciduous trees that reach an average of 30 meters in height and are known for rapid regeneration following forest fires.

MAFSA estimates it can provide on a sustainable basis 146,000 cubic meters of suitable biomass per year or up to 50,000 bone dry metric tons of biomass material. Through testing done by Twin Ports Testing (Superior, WI), MAFSA has confirmed that the chemical makeup of its lenga lumber is appropriate for biomass energy generation. MAFSA ensures a permanent, sustainable flow of biomass material by selectively harvesting saw logs (the part of the tree to be used by a saw mill) and the brush that surrounds them. Under MAFSA's current forestry practices, it harvests approximately 30-40 percent of the standing saw log volume annually, which leaves medium-sized trees and large seed trees for subsequent harvests and regeneration.

As part of the feasibility study, a technical assessment will be conducted of the biomass fuel, logistics for harvesting the fuel, and options to identify the best technology for converting the biomass resource to electricity (as well as heat/syngas). Economic feasibility will be determined by assessing the demand for electricity, heat, syngas and methanized gas as well as the infrastructure for delivering these commodities. As suggested above, the potential offtakers are: local utility Edelmag for electricity, Gasco for methanized gas, Methanex for syngas, private businesses and residential areas for heat, and hotels in remote areas for heating via boilers that combust wood chips. The preliminary environmental and social impact analysis will provide the basis for MAFSA to have an environmental impact assessment (*Evaluación de Impacto Ambiental*) prepared for the environmental authority and prospective lenders. Edited portions of a background Definitional Mission are provided for reference in Annex 2.

1.2 OBJECTIVE

The objective of this study is to determine the best option to utilize forestry byproducts for purposes of biomass cogeneration at a proposed five megawatt plant in or near Puerto Natales in southern Chile. The Terms of Reference (TOR) for this Feasibility Study are attached as Annex 5.

1.3 PROPOSALS TO BE SUBMITTED

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

The amount for the contract has been established by a USTDA grant of US\$484,000. **The USTDA grant of \$US484,000 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\$484,000 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 Chile Puerto Natales 5 MW Biomass Energy Plant Feasibility Study.

2.2 DEFINITIONS

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

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

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

2.3 DEFINITIONAL MISSION REPORT

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

2.4 EXAMINATION OF DOCUMENTS

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

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

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

2.5 PROJECT FUNDING SOURCE

The Feasibility Study will be funded under a grant from USTDA. The total amount of the grant is not to exceed US\$484,000.

2.6 RESPONSIBILITY FOR COSTS

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

2.7 TAXES

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

2.8 CONFIDENTIALITY

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

2.9 ECONOMY OF PROPOSALS

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

2.10 OFFEROR CERTIFICATIONS

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

2.11 CONDITIONS REQUIRED FOR PARTICIPATION

Only U.S. firms are eligible to participate in this tender. However, U.S. firms may utilize subcontractors from the Host Country for up to 20 percent of the amount of the USTDA grant for

specific services from the TOR identified in the subcontract. USTDA's nationality requirements, including definitions, are detailed in Annex 3.

2.12 LANGUAGE OF PROPOSAL

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

2.13 PROPOSAL SUBMISSION REQUIREMENTS

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

Joaquín Perea Muñoz
Gerente General
Monte Alto Forestal S.A.
Ruta 9 Norte, Kilometro 9.5
Barranco Amarillo
Punta Arenas
Chile

An Original and eight (8) copies of your proposal must be received at the above address no later than 4:00 PM, on OCTOBER 11, 2013.

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

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

2.14 PACKAGING

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

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

2.15 OFFEROR'S AUTHORIZED NEGOTIATOR

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

2.16 AUTHORIZED SIGNATURE

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

2.17 EFFECTIVE PERIOD OF PROPOSAL

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

2.18 EXCEPTIONS

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

2.19 OFFEROR QUALIFICATIONS

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

2.20 RIGHT TO REJECT PROPOSALS

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

2.21 PRIME CONTRACTOR RESPONSIBILITY

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

2.22 AWARD

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

2.23 COMPLETE SERVICES

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

2.24 INVOICING AND PAYMENT

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

Section 3: PROPOSAL FORMAT AND CONTENT

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

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

The proposal shall consist of a technical proposal only. A cost proposal is NOT required because the amount for the contract has been established by a USTDA grant of US\$484,000, which is a fixed amount.

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

Each proposal must include the following:

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

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

3.1 EXECUTIVE SUMMARY

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

3.2 U.S. FIRM INFORMATION

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

3.3 ORGANIZATIONAL STRUCTURE, MANAGEMENT, AND KEY PERSONNEL

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

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

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

3.4 TECHNICAL APPROACH AND WORK PLAN

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

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

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

3.5 EXPERIENCE AND QUALIFICATIONS

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

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

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

- Project name,
- Name and address of client (indicate if joint venture),
- Client contact person (name/ position/ current phone and fax numbers),
- 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:

Evaluation Criteria

	Evaluation Criteria	Points
Firm or Consortium	Experience with biomass energy Projects: 15 points Experience In Chile: 5 Points Experience with Environmental and Social Impact Assessment: 5 Points Experience with Economic and Financial Analysis of Renewable Energy Projects: 5 points	30/100
Team Leader	Relevant experience related to the Project: 60 percent of points for each team member Academic/professional training qualifications: 25 percent of points for each team member Spanish language ability: 15 percent of points for each team member	15/100
Biomass Resource Engineer		15/100
Power Engineer		10/100
Economic and Financial Specialist		10/100
Local Environmental and Social Specialist		10/100
Local Lawyer		10/100
Total		100/100

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

Price will not be a factor in contractor selection.

ANNEX 1

Joaquín Perea Muñoz
Gerente General
Monte Alto Forestal S.A.
Ruta 9 Norte, Kilometro 9.5
Barranco Amarillo
Punta Arenas
Chile

Phone: +56 61 211 108
E-Mail: joaquinpm@montealtoforestal.cl

Puerto Natales 5 MW Biomass Energy Plant Feasibility Study
USTDA Activity No. 2013-51024A

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. Puerto Natales 5 MW Biomass Energy Plant Project ("Project"). The Grantee invites submission of qualifications and proposal data (collectively referred to as the "Proposal") from interested U.S. firms that are qualified on the basis of experience and capability to develop a feasibility study to assist Monte Alto Forestal S.A. (MAFSA) in assessing the technical, economic, financial and environmental feasibility of a biomass plant expected to use biomass resources from MAFSA's forestry operations.

This feasibility study grant supports the development of a 5 MW biomass energy plant in Puerto Natales, Chile. The technology options to be assessed are combined heat and power (CHP) and biomass gasification. The Project will either result in the construction of a biomass combined health and power (CHP) plant or a biomass gasification plant. Regardless of the generation, the Project could sell extra wood chips to customers with boilers in the Puerto Natales area.

As part of the feasibility study, a technical assessment will be conducted of the biomass fuel, logistics for harvesting the fuel, and options to identify the best technology for converting the biomass resource to electricity (as well as heat/syngas). Economic feasibility will be determined by assessing the demand for electricity, heat, syngas and methanized gas as well as the infrastructure for delivering these commodities. The preliminary environmental and social impact analysis will provide the basis for MAFSA to have an environmental impact assessment prepared for the environmental authority and prospective lenders.

MAFSA, the Grantee, is a Chilean forest management company which owns the hardwood forest that produces the biomass resource. MAFSA manages approximately 59,000 hectares of forest and conservation land, the majority of which is under direct ownership and the remainder under option to purchase. The land is comprised of lenga trees, deciduous trees that reach an average of 30 meters in height and are known for rapid regeneration following forest fires. MAFSA estimates it can provide 146,000 cubic

meters of suitable biomass per year or up to 50,000 bone dry metric tons of biomass material.

The U.S. firm selected will be paid in U.S. dollars from a \$484,000 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 edited portions of a background definitional mission report are available from USTDA, at 1000 Wilson Boulevard, Suite 1600, Arlington, VA 22209-3901. To request the RFP in PDF format, please go to: <https://www.ustda.gov/businessopps/rfpform.asp>. Requests for a mailed hardcopy version of the RFP may also be faxed to the IRC, USTDA at 703-875-4009. In the fax, please include your firm's name, contact person, address, and telephone number. Some firms have found that RFP materials sent by U.S. mail do not reach them in time for preparation of an adequate response. Firms that want USTDA to use an overnight delivery service should include the name of the delivery service and your firm's account number in the request for the RFP. Firms that want to send a courier to USTDA to retrieve the RFP should allow one hour after faxing the request to USTDA before scheduling a pick-up. Please note that no telephone requests for the RFP will be honored. Please check your internal fax verification receipt. Because of the large number of RFP requests, USTDA cannot respond to requests for fax verification. Requests for RFPs received before 4:00 PM will be mailed the same day. Requests received after 4:00 PM will be mailed the following day. Please check with your courier and/or mail room before calling USTDA.

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

Interested U.S. firms should submit their Proposal in English directly to the Grantee by 4:00 PM, October 11, 2013 at the above address. Evaluation criteria for the Proposal are included in the RFP. Price will not be a factor in contractor selection, and therefore, cost proposals should NOT be submitted. The Grantee reserves the right to reject any and/or all Proposals. The Grantee also reserves the right to contract with the selected firm for subsequent work related to the project. The Grantee is not bound to pay for any costs associated with the preparation and submission of Proposals.

A N N E X 2

Excerpted Definitional Mission Report



Renewable Energy in Chile Definitional Mission (DM)

Final Draft DM Report

United States Trade and Development Agency
(USTDA)

27 June 2013



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.

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The U.S. Trade and Development Agency

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

USTDA's strategic use of foreign assistance funds to support sound investment policy and decision-making in host countries creates an enabling environment for trade, investment, and sustainable economic development. Operating at the nexus of foreign policy and commerce, USTDA is uniquely positioned to work with U.S. firms and host countries in achieving the agency's trade and development goals. In carrying out its mission, USTDA gives emphasis to economic sectors that may benefit from U.S. exports of goods and services.

