

REQUEST FOR PROPOSALS

FEASIBILITY STUDY FOR THE

COMPRESSED NATURAL GAS (CNG) INFRASTRUCTURE PROJECT

Submission Deadline: **5:00 PM**
LOCAL (LAGOS) TIME
JANUARY 25, 2013

Submission Place:
Oando Gas & Power
Tender Committee
9th Floor
No. 2 Ajose Adeogun Street
Victoria Island, Lagos
Attention: Gboyega Akintobi
Phone No: +234 (1) 270 2400 Ext. 6446

SEALED PROPOSALS SHALL BE CLEARLY MARKED AND RECEIVED PRIOR TO THE TIME AND DATE SPECIFIED ABOVE. PROPOSALS RECEIVED AFTER SAID TIME AND DATE WILL NOT BE ACCEPTED OR CONSIDERED.

REQUEST FOR PROPOSALS

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Section 1: INTRODUCTION

The U.S. Trade and Development Agency (USTDA) has provided a grant in the amount of US\$494,000 to Oando Gas & Power Limited (the “Grantee”) in accordance with a grant agreement dated September 26, 2012 (the “Grant Agreement”). The purpose of this feasibility study is to evaluate the technical feasibility and economic viability of deploying compressed natural gas (CNG) refueling stations around Lagos State (the “Project”) in Nigeria (the “Host Country”). The Study will consider the requirements and the viability of utilizing existing fuel retail outlets and constructing new CNG stations to strategically provide adequate spread and access across the state. The Study will assess the requirements and develop plans for CNG infrastructure (i.e. gas supply sources, mother stations, transportation) and refueling stations (i.e. locations, gas supply, construction issues); identify and analyze policy and regulatory issues; perform an assessment of the demand for CNG from industry, electric power producers, vehicle, and other markets; and assess the economic and financial viability of the Project. The Grant Agreement is attached at Annex 4 for reference. The Grantee is soliciting technical proposals from qualified U.S. firms to provide expert consulting services to perform the Feasibility Study.

1.1 BACKGROUND SUMMARY

The Project will develop the CNG infrastructure off of Nigeria’s growing pipeline network. It is anticipated that the first phase of the Project will rollout approximately ten to fifteen CNG daughter stations within the Lagos metropolitan region, which will be supplied with CNG by the mother station which is currently under construction by the Grantee. The second phase of the Project will likely implement an additional mother station with its own respective daughter stations in order to provide an adequate spread of refueling locations and access to CNG across Lagos State. In addition to the mother-daughter stations, it is estimated that at least ten CNG retrofit and CNG vehicle maintenance and repair facilities will need to be established throughout the state. The establishment of this CNG infrastructure will facilitate the development of multiple industries, likely including small scale captive electric power generation and industrial processing using CNG as feedstock or fuel. Portions of a background Desk Study are provided for reference in Annex 2.

1.2 OBJECTIVE

The objective of the Project is to develop the CNG infrastructure off of Nigeria’s growing pipeline network. The purpose of this feasibility study is to evaluate the technical feasibility and economic viability of deploying CNG refueling stations around Lagos State in Nigeria. 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\$494,000. **The USTDA grant of US\