1000 Wilson Boulevard • Suite 1600 • Arlington, VA 22209-3901
Phone: 703-875-4357 • Fax 703-875-4009 • Web site: www.ustda.gov • email: info@ustda.gov

1 Project Recommendation 2: Monte Alto Biomass Cogeneration

We recommend that USTDA support the biomass energy plant of approximately 5MW ('the Project') that is being developed in Puerto Natales by Monte Alto Forestal S.A (MAFSA). USTDA should support the Project by providing funding to MAFSA for a feasibility study aimed at proving the Project's technical, economic and commercial, social, and environmental feasibility. The Project is likely to have positive development benefits for the host country by generating electricity at a competitive cost; increasing energy security by using locally available primary energy sources; and decreasing local pollution and GHG emissions from power generation. The Project may also provide positive economic benefits for the US economy, mainly through the export of US-made goods and services.

Following an executive summary of this opportunity from USTDA's perspective (1.1), the remainder of this section analyzes the Project in detail as follows:

- The Project is at a prefeasibility stage appropriate for USTDA consideration (1.2), and is being promoted by a sponsor that has shown to be well-organized, effective, and responsive(1.3)
- There are interested potential lenders, and the Global Environment Fund (GEF)—an existing equity partner in MAFSA—is potentially interested in investing in the Project (1.4). In addition, there are various US companies that could competitively export US-made goods and services for developing it (1.5)—although there is competition from non-US providers of goods and services (1.6)
- The Project is likely to create a positive developmental impact (1.7), likely to have an acceptably low impact on the environment (1.8), and will not create a threat to US labor (1.9)
- Qualified contractors are needed to prove the Project's viability).

As required by our contract, we complete this section by explaining the justification for USTDA to fund a feasibility study for the Project (1.10); present the TORs and budget for the proposed feasibility study and summarize our recommendation that USTDA support the Project with the proposed budget.

1.1 EXECUTIVE SUMMARY

The Project, which has been under development by MAFSA since 2011, will likely result in the construction of a biomass combined heat and power (CHP) plant. This is due to the proven viability of this technology. As an alternative, MAFSA has conducted preliminary research on biomass gasification technology.

Both CHP and gasification technologies would be used to produce electricity and could also produce heat, in the form of steam or hot water, for district heating. In addition, a biomass gasification plant could produce additional synthesis gas (syngas) created from gasification of the biomass fuel, which could be methanized and sold to the existing natural gas grid or sold to a company that uses syngas as an input for its operations – for example, Methanex. Finally, the Project could sell extra

wood chips to customers with boilers in the Puerto Natales area regardless of the generation technology chosen.

The Project will be located on the outskirts of the town of Puerto Natales in the Magallanes y La Antártica Chilena region of Chile at a site yet to be determined. MAFSA has targeted a 5MW installation because it will be sufficient to meet the demand of Puerto Natales. As a result, existing conventional generation assets will be held in reserve to supply electricity if the MAFSA generating unit is unavailable. MAFSA aims to acquire a site for the Project that will have easy access to the town's electric grid and natural gas grid. The Project aims to sell electricity directly to the distribution grid of Puerto Natales. In the event that the Project includes district heating, MAFSA would also seek to locate the Project near the heating loads that a district heating grid would serve.

MAFSA will develop the Project under Monte Alto Renovables S.A. (MARSAs), a subsidiary of MAFSA that is jointly owned by MAFSA and a U.S. citizen who is pursuing the Project with MAFSA. MAFSA will provide most of the staff for MARSAs. In addition, its forestry operations will supply the fuel for the biomass plant.

MARSAs has been formed to develop the Project as well as other renewable energy projects. To date, MARSAs has been engaged in electric services company (ESCO) projects with hotels in the Parque Nacional Torres Del Paine and is pursuing other similar contracts.

The Project has good potential to benefit the economy of the host country as well as the economy of the US. The Project will lower electricity and heating costs for the host country by using a lower cost fuel for heating and electricity generation than is currently available in Puerto Natales. The Project also has the potential to reduce local pollution, reduce global GHG emissions, and improve energy security. In addition to the national energy security benefits, the Project will greatly increase the energy security of the remote city of Puerto Natales. To achieve these benefits, MAFSA is very interested in purchasing equipment (potentially worth up to US\$16.5 million) for the Project from the US.

The proposed biomass project is likely to be:

- Technically feasible, due to the ready access to a biomass resource owned by the majority shareholder and the commercially proven technology for both biomass CHP and biomass gasification projects
- Economically and commercially viable, based on a preliminary assessment
- Acceptable under the regulatory regime of Chile and under environmental standards of potential lenders.

Assuming that the Project proves its technical, economic, commercial, and environmental viability, lending institutions and equity partners are likely to consider it a good investment. MAFSA has completed several important steps that would allow it to meet financiers' requirements. However, to fully meet the requirements of financiers, MAFSA must contract specialized consultants to complete studies that will:

- Prove technical viability by conducting a technical assessment of the biomass fuel, logistics for harvesting the fuel, and options to determine what the best technology will be for converting the biomass resource to electricity (and heat/syngas)
- Prove economic and financial viability by assessing demand for electricity, heat, syngas, and methanized gas; selecting the biomass energy technology best suited to meet demand for these commodities; developing a full financial model for the Project; and developing a commercial strategy for the Project
- Prepare a preliminary environmental and social impact assessment that reviews the key requirements of relevant lenders and authorities; analyzes and assesses environmental and social red flags; and provides the basis for MAFSA to develop an *Evaluación de Impacto Ambiental*
- Prepare ancillary studies, by conducting an assessment of potential sites for the Project and an assessment of options for interconnecting to the local electricity grid, injecting methanized syngas into the existing natural gas grid, and/or constructing a grid to deliver heat to heat customers
- Review relevant regulatory matters.

In addition, the specialized consultants will analyze host country development impacts and assess US export benefits that will result from the USTDA grant. Finally, the specialized consultants will provide an implementation plan for the Project's next steps.

1.2 PROJECT DESCRIPTION

The Project aims to use biomass CHP to provide electricity to the town of Puerto Natales in the Magallanes and Antártica Chilena region of Chile. In addition, MAFSA will explore the options of supplying district heating or methanized syngas to Puerto Natales. The Project will use MAFSA's forest resource as fuel for the Project. The forest resource that MAFSA will use for the Project will include waste from the saw mill as well as biomass byproduct. Biomass byproduct consists of underbrush and other tree waste collected while harvesting premium trees for the saw mill's operations and thinning operations.

MAFSA manages approximately 59,000 hectares of land (41,000 hectares owned by the company and 18,000 nearby under option to purchase) and estimates that they can provide 146,000 m^3 of biomass per year. MAFSA's lands are divided into nine legally independent, though physically adjacent, properties. The lands are comprised of Lengua forest and conservation lands. Lengua trees are deciduous trees that reach an average of 30 meters in height. In addition, Lengua trees are known for rapid regeneration following forest fires.

The Project is likely to be technically and economically viable. MAFSA hired Proyersa, a Chilean engineering firm specialized in energy, to conduct an initial feasibility study for using MAFSA's biomass resource in an electric generation project. The study found that a biomass plant in the town of Punta Arenas, which is

in the same region as Puerto Natales, would be technically viable using MAFSA's forest resource. Furthermore, our economic analysis explained in Section shows that the LRMC of a small biomass cogeneration plant will be lower than the LRMC of unsubsidized conventional generation options. In addition, the International Energy Agency has stated that biomass projects that provide electricity and heat are generally considered viable.

With the intention of developing the Project, MAFSA has established a team of experts (1.2.1). Since conceiving the idea of the Project, the project sponsor has taken steps to move the Project towards implementation, including assessing infrastructure requirements (1.2.2) and conducting a preliminary assessment of the biomass resource (1.2.3) Finally, MAFSA has developed a basic financial model to prove the Project's economic fundamentals (1.2.4).

MAFSA expects that it will require between 19 and 22 months to put the Project into operation. However, we expect that the earliest the Project will be operational would be 2016. We expect that it will require:

- 12 to 16 months to complete the feasibility studies—including negotiating the PPA
- Four to six months to secure financing
- Three to six months to complete the planning stage of construction—including finalizing building plans
- One year to complete construction.

Assuming this process starts in July 2013, the Project could begin commercial operations at some point between January and October 2016.

1.2.1 MAFSA Team

MAFSA's MAFSA subsidiary will be managed by a skilled management team that will in turn be advised by a board of directors with experience with biomass investments and sustainable forestry. As of March 2013, MAFSA's management team is comprised of the following individuals:

- Joaquin Perea Muñoz—a trained accountant who has four years of experience as the general manager of MAFSA. Previously, he served as an investment officer for GEF and as a financial analyst in the forestry sector. During his time as a financial analyst, he invested in sustainable forestry in Argentina, Colombia, and South Africa.
- Grant Devine—an investor who holds a Master's in Business Administration from the Yale School of Management. Previously, Mr. Devine was the co-founder of an investment management company specializing in real estate and alternative assets.
- Fernando Romero Bravo—a forest engineer with expertise in marketing who is charged with finding new national and international markets for MAFSA's lenga lumber as a premium quality hardwood.
- Cristhian Burger Bermedo—responsible for organizing and planning production at the Punta Arenas saw mill and drying facility; providing technical production support; maximizing the use of the plant; and managing production costs.

- Carolina Ulloa Álvarez—head of information services responsible for preparing long, medium, and short-term forest management plans; forest harvesting plans; analyzing forest production; and performing quality control tasks in the sawmill.

In addition, MAFSA's MARSA management team will report to a board of directors that includes:

- GEF—a global alternative asset manager. GEF has experience investing in biomass projects and would be represented on the board of directors as a result of their involvement in MAFSA and potentially as an investor in the Project as well. The GEF's investments include Greenko in India, which is a leader in the renewable energy market in India with over 260MW of installed hydro and biomass capacity
- Mr. Eduardo Mladinic—a member of MAFSA's founding family who has been involved with MAFSA his entire professional life. In addition to his involvement with MAFSA, he is a businessman in Punta Arenas who owns car dealerships, hotels, and eco-tourism facilities.
- Dr. Juan Gowda—a forestry expert who holds a doctorate in sustainable forestry.

1.2.2 Infrastructure requirements

The infrastructure requirements of the Project are divided into two separate categories: those for accessing the Project, and those for transmitting electricity (and potentially the heat/methanized syngas) generated by the Project to Puerto Natales. The Project and the source of the biomass fuel will be easily reached on well paved roads. In addition, the Project will be served by the port of Puerto Natales for delivering equipment.

The Project will be easily accessible because MAFSA envisions placing the Project on the outskirts of Puerto Natales. Consequently, the Project will be within the reach of the existing power and gas infrastructure of Puerto Natales. Therefore, it will require minimal infrastructure investment to transmit electricity or methanized syngas to the town. However, in order to transmit heat to customers in Puerto Natales, MAFSA may need to construct a district heating grid to deliver hot steam or water to customers.

1.2.3 Biomass resource assessment

MAFSA can provide an adequate amount of biomass fuel for a 5MW biomass energy plant. MAFSA estimates that its forests can sustainably provide up to 50,000 Bone Dry Metric Tons (BDMT) of biomass material per year derived from underbrush collected on MAFSA's land and waste resulting from MAFSA's saw mill operations. Furthermore, MAFSA has confirmed that the chemical makeup of its lenga lumber is appropriate for biomass energy projects. Depending on the efficiency and design of the biomass equipment, between 6,800 and 8,150BDMT are required to fuel 1MW of capacity on an annual basis. Therefore, the quantity of BDMTs is more than sufficient to power a 5MW installation.

MAFSA ensures a permanent, sustainable flow of biomass material by selectively harvesting saw logs—the part of a tree stem that will be used by a sawmill—and the brush that surrounds them. Under MAFSA's current forestry practices, MAFSA

harvests approximately 30-40 percent of the standing sawlog volume annually, which leaves medium-sized trees and large seed trees for subsequent harvests and regeneration. Currently, a non-commercial post-harvest thinning removes one third of the trees competing with crop trees targeted for the next harvest. The parts of sawlogs that are not used for lumber, trees that are thinned for next year's harvest, saw dust from the saw mill, and the other brush collected in the process of harvesting sawlogs will serve as the resources for biomass fuel equivalent to 50,000 BDMT.

The Proyersa feasibility study MAFSA commissioned, which assessed an 11MW biomass energy installation, calculated that MAFSA's resource would provide sufficient fuel for the proposed installation. However, this study did not take into account using biomass to generate district heat and electricity, which could require additional fuel. For this reason, MAFSA solicited bids for a new feasibility study in 2011. As of October 2011, MAFSA had received a bid from the Biomass Energy Resource Center (in Montpelier, VT), which has at least one employee with experience assessing renewable energy projects for USTDA.

1.2.4 Economic fundamentals

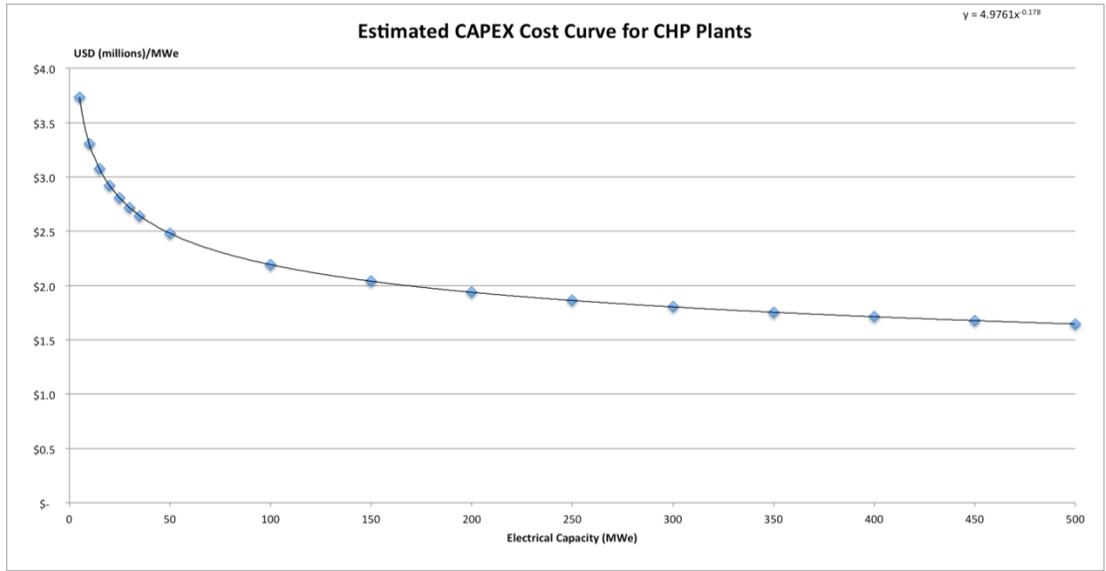
MAFSA estimates a capital expenditure (CAPEX) requirement of US\$20 million to construct the biomass energy plant. In addition, it will cost MAFSA between US\$0.6 and US\$2 million for biomass harvesting equipment.¹

CAPEX assumptions

Figure 1.1 shows a curve of the average cost of installed biomass energy capacity per MW as calculated by GEF. The costs shown are turnkey costs, defined for the purposes of this report as the sum of all costs required to hand over a completely finished and operational asset.

¹ Ashton, S.; B. Jackson; R. Schroeder. 2007. Cost Factors in Harvesting Woody Biomass. Pages 153–156. In: Hubbard, W.; L. Biles; C. Mayfield; S. Ashton (Eds.). 2007. Sustainable Forestry for Bioenergy and Bio-based Products: Trainers Curriculum Notebook. Athens, GA: Southern Forest Research Partnership, Inc.

Figure 1.1: Cost Curve MAFSA Used for Its Cost Estimate



Source: Global Environmental Fund

The curve above shows that the cost per MW of installed capacity falls dramatically between zero and fifty MW and that beyond 100MW costs decline more slowly. On the curve, the proposed 5MW CHP plant would cost approximately US\$4 million per MW. The curve above is consistent with estimates from the International Energy Agency, which calculate that installed capacity for biomass gasification or Biomass CHP projects costs between US\$3-4 million per MW.¹

1.3 PROJECT SPONSOR’S CAPABILITIES AND COMMITMENT

MAFSA’s multi-disciplinary management team has no specific experience in biomass development. However, the management team’s overall experience, skills, and organization seem appropriate to move the Project forward (1.3.1). MAFSA has demonstrated its commitment to the Project by investing adequate time and resources into it. It has also demonstrated its responsiveness and commitment to the Project by effectively providing USTDA and Castalia with all available information required to assess the Project (1.3.2).

1.3.1 Experience of project sponsor

MAFSA has assembled a team with adequate skills to successfully carry out the Project. The diverse team profiled in Section 1.2.1 covers the core skills necessary to successfully implement and manage a large project: business, financial, and forestry experience.

- Business experience—the managing director has founded and successfully run an investment management company and holds a Master’s in Business Administration from a prestigious university. The commercial manager has experience conducting marketing and business negotiations. The mill manager has experience operating an

¹ IEA. “Biomass for Power Generation and CHP.” January, 2007

industrial plant. In addition, board member Mr. Mladinic has decades of experience owning car dealerships, hotels, and eco-tourism facilities.

- Financial experience: the general manager has financial experience as an investment adviser and financial analyst, particularly in the forestry sector. Additionally, the GEF, which has structured investments in sustainable businesses worldwide, would be represented on the board of directors
- Forestry experience—the general manager has experience investing in the forestry sector. The information technology specialist has experience preparing long, medium, and short-term forest management plans; forest harvesting plans; and analyzing forest production. In addition, MAFSA is advised by Dr. Juan Gowda, a sustainable forestry expert.

1.3.2 Commitment of the project sponsor

We assess MAFSA to be committed to developing the Project based on its time commitment, financial commitment, and our own interactions with the project team. MAFSA's team has been preparing the Project since 2011. In addition to having spent time advancing the Project, the project sponsor has stated that it has invested in developing the Project.

In Castalia's interactions with MAFSA, the project sponsor has displayed a good degree of responsiveness, and a level of dedication to the Project that seems appropriate based on our experience with renewable energy developers. The MAFSA team has effectively and efficiently provided available information about the technical, commercial, financial, and environmental aspects of the Project to USTDA and Castalia. It has provided all information requested within one week of requesting the information (and often in less time). It has also accepted all meeting requests, and has met with Castalia consistently since the start of our assignment. These meetings have been productive, and MAFSA has responded to all inquiries made by Castalia and USTDA. It has also provided additional information after the meetings to verify the information discussed.

1.4 IMPLEMENTATION FINANCING

MAFSA has proposed a reasonable cost (1.4.1), and a reasonable target capital structure for its biomass CHP project (1.4.3). There are several potential lenders who are interested in providing debt financing for the Project. Among these lenders, the Export-Import Bank of the United States ('Ex-Im Bank') is among the most likely sources of financing due to its interest in financing the Project and the attractive lending terms it can offer (1.4.2). Finally, MAFSA has provided initial qualification materials that, if strengthened, will meet the requirements of interested lenders (for example, a detailed financial model). However, some key items are missing (1.4.4).

1.4.1 The proposed costs are overall reasonable

MAFSA estimates that the Project will require an overall investment of about US\$21.5 million dollars, for the Project to be turnkey (or 'installed'). This cost is based on an estimated cost of US\$4 million per MW of capacity produced by GEF

and US\$1.5 million for biomass harvesting equipment. The GEF's estimate is in line with per MW cost estimates provided by the IEA for Biomass CHP and Biomass Gasification.¹ In addition, the cost of biomass harvesting equipment cost is in line with estimates from industry and academic sources.

1.4.2 There are good options from interested debt financiers

Ex-Im Bank, OPIC, IFC, IIC, and CAF are all good options for debt financing. MAFSA has had preliminary conversations with OPIC, IIC and CAF – three multi-lateral lending institutions. Castalia has contacted the Ex-Im Bank in addition to the potential lenders that MAFSA has contacted.

MAFSA could potentially qualify for debt-financing from all of these institutions. However, to qualify for OPIC funding, at least 25 percent of the equity should be held by US investors, which may occur if and when MAFSA sells shares in MARSAs and seeks an equity partner from the US. MAFSA already has a large investor from the US, the GEF, which is invested in its forestry business and is potentially interested in being an equity investor in MARSAs.

Also, MAFSA may have some difficulty qualifying for financing from IIC because it typically does not provide financing for projects with a CAPEX larger than US\$15 million. However, they are interested in the Project and could potentially make an exception to this rule. If IIC does decide to support the Project, the IIC may be able to provide debt and/or equity financing.

Among potential debt financing options, the Ex-Im Bank is among the most likely sources of implementation funding. It can offer very favorable terms for financing the Project, and it has a policy priority of supporting US-manufactured renewable energy exports.

In addition, an Ex-Im Bank staff member expressed a high degree of motivation to finance the Project, provided the Project's viability is backed up by the necessary studies and permits. MAFSA plans to seek a letter of interest from the Ex-Im Bank. All of the potential lenders that we contacted are very interested in the Project, provided that MAFSA can meet their lending requirements. Therefore, MAFSA should further explore their financing options once they have a solid commercial strategy and detailed financial model.

1.4.3 Capital structure corresponds to the requirements of prospective lenders

The capital structure that MAFSA is targeting meets or exceeds the equity requirements of potential US Government, multi-lateral, and private sector lenders. The Ex-Im Bank and OPIC can offer to finance up to 85 percent and 75 percent of the cost of projects that they finance, respectively. Each project is taken on a case by case basis; however, OPIC stated that a company borrowing from it for the first time is unlikely to receive the maximum percentage possible. The IIC, a multi-lateral lender, requires that the capital structure be at least 20 percent equity, although it prefers 25 to 30 percent equity. However, the IIC only provides debt financing for up to 50 percent of total CAPEX. The IFC declined to provide a target capital structure, and

¹ IEA. "Biomass for Power Generation and CHP." January, 2007

just noted that the proposed capital structure should contain more equity if the Project does not obtain a PPA.

1.4.4 There are other lending requirements that need to be met

MAFSA has or will conduct some components of project preparation that, if strengthened, will comply with lender requirements. However, some lender requirements are lacking and some need to be further developed. In particular, a technical feasibility study and an environmental and social impact assessment need to be conducted. Aside from capital structure requirements explained above, all potential lenders that Castalia contacted require that MAFSA provide:

- A summary of all aspects of the Project, contained in an independently prepared feasibility study—MAFSA does not have a feasibility study for its project
- A detailed financial model—MAFSA needs to strengthen its basic financial model with much greater detail, or prepare a new one
- Existing offtake agreements and supply contracts—MAFSA does not have offtake agreements or supply contracts although they have entered into preliminary discussions with potential offtakers. The potential offtakers are:
 - Edelmag for electricity
 - Gasco for methanized gas
 - Methanex for Syngas
 - Private businesses and households for heat
 - Hotels in remote areas with boilers for heating for wood chips.
- A detailed technical viability study—the Proyersa study that MAFSA commissioned showed the technical viability of a similar project in the same region, but MAFSA needs to conduct a new study for the Project
- An environmental impact assessment in compliance with standards of the IFC and those for a Declaración de Impacto Ambiental required by local law—MAFSA needs to commission a compliant environmental impact assessment
- A social impact assessment—MAFSA needs to commission one together with the environmental impact assessment
- Proof of land rights and required permits—MAFSA has satisfactory documentation.

All of the potential lenders require each of the components above in some form. However, with the exception of the environmental and social impact assessments, there are no specific formats or templates to comply with these requirements. The industry standard for environmental and social impact assessments for biomass is the IFC's 'Environmental, Health, and Safety Guidelines: Thermal Power Plants'. These guidelines call for consideration of:

- Environmental factors including:
 - Air emissions

- Energy efficiency and GHG emissions
- Water consumption and habitat alteration
- Effluents
- Solid wastes
- Hazardous material and oil
- Noise
- Occupational health and safety factors including:
 - Non-ionizing radiation
 - Confined spaces
 - Heat
 - Noise
 - Electrical hazards
 - Fire and explosion hazards
 - Chemical hazards
 - Dust
- Community health and safety factors including:
 - Water consumption
 - Traffic safety.¹

The IFC standard for environmental and social impact assessment is the standard that the Ex-Im Bank, the IIC, and OPIC reference to determine eligibility for financing.

1.5 US EXPORT POTENTIAL

The US export potential for the Project could be between US\$8.5 million and US\$16.5 million – between 50 and 80 percent of the total project cost – out the total projected capital expenditure (CAPEX) of US\$21.5 million. The total CAPEX figure is calculated based on the average of US\$4 million per MW shown in Figure 1.1 multiplied by five for a 5MW system. In addition, biomass harvesting equipment should cost approximately US\$1.5 million.²

MAFSA has expressed an interest in purchasing either biomass CHP equipment or gasification equipment from US companies. The most likely choice is biomass CHP equipment. If MAFSA chooses to purchase Biomass CHP equipment, it is likely that

¹IFC. “Environmental Health, and Safety Guidelines: Thermal Power Plants.” Accessed March 7, 2013 at: http://www1.ifc.org/wps/wcm/connect/dfb6a60048855a21852cd76a6515bb18/FINAL_Thermal%2BPower.pdf?MOD=AJPERES&id=1323162579734

²Ashton, S.; B. Jackson; R. Schroeder. 2007. Cost Factors in Harvesting Woody Biomass. Pages 153–156. In: Hubbard, W.; L. Biles; C. Mayfield; S. Ashton (Eds.). 2007. Sustainable Forestry for Bioenergy and Bio-based Products: Trainers Curriculum Notebook. Athens, GA: Southern Forest Research Partnership, Inc.

between 50 to 70 percent of the total CAPEX will likely come from the US. However, if MAFSA decides to purchase biomass gasification equipment, there is a possibility that up to 80 percent of will come from the US.

Table 5.1 shows the components of a Biomass CHP project, the most likely type of project for MAFSA, based on percentage of total CAPEX and US export potential.

Table 5.1: Estimated Value of US Exports for Biomass CHP Project

Item	Percentage of CAPEX	US Export Potential
Boilers	30-40	Yes
Conversion Technology	30-40	No
Balance of Plant	15-20	Yes
Biomass Harvesting Equipment	5-10	Yes

Source for Percentage of CAPEX: Conversation with Eric Rojas of P&W Power systems on March 13, 2013 for boilers, conversion technology and balance of plant equipment. Biomass harvesting equipment percentage based on percentage of US\$1.5 million out of a total CAPEX of US\$21.5 million.

Source for US Export Potential: Conversation with Joseph Seymour of Biomass Thermal Energy Council on March 12, 2013 for Boilers, Conversion Technology, and Balance of Plan Equipment for boilers, conversion technology and balance of plant equipment. Conversation with Florentino Bernal of Caterpillar on April 24, 2013 for biomass harvesting equipment.

MAFSA intends to procure all components through an open, competitive request for proposals for an engineering, procurement, and construction contractor to build the Project. However, MAFSA intends to maintain final authority over the components acquired by the winning bidder. Manufacturers contracted by the EPC contractor seeking to export from the US would consist of US based companies that manufacture boiler and balance of plant equipment, or biomass gasification equipment.

MAFSA has researched US companies capable of supplying components for biomass CHP equipment. The companies include:

- **Superior Boilerworks**—boiler systems manufacturer, with approximately 5,000 biomass energy systems operating globally. In provides turnkey biomass CHP systems and recently entered into a partnership with Alternative Energy Systems International to manufacture biomass gasification systems¹
- **Hurst Boiler**—one of the US largest boiler manufacturers. It has experience exporting boilers globally—including to Chile. In addition, Hurst has experience exporting boiler equipment for biomass CHP plants of similar size to the plan envisioned by MAFSA in Latin America
- **Messersmith Manufacturing**—boiler manufacture with 35 years of experience providing boilers for biomass CHP projects in the US. Messersmith indicated an interest in exporting to Chile, though they have not done so in the past.

¹ AESI. “Alternative Energy Solutions International and Superior Boiler Works Announce Partnership.” February, 2012 Accessed on March 8, 2013 at: <http://www.aesintl.net/blog/aesi-news/superior-boiler-works-and-alternative-energy-solutions-international-announce-partnership>

To date, MAFSA has also contacted two biomass gasification project developers that would assemble the biomass gasification equipment in the US: Rentech and PHG Energy. Each of these companies has developed a new variant of biomass gasification technology:

- **Rentech**—an alternative energy company with ownership over the Rentech-Silvagas and the Rentech-Clearfuels biomass gasification technologies. Both technologies have completed pilot testing, and Rentech is looking for opportunities to deploy them commercially.¹
- **PHG Energy**—a biomass gasification project developer with ownership over the downdraft gasification technology, which it has demonstrated at commercial scale. PHG Energy has developed partnerships with Caterpillar and the Associated Physics of America, and is seeking opportunities to implement its technology commercially.²

MAFSA estimates that it will require at least two biomass forwarders, several skidders, a chipper, and front loading trucks. US companies, such as Caterpillar and John Deere, are global market leaders for providing biomass harvesting equipment. Both companies provide MAFSA's required equipment and manufacture the majority of their equipment appropriate for biomass harvesting in the United States.

All of these companies have manufacturing facilities or source their components from the US. Although current US export of technology appropriate for biomass energy is limited to some components of the biomass plant – in particular boilers and balance of plant equipment –, all companies we contacted expressed interest in exporting. The companies we contacted were particularly interested in exporting if the US Government is able to offer support through the Ex-Im Bank financing. Therefore, USTDA support of the Project could prove instrumental in making the MAFSA aware of interested US exporters, who may otherwise not have been aware of US manufacturers.

1.6 MARKET ENTRY ISSUES AND FOREIGN COMPETITION

Market entry issues and foreign competition are unlikely to prevent US companies from successfully competing in exporting goods and services for the Project. Chile has a commitment to welcoming foreign investment enshrined in its Constitution (1.6.1). As a result of Chile's openness to foreign competition, its market for developing renewable energy projects and for supplying goods and services related to renewable energy is open and highly competitive. Despite the competition, US based manufacturers are well placed to compete in Chile's renewable energy market (1.6.2).

1.6.1 Market entry of foreign companies in Chile

The Constitution of Chile establishes the main principles for the rules on foreign investment, including equality before the law, economic freedom, and non-

¹ Conversation with Jaime Carlson of Rentech on on March 14,2013

² PHG Energy. "About". Accessed on March 20,2013 at: <http://phgenergy.com/company>

discrimination. Non-discrimination guarantees that foreign investors will receive the same treatment from the Government as domestic investors; it also guarantees foreign investors free access to all sectors of the economy. Only in exceptional circumstances can the Government reserve areas for domestic investment.¹

Chile has adhered to these practices in the energy sector since the 1980s, allowing for a large degree of foreign private investment, including from the US. For example, AES Gener – a major player in the Chilean electricity market – is majority owned by AES Corporation, which is based in the US. Chile has also allowed for foreign investment in the renewable energy sphere, including by US companies.

Finally, Chile has a good business environment, with a low level of perceived corruption.² Chile signed a Free Trade Agreement with the US in 2003, under which trade between the two countries has increased by 400 percent.³

1.6.2 Foreign competition in Chile

Table 1.2 provides an overview of the competitiveness of US companies for providing goods and services for biomass projects in Chile, as described in more detail below.

Table 1.2: Overview of US Competitiveness for Supplying Goods and Services

Item	US Firm Competitiveness	Main Competitors
Boilers	Good	European companies, Brazilian Companies, Indian Companies, Chinese Companies
Power Conversion Technology	Low	European companies
Balance of Plant Equipment	Good	Indian Companies, Chinese Companies
Gasification Technology	Good	European Companies
Transformers	Good	European Companies, Canadian Companies, Mexican Companies, South Korean Companies
Construction Companies	Low	Chilean construction companies
Biomass Harvesting Equipment	Good	Canadian and Japanese Companies

Boilers

Companies that provide boilers manufactured in the US are competitive in Chile, provided they can arrange financing. US manufacturers and European manufacturers have the advantage of making products that are well regarded for their quality. In fact, MAFSA opted for a boiler from Binder, a German boiler

¹ EO Consorcio Eolico SA, 2011. “Why invest in Chile”, <http://eolico.cl/en/index.php/eolic-energy-in-chile/por-que-invertir-en-chile-5/> (accessed February 1, 2013)

² Chile has 2012 Corruption Perception Index of 20, nearly the same as the U.S.’s index of 19; and much lower than Brazil’s index of 69 and Argentina’s index of 102

³ Ambassador Alex Wolff and Dr. Hugh Rudnick, 2013. “Direct line webchat on renewable energy opportunities in Chile”

company, for an ESCO project it is operating at Lago Grey hotel. However, the Binder boiler was purchased due to the relationship that MAFSA had with a Binder supplier. US manufactured boilers are generally less expensive than European manufactured boilers. Therefore, they can be competitive against Binder or other European boilers if MAFSA has a greater understanding of the boilers available from US suppliers.

Chinese, Indian, and Brazilian manufacturers cost less than American manufactured boilers; however, companies are often skeptical of the quality of their boilers. In sum, American boiler manufacturers are in the middle of the cost spectrum but are considered higher quality than low end products. As a result, financing is often key for US manufactured boilers to be selected as the preferred bidder.

Power Conversion Technology

European manufacturers are the clear leaders in manufacturing power conversion technology for biomass combined heat and power plants. Due in part to more stringent renewable energy portfolio standards in Europe, European companies have large amounts of experience delivering biomass power conversion technology. This gives European companies a competitive edge in producing conventional steam driven turbines for biomass applications. In addition, the leading Organic Rankine Cycle turbine manufacturers, which is the turbine most likely to be most appropriate for a biomass energy plant of the scale that MAFSA envisions, are all based in Europe – for example, Turboden. As a result, US companies have limited competitiveness in producing power conversion technology for biomass combined heat and power applications.

Balance of Plant Equipment

The US is competitive in balance of plant equipment, which includes dust collectors, electrostatic precipitators, selective non-catalytic reduction systems, and induced draft fans. Biomass CHP balance of power equipment are common industrial applications. There are many US manufacturers of this equipment that are competitive globally. Some examples of manufacturers of balance of plant equipment include:

- Dust Collector—Cyclone Collectors (Snellville, GA), Dynacom Inc. (Brainbridge Township, OH), and Filter 1 Clean Air Consultants (Garland, TX)
- Electrostatic Precipitator—Dynacom Inc. (Brainbridge Township, OH), Solid Waste Equipment Co (Omaha, NE), and Filter 1 Clean Air Consultants (Garland, TX)
- Selective Non-Catalytic Reduction Systems—Applied Utility Systems (Aliso Viejo, CA) and Epcon Industrial Systems (Conroe, TX)
- Induced Draft Fan—MSC Industrial Supply Co. (Melville, NY), Blair Co. (Elk Grove Village, IL), and New York Blower Co. (Willowbrook, IL).¹

As evidence that US manufactured balance of plant equipment is competitive in Chile, Energía Pacifico (a local biomass energy developer) uses American made

¹ ThomasNet.com. “Suppliers,” Accessed on May 3, 2013 at: <http://www.thomasnet.com/suppliers/>

electrostatic precipitators (a type of emissions control equipment) in its biomass plants.

Gasification Technology

The US is competitive in biomass gasification technology. However, European manufacturers are quality competitors. MAFSA has initiated conversations with several biomass gasification technology developers based in the United States – including Rentech Chiptec, and PHG energy. Both of these companies possess proprietary technology, which if appropriate for the Project and would not have any international competitors. Finally, NREL notes that there are over 40 biomass gasifier developers in the US.¹

Construction Companies

US construction companies are not competitive in the Chilean renewable energy market. Chilean construction companies have the competitive advantage of not having to mobilize labor and materials from overseas (or if they do, in smaller quantities than foreign companies). Therefore, US companies will only be competitive when the construction project requires significant specialized labor and materials that must be imported. For this reason, the existing biomass companies that we spoke with, Energía Verde and Energía Pacifico, both chose to use Chilean companies to construct their biomass plants.

Biomass Harvesting Equipment

US companies, such as John Deere and Caterpillar, are global market leaders in the forestry equipment market with a strong presence in Chile. Woody biomass harvesting equipment is considered part of their forestry equipment operations; however, the market for woody biomass harvesting equipment is nascent. It is likely that US manufacturers will compete primarily with Canadian and Japanese companies who are their prime competitors for other types of forestry equipment. These competitors include Tigercat from Canada and Hitachi and Komatsu. Of these competitors, only Komatsu manufactures some forestry equipment in the United States.

1.7 DEVELOPMENTAL IMPACT

The Project is expected to have various positive developmental impacts for Chile. These include positive impacts on infrastructure development and human capacity building. To a limited extent, the Project will also have other positive impacts, such as improved environmental sustainability, enhanced energy security, and cost reduction impacts.

Table 1.3 summarizes the expected developmental impacts, which are reviewed below.

Table 1.3: Developmental Impacts of the Project

Category	Expected Developmental Impact
Infrastructure	▪ 5MW biomass energy plant

¹ Richard Bain. “USA Biomass Gasification Status.” April 18, 2012

Development	<ul style="list-style-type: none"> ▪ Syngas for heating or steam for district heating
Market-Oriented Reform	<ul style="list-style-type: none"> ▪ Will reduce cost of subsidies to the Magallanes y la Antártica region, limiting market distortion. In addition, will support Chile's goal to diversify its energy matrix
Human Capacity Building	<ul style="list-style-type: none"> ▪ New jobs for biomass energy plant operators ▪ Training for employees operating biomass energy plant ▪ Additional jobs at the MAFSA sawmill for processing biomass fuel
Technology Transfer and Productivity Improvement	<ul style="list-style-type: none"> ▪ If MAFSA uses biomass gasification, there will be technology transfer impacts through importation of a novel technology, and operation and maintenance skills transfer ▪ Productivity improvements through reduced cost of electricity and potentially lower cost of heating ▪ Financial revenue gains of NPV17,069,625, and IRR of 10.6 percent
Other	<ul style="list-style-type: none"> ▪ Improved energy security through reduced fossil fuel imports ▪ Reduced pollution in environmentally sensitive areas

1.7.1 Infrastructure impacts

The Project may have several infrastructure benefits. The Project itself would result in the construction of a biomass plant with an estimated installed capacity of 5MW, generating approximately 40GWh per year. This electricity would be used to meet the needs of Puerto Natales, which is a remote town that must supply all of its own energy. In addition, the Project may also encourage constructing a district heating system.

1.7.2 Market-oriented reforms

The electricity market in Chile is generally very advanced; however, in the Magallanes y la Antártica region, the cost of electricity and heating is still heavily subsidized. The Chilean government subsidizes the cost of natural gas for the region between 50 and 60 percent, creating a distortion in the electricity market. Past attempts to reduce this subsidy have resulted in protests and rioting.

The Project is expected to generate market-oriented reforms by introducing a lower cost electricity and heat generation technology and fuel source that would reduce the amount of the subsidy that the Chilean government must pay. Consequently, this will reduce the distortion in the energy market of the Magallanes y la Antártica region. In addition, it would help Chile achieve its goal to diversify its energy matrix.

1.7.3 Human capacity building

MAFSA expects the Project to create new jobs during its construction phase. After construction is completed, MAFSA expects to create new positions that will last the lifetime of the Project at the biomass plant and at MAFSA's forestry project. Full time staff will need to be trained to operate the Biomass plant.

1.7.4 Productivity improvement

The Project will result in productivity improvements for Chile. The Project could produce electricity and heat less expensively than several forms of conventional

generation in Chile. In Puerto Natales, energy costs are high and drive up the costs of the hospitality industry, the core industry of Puerto Natales, as well as all other industries. Lower energy costs could lead to more profitable industries or potentially lower costs for items such as hotel rooms. This could attract additional visitors and lead to higher amounts economic activity in Puerto Natales.

1.7.5 Other developmental impacts

The Project will increase energy security and reduce pollution. The Project will help improve energy security by reducing the amount of fossil fuels that need to be imported to meet demand. By reducing fossil fuel consumption in Puerto Natales, the Project would further protect the environmentally sensitive area surrounding the Torres Del Paine national park from localized pollution effects, such as fossil fuel spills.

1.8 IMPACT ON THE ENVIRONMENT

The Project is expected to have a minimal impact on the environment according to informal analysis conducted by the management team of MAFSA. MAFSA bases its assessment on the fact that biomass fuel will come from a forest that is managed by MAFSA in a certified sustainable way (1.8.1). As a result, the Project should be able to easily gain approval from the SEA by submitting an Estudio de Impacto Ambiental (EIA); any EIA submitted should be also compliant with lending agency standards (1.8.2).

1.8.1 Environmental impacts

The Project sponsor has not conducted any formal research on the environmental impact of the Project. However, the Project will only use fuel from MAFSA's forest. MAFSA's management ensures an economically, environmentally, and socially sustainable enterprise and received Forest Stewardship Council Chain of Custody certification in 2011.

1.8.2 Compliance with environmental standards

MAFSA will need to prepare an EIA as the proposed biomass plant is larger than 3MW. This task is critical to developing the Project, as it is not possible to develop the biomass without an EIA. As explained in section 1.4.4, by preparing an EIA for the Project that is compliant with Chilean environmental law, the Project should also comply with the IFC's performance standards and the Equator Principles. As a result, the Project would meet the environmental and social due diligence requirements of international finance institutions.

The Project is not expected to have significant impacts on the environment; therefore the cost of preparing a full EIA should be relatively small. To assure that there are no clear environmental or social red flags, we recommend that USTDA provide funding for a preliminary Environmental and Social Impact Assessment (ESIA). The preliminary ESIA will provide confidence that the Project will be completed, giving MAFSA an incentive to invest in the full EIA. The preliminary ESIA will also form the basis for the full EIA.

1.9 IMPACT ON US LABOR

The Project is not expected to have any negative impact on US labor, and it is compliant with the legislative prohibitions on the use of Foreign Assistance Funds. The Project would purchase goods manufactured in a market where there are several competitive US-based manufacturers with a high likelihood of submitting winning bids. The Project does not propose establishing manufacturing facilities in Chile or anywhere else. Therefore, it does not provide any financial incentives to any US goods and services suppliers to establish manufacturing operations outside of the US or replace US employees with foreign ones. The sales opportunities from the Project for US goods and services providers would instead encourage companies to continue manufacturing these products in the US. As a result, this Project would encourage them to retain workers (or possibly hire new manufacturing or assembly workers).

The Project is not expected to contribute to the violation of internationally recognized workers' rights. MAFSA plans to procure goods and services for the Project from reputable companies with no known workers' rights abuse complaints. In addition, the key goods and services providers considered are located in the US, Canada, the European Union, Japan or Chile. All of these countries have ratified fundamental labor conventions, such as those on forced labor, freedom of association, rights to organize, minimum age, and hours of work. Companies located in these countries must adhere to these conventions.

The Project does not plan to provide direct assistance for establishing or expanding production of any commodity that is in surplus. USTDA funding would be used solely to fund a feasibility study performed by a US company. The Project would only construct a biomass energy plant in Chile. The Project would only generate electricity and syngas/heat, all of which are not in surplus and are not a commodity for export.

1.10 JUSTIFICATION

USTDA support for the Project is justified because it is necessary to realize an opportunity to increase the export of US goods and services by up to US\$16.5 million and help mitigate climate change through reducing carbon dioxide emissions. USTDA funding can enable this opportunity by providing funding to allow the Project to overcome early hurdles often faced by promising renewable energy projects.

The Project is at the development phase wherein it must rely on development equity to finance the cost of necessary studies and authorizations that will enable the Project to present itself to a lending institution, and reach financial close to finance the construction phase. In the development phase, a project is considered most risky; therefore, development equity is difficult to acquire. For this reason, many renewable energy projects stall in this phase.¹ USTDA grant funding adds value to

¹ USDOE. "Developing Large-Scale Renewable Energy Projects at Federal Facilities Using Private Capital." May 2012 Accessed February 13, 2013 at: <http://www1.eere.energy.gov/femp/pdfs/largeregguide.pdf>

the Project because it will enable MAFSA to hire experts to prepare required studies necessary to move the Project forward.

This is consistent with the US Government's policy, because enabling the Project to go forward is likely to promote the export of US goods. In addition, energy sector development in low and middle-income countries is a strategic priority for USTDA. This project will result in commercial and developmental outcomes, including diversification of energy sources through development of clean, renewable, and alternative fuels. Furthermore, by introducing additional clean generation capacity to the Chilean electricity grid, the Project will contribute to mitigating climate change—a goal of USTDA and the US Government more broadly.

The success of the Project can be measured in three ways:

- Value of US goods and services exported to Chile in order to construct and operate the Project
- Economic savings on electricity and heating costs—USTDA can measure the savings realized in Puerto Natales for electricity and heating through the use of inexpensive NCRE compared to more expensive conventional generation
- Tons of Carbon Dioxide Emissions Equivalent (tCO₂e) mitigated—using the emissions factor for the Chilean electricity sector, USTDA can measure the GHGs mitigated per megawatt of electricity generated by the Project.

The above indicators can assure the USTDA that their investment in the Project will have positive impacts on Chile's economic development, the global environment, and the US economy.

ANNEX 3



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

NATIONALITY, SOURCE, AND ORIGIN REQUIREMENTS

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

USTDA STANDARD RULE (GRANT AGREEMENT STANDARD LANGUAGE):

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

NATIONALITY:

1) Rule

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

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

2) Application

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

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

3) Definitions

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

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

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

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

SOURCE AND ORIGIN:

1) Rule

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

2) Application

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

3) Definitions

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

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

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

ANNEX 4



GRANT AGREEMENT

This Grant Agreement is entered into between the Government of the United States of America, acting through the U.S. Trade and Development Agency ("USTDA") and Monte Alto Forestal S.A. ("Grantee"). USTDA agrees to provide the Grantee under the terms of this Grant Agreement US\$484,000 ("USTDA Grant") to fund the cost of goods and services required for a feasibility study ("Study") on the proposed Puerto Natales 5 MW Biomass Energy Plant ("Project") in Chile ("Host Country").

1. USTDA Funding

The funding to be provided under this Grant Agreement shall be used to fund the costs of a contract between the Grantee and the U.S. firm selected by the Grantee ("Contractor") under which the Contractor will perform the 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 made a part of 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 United States Government funds, and that any decision by USTDA to exercise or refrain from exercising these approval rights shall be made as a financier in the course of funding the 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 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 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.

8. Study Schedule

(A) Study Completion Date

The completion date for the Study, which is March 31, 2015, is the date by which the parties estimate that the Study will have been completed.

(B) Time Limitation on Disbursement of USTDA Grant Funds

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

9. USTDA Mandatory Contract Clauses

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

10. Use of U.S. Carriers

(A) Air

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

(B) Marine

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

11. Nationality, Source and Origin

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

- (a) the Contractor must be a U.S. firm;
- (b) the Contractor may use U.S. subcontractors without limitation;
- (c) employees of U.S. Contractor or U.S. subcontractor firms shall be U.S. citizens or non-U.S. citizens lawfully admitted for permanent residence in the United States, except as provided pursuant to subpart (d) below;
- (d) up to twenty percent (20%) of the USTDA Grant amount may be used to pay for services performed by (i) Host Country subcontractors, and/or (ii) Host Country nationals who are employees of the Contractor;

(e) a Host Country subcontractor may only be used for specific services from the Terms of Reference identified in the subcontract;

(f) subcontractors from countries other than the United States or Host Country may not be used;

(g) goods purchased for performance of the 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 General Manager. 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: Joaquín Perea Muñoz
Gerente General
Monte Alto Forestal S.A.
Ruta 9 Norte, Kilometro 9.5
Barranco Amarillo
Punta Arenas
Chile

Phone: +56 61 211 108
E-Mail: joaquinpm@montealtoforestal.cl

To: Chile Country Manager
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, lac@ustda.gov, and
iflewellin@ustda.gov

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

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

Appropriation No.: 1113/141001

Activity No.: 2013-51024A

Reservation No.: 2013237

Grant No.: GH201351237

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 I of the USTDA Mandatory Contract Clauses set forth in Annex II to this Grant Agreement. This article and Articles 5, 12, 13, 14, and 21 of the Grant Agreement shall survive termination of the Grant Agreement.

20. Non-waiver of Rights and Remedies

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

21. U.S. Technology and Equipment

By funding this 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.

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

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

By:



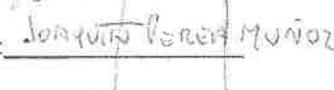
Date: 07/31/13

Witnessed:

By: _____

For Monte Alto Forestal S.A.

By:



Date: 30/7/13

Witnessed:

By: _____

Annex I -- Terms of Reference

Annex II -- USTDA Mandatory Clauses

Annex II

USTDA Mandatory Contract Clauses

A. USTDA Mandatory Clauses Controlling

The parties to this Contract acknowledge that this Contract is funded in whole or in part by the U.S. Trade and Development Agency ("USTDA") under the Grant Agreement between the Government of the United States of America acting through USTDA and Monte Alto Forestal S.A. ("Client"), dated _____ ("Grant Agreement"). The Client has selected _____ ("Contractor") to perform the feasibility study ("Study") for the proposed Puerto Natales 5 MW Biomass Energy Plant ("Project") in Chile ("Host Country"). The Client and the Contractor are the parties to this Contract, and they hereinafter are referred to collectively as the "Contract Parties." Notwithstanding any other provisions of this Contract, the following USTDA Mandatory Contract Clauses shall govern. All subcontracts entered into by Contractor funded or partially funded with USTDA Grant funds shall include these USTDA Mandatory Contract Clauses, except for clauses B(1), G, H, I, and J. In addition, in the event of any inconsistency between the Grant Agreement and the Contract or any subcontract thereunder, the Grant Agreement shall be controlling.

B. USTDA as Financier

(1) USTDA Approval of Contract

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

(2) USTDA Not a Party to the Contract

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

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

C. Nationality, Source and Origin

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

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

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

D. Recordkeeping and Audit

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

E. U.S. Carriers

(1) Air

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

(2) Marine

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

F. Workman's Compensation Insurance

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

G. Reporting Requirements

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

H. Disbursement Procedures

(1) USTDA Approval of Contract

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

(2) Payment Schedule Requirements

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

(3) Contractor Invoice Requirements

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

(a) Contractor's Invoice

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

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

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

(ii) For Contract performance milestone payments:

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

(iii) For final payment:

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

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

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

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

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

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

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

(c) USTDA Address for Disbursement Requests

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

I. Termination

(1) Method of Termination

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

(2) Ramifications of Termination

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

(3) Survivability

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

J. USTDA Final Report

(1) Definition

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

(2) Final Report Submission Requirements

The Contractor shall provide the following to USTDA:

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

and

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

and

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

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

(3) Final Report Presentation

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

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

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

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

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

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

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

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

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

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

K. Modifications

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

L. Study Schedule

(1) Study Completion Date

The completion date for the Study, which is March 31, 2015, is the date by which the Contract Parties estimate that the Study will have been completed.

(2) Time Limitation on Disbursement of USTDA Grant Funds

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

M. Business Practices

The Contract Parties recognize the existence of standards of conduct for public officials and commercial entities in their respective countries. Therefore, the Contract Parties shall fully comply with all United States and Host Country laws relating to corruption or bribery. For example, the Contractor and its subcontractors shall fully comply with the requirements of the Foreign Corrupt Practices Act, as amended (15 U.S.C. §§ 78dd-1 et seq.). Each Contract Party agrees that it shall require that any agent or representative hired to represent it in connection with the 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.

N. USTDA Address and Fiscal Data

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

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

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

Fiscal Data:

Appropriation No.: 1113/141001
Activity No.: 2013-51024A
Reservation No.: 2013237
Grant No.: GH201351237

O. Taxes

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

P. Export Licensing

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

Q. Contact Persons

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

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

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

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

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

R. Liability

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

S. Arbitration

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

ANNEX 5

Annex I

Terms of Reference

Purpose and Background

The purpose of this feasibility study (“Study”) is to determine the best option to utilize forestry byproducts for purposes of biomass cogeneration at a proposed five megawatt plant (“the Project”) in or near Puerto Natales in the Magallanes Region of southern Chile. The Study entails the assessment of technical, economic, financial, and environmental viability of the biomass energy plant, considering the technology options of combined heat and power (CHP) and biomass gasification. The Grantee is Monte Alto Forestal S.A. (MAFSA), a Chilean forest management company which owns the hardwood forest that produces the biomass resource.

Task 1: Demand Study

The Contractor shall conduct an assessment of the demand for electricity. After assessing demand for electricity, the Contractor shall assess demand for additional products comprising synthesis gas (syngas), methanized gas, wood chips, and heating in Puerto Natales and the immediate region surrounding it. When considering heating, the Contractor shall include consideration of demand for heat in the Grantee’s own operations drying wood products—including wood chips, pellets, and briquettes. The demand study shall also determine the price per unit of each commodity produced that the market is willing to pay.

To conduct this study, the Contractor shall assess the potential off take of each commodity from potential purchasers in terms of quantity and willingness to pay. The Contractor shall determine what quantity of each commodity would be demanded at various price points. However, the Contractor shall not be responsible for negotiating a power purchase agreement (PPA) with potential offtakers.

The Contractor shall assess willingness to pay based on existing market prices for each commodity and the price of each commodity that would be established by an efficient market (i.e., without subsidy). The Contractor shall calculate demand for electricity in consultation with local utility Edelmag, based on the cost of electricity with and without subsidies. The Contractor shall calculate demand for methanized gas in consultation with Gasco, based on the cost of natural gas with and without subsidies. The Contractor shall identify the demand for syngas, wood chips, and heat through consultation with potential residential, commercial and industrial customers.

Task 1 Deliverable: The Contractor shall submit a Demand Study in English that includes electricity, syngas, methanized gas, wood chips, and heating in the Puerto Natales region demand as described in Task 1.

Task 2: Technical Resource Assessment

The Contractor shall conduct a technical resource assessment of the Grantee's biomass resource. This technical assessment shall build on the results of previous feasibility research conducted by the Grantee. In particular, the Contractor shall consider the results of the feasibility study conducted by Proyersa S.A. for the Grantee, which the Grantee shall provide to the Contractor. The Contractor shall collect and analyze data from the Grantee's forestry operation, and certify the data through a reputable third party. The final product of this work shall be a report containing a biomass resource assessment.

Subtask 2.1: Study on Total Biomass Resource

The Grantee shall provide all biomass resource assessment data it possesses to the Contractor. In addition, the Contractor shall conduct supplemental biomass resource data gathering to verify all characteristics of the biomass resource. The Grantee shall record:

- Size of the biomass resource in bone dry metric tons that can be sustainably harvested annually
- Reproductive capacity of biomass resource sources
- Effect of the Grantee's other commercial operations on the Biomass resource
- Calorific value of various biomass resource types (sawdust, brush and lenga trees)
- Average humidity of biomass resources.

The Contractor shall process data and calculate the amount of electricity that can be generated from using the resource to fuel a combined heat and power plant or a biomass gasification plant. Furthermore, the Contractor shall assess if the biomass resource will be sufficient to produce quantities of syngas in excess of the amount needed for electricity generation that can be sold.

The Contractor shall analyze and error check all collected data. The Contractor shall also hire a third party to certify that the Contractor's biomass resource assessment is accurate. This certification must be provided by a reputable firm whose certification will give the Project credibility to potential lenders and investors. The certification and any analysis by the third party engineering firm shall be included in the Technical Resource Assessment Report.

The Contractor shall provide a formal estimate of the annual generation of the biomass plant. This will also include a standard deviation of the annual generation estimate. The intent shall be to reflect the probable effects of deviation from the estimated annual generation on the financial performance of the Project. The Contractor shall present this information in the Technical Resource Assessment Report.

Subtask 2.2: Study on Logistics of Harvesting Biomass Resource

The Contractor shall conduct an engineering study on site access and logistics for harvesting the biomass resource, taking into consideration especially the required machinery to transport the biomass resource from the Grantee's forestry operations to the biomass processing facility. The logistics study shall review the following:

- Road networks to the Grantee's forestry resource
- Road networks within the Grantee's forestry resource
- Equipment required to harvest the biomass resource
- Conflicts between the sustainable forestry management plan and harvesting the biomass resource.

The Contractor shall assess the existing infrastructure and equipment affecting logistics of biomass harvesting, and recommend infrastructure to be developed and equipment to be purchased. The Contractor shall estimate the cost of harvesting the biomass resource. The cost estimate should include a defined cost curve that shows the cost of harvesting the entire resource available annually as well as various options for harvesting a portion of the resource. For example, the Contractor shall show the cost of harvesting post-harvest forest residue, forest residue from thinning operations, and sawmill residue separately. The Contractor shall also create plans and bid documents to develop the recommended infrastructure and purchase the required equipment.

Task 2 Deliverable: The Contractor shall submit a Technical Resource Assessment Report in English that includes:

- Biomass resource assessment data
- Biomass resource analysis certification and commentary from a third party engineering firm
- Estimated annual electricity generation of the site
- Biomass resource harvesting logistics report.

Task 3: Technology Study

The Contractor shall conduct a study that will evaluate technology options available to utilize the Grantee's biomass resource and select a preferred technology option. The Contractor shall consider:

- Biomass combined heat and power (CHP)
- Biomass gasification and heating
- Biomass gasification and syngas
- Biomass syngas production

For each technology, the Contractor shall include in its assessment consideration of the biomass fuel preparation equipment and processes; and emission control equipment best suited for each technology. Emissions control equipment shall be compliant with Chilean

law. The Contractor shall also present options for increasing the size of the Project if the biomass resource allows for it and it is more economically attractive.

To determine which technology is most appropriate for the Grantee, the Contractor shall use the demand study conducted in Task 1 to generate a financial model for each technology. The Contractor shall analyze the financial model for using each technology and determine which technology will provide greatest economic benefit for the Grantee. The Contractor shall draft terms of reference for EPC contractors to construct the selected technology.

Task 3 Deliverables: Contractor shall submit the following materials in English to the Grantee:

- Technology Study
- Financial models for each technology

Task 4: Siting Study

The Contractor shall conduct a siting study that will evaluate locations for the facility that will house the technology determined in Task 3. The siting study will determine the most economically and financially advantageous location based on the following determining factors:

- Cost of the site—the Contractor shall recommend a site where the cost of the land is economic relative to the benefits of the site's location
- Ease of access—the Contractor shall recommend a site that will be easily accessed by construction equipment and material
- Ease of access to the electricity grid—the Contractor shall recommend a site that is close enough to the electricity grid that the Project can economically interconnect to the electricity grid
- As applicable based on the technology recommended in Task 3, ease of access to the natural gas grid, proximity to heat customers, or distance from the methanization plant—the Contractor shall recommend a site that will allow easy delivery of syngas, natural gas, or heat to customers
- Legal and regulatory requirements—the Contractor shall recommend a site that can be easily acquired and on which the construction of an industrial facility is appropriate and legally permissible
- Social factors—the Contractor shall recommend a site that is not expected to raise concerns regarding its proximity to a local community.

The Contractor shall coordinate with the Grantee to ensure that the proposed site meets their requirements. After identifying the preferred site the Contractor shall approach the land owner to initiate negotiations to acquire the site.

Task 4 Deliverables: Contractor shall submit the following materials in English to the Grantee:

- Siting Study

- Legal documentation of site ownership
- Zoning documents confirming site eligibility for construction of industrial complex.

Task 5: Interconnection Study

The Contractor shall conduct an interconnection study, evaluating the transmission of electricity produced by the Project to the electricity distribution grid in Puerto Natales. After assessing electricity transmission, the Contractor shall assess the interconnection requirements to deliver syngas, methanized gas, or heat from the Project to the methanization plant, local gas grid, or local heat grid. Whether the Contractor should investigate the need to connect to the methanization plant, gas grid, or heat grid will depend on the technology recommended in Task 3.

For the electricity connection, the Consultant shall study the technical and economic viability of connecting the Project's feeder line to the local electricity grid to bring the Project's electricity to market. This study should focus on:

- Proposing potential feeder line routes
- Identifying equipment and material requirements of the proposed routes
- Evaluating the technical and economic viability of proposed feeder line routes.

The Contractor shall recommend the interconnection route that is the most technically and economically viable, as well as two alternative routes (in a ranked order) in case easement issues prevent the best route from being developed. The Contractor shall also prepare an Interconnection Report explaining the advantages and disadvantages of the routes considered. This report shall include a course of action for developing the recommended route.

For the syngas, gas, or heat interconnection, the Contractor shall recommend the delivery method that is the most technically and economically viable. The Contractor shall consider interconnecting to the existing natural gas grid to distribute methanized syngas.

The Contractor shall also consider converting the natural gas grid to deliver heat—in the form of hot water or steam—if the natural gas grid will no longer deliver natural gas, or alternatively, constructing a district heating grid. The Contractor shall also consider using vehicles especially suited to deliver syngas or natural gas either to a methanization factory or the transmission grid.

Task 5 Deliverable: The Contractor shall submit an Interconnection Report in English as detailed above in Task 5.

Task 6: Preliminary Environmental and Social Impact Overview

The Contractor shall conduct a preliminary environmental and social impact overview to determine if there are any potential significant environmental or social impacts for the Project. The overview should provide the basis for developing a full Environmental and Social Impact Analysis. The analysis shall identify and consider:

- Potential conflicts with national parks/biospheres
- Potential conflicts with social heritage sites
- Potential impacts on local flora and endemic species
- Potential impacts of biomass resource harvesting on the Grantee's sustainable forestry plans
- Potential impacts on waterways and impact of runoff
- Potential legal and regulatory conflicts (for example, land rights).

The Contractor shall conduct a desk review of relevant documents provided by the Grantee. The Contractor shall also conduct independent research. In addition, the Contractor shall conduct a two day on-site examination of the Grantee's site. Finally, the Contractor shall conduct a meeting with local stakeholders to assess any potential social conflicts.

Task 6 Deliverable: The Contractor shall submit a preliminary environmental and social impact analysis in English as detailed in Task 6.

Task 7: Economic and Financial Analysis

The Contractor shall develop a Financial Model that includes investment costs, operating costs, revenues, financial analysis, and profitability analysis. Based on this Financial Model and the Contractor's market analysis, the Contractor shall develop a Commercial Strategy for the Project, including recommended financing terms that the Grantee should seek.

Subtask 7.1: Financial Model

The Contractor shall prepare a detailed Financial Model (using Microsoft Excel) of the Project based on assumptions from its technical assessment and current market conditions in Chile. The Financial Model shall be flexible (allowing a clear and easy modification of key operating and financial assumptions) and enable the assessment of different scenarios -- positive and negative -- that can impact Project success and profitability. At a minimum, the Financial Model shall include the following components:

- Project development costs
 - Primary and auxiliary energy equipment (for example, turbines, transformers, inverters, etc.)
 - Site development, preparation, and construction

- Costs of interconnection (transmission line development cost, easement costs, and/or natural gas grid connection or construction of district heating grid)
- Permitting, licensing, legal, and other professional service fees
- Insurance during construction
- Operating costs
 - Personnel training
 - Biomass harvesting equipment cost
 - Fuel Cost (gathering and processing biomass fuel or purchasing biomass fuel)
 - Social, general, and administrative costs and maintenance
 - Insurance during operations
- Financing costs
 - Interest during construction
 - Contingency reserve
 - Cost of letters of credit
 - Debt service during operation
 - Any refinancing fees
- Revenues
 - Projected revenues from selling via a power purchase agreement (PPA)
 - Projected revenues from syngas, methanized gas, or heat sales
 - Projected revenues from sales of additional wood chips
 - Projected revenues under different performance scenarios (for example, in the event of equipment failure)
- All relevant taxes

The Contractor shall include sources for all components of the Financial Model, including sources of financing used to estimate financing costs. The Financial Model shall calculate the profitability, return on investment, and internal rate of return (IRR) of the Project under different scenarios, including: different capital structures, alternative methods of depreciation, varying plant performance, construction cost overruns, different interest rates, and others. The Financial Model shall be provided to the Grantee for its ongoing use as a tool during and subsequent to the completion of the Study and shall therefore be flexible, clearly structured, and easy to use in order to allow the Grantee to model scenarios that the Project may experience during the course of its operations.

Subtask 7.2: Commercial Strategy

The Contractor shall conduct profitability analysis under different scenarios using the Financial Model. The Contractor shall also conduct a biomass market analysis covering prevailing commercial arrangements, terms, and conditions; competition by other biomass projects and by other renewable technologies (particularly wind); availability of finance; criteria of lenders, as well as providers of equity and quasi-equity through interviews and secondary data; and identification of key barriers to financing.

Based on these analyses, the Contractor shall develop a Commercial Strategy for the Grantee. The commercial strategy should make recommendations to the Grantee on the following issues:

- Debt and equity providers—recommended providers based on the Project’s profile
- Power sale strategy
- Heat, syngas, methanized gas, and/or wood chip sale strategy
- Capital structure—debt to equity ratio, and use of subordinated debt
- Safeguards to mitigate risks to the Project’s profitability.

The Commercial Strategy shall be presented in a Commercial Strategy Report to be used alongside the Financial Model.

Task 7 Deliverables: The Contractor shall submit the following materials in English to the Grantee:

- A Financial Model
- A Commercial Strategy Report

Task 8: Permitting and Other Regulatory Issue Analysis

The Contractor shall confirm that the Project meets applicable legal requirements, including forestry management, land use, water use, waste disposal, highway access, security, wildlife preservation, noise limits, and other such criteria; as well as any requirements under Chile’s electricity sector regulatory framework by reviewing the Grantee’s existing documentation. To the extent that such confirmation cannot be provided or additional legal requirements must be fulfilled prior to project implementation, the Contractor shall provide documentation, calculations, and other support to the Grantee in filing for waivers, extensions, or new permits as required.

Task 8 Deliverable: The Contractor shall prepare a Permitting and Other Regulatory Issues Analysis Report listing the regulatory requirements for development of the site, their current status, and an action plan to guide the Grantee in meeting remaining requirements.

Task 9: Developmental Impact Assessment

The Contractor shall assess the developmental impacts associated with the implementation of the Project as defined during the Study, and the methodology for measuring those benefits or adverse impacts. The assessment shall include examples of the expected development impacts if the Project is implemented as outlined in the Final Report. The Contractor shall also develop a methodology for assessing the Project’s impact over time.

The Contractor shall use the categories below as a guide for evaluating the impacts of the Project, and shall include quantitative estimates where possible:

- Infrastructure—the Contractor shall estimate the expected scale of infrastructure development and improvements needed to carry out the Project
- Human capacity building—the Contractor shall estimate the number and types of jobs created if the Project is implemented, as well as any training and skills development resulting from the Project
- Technology transfer and productivity improvement—the Contractor shall analyze the potential commercial contracts for licensing new technology and their impact in Chile. This could include productivity gains from the technology or more efficient use of resources
- Market oriented reform—the Contractor shall discuss market-oriented reforms that would result from the implementation of the Project. This could include policy and regulatory changes at the local or national level or reduction of market distortions
- Other benefits—the Contractor shall present any other benefits of the Project not included in the preceding categories.

Task 10: U.S. Sources of Supply

The Contractor shall identify potential sources of equipment and services that can be procured competitively from U.S. vendors for construction of the Project using the technology identified in Task 3. The Contractor shall compile a list of such vendors and the equipment and services that they provide, as well as preliminary estimates from the vendors for the cost of their services and products relevant to the Project. This list shall comprise the Sources of Supply Report.

Task 11: Implementation Plan

The Contractor shall recommend an Implementation Plan to the Grantee. At a minimum, the Implementation Plan shall include schedules for:

- Development activities
- Contracts and commercial agreements
- Regulatory consent
- Securing financing
- Key ownership and management decisions.

The Contractor shall also provide the following as part of the Implementation Plan:

- A standard interconnection agreement for the Project to connect to the grid (based on the technical assessment from Task 3)
- Bid documents to initiate a bidding process for the construction of the Project. The Contractor shall not be responsible for publicizing the bid documents or evaluating proposals.

Task 12: Final Report

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

ANNEX 6



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

U.S. Firm Information Form

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

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

Activity Type [<i>To be completed by USTDA</i>]	Feasibility Study	Technical Assistance	Other (specify)
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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)	
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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	
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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 [<i>To be completed by USTDA</i>]	
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Activity Title [<i>To be completed by USTDA</i>]	
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Full Legal Name of Prime Contractor U.S. Firm ("U.S. Firm")	
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Full Legal Name of Subcontractor	
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Business Address of Subcontractor (street address only)	
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Telephone Number	
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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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Subcontractor Point of Contact

Name	Surname	
	Given Name	

Address	
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Telephone	
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Fax	
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Email	
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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"/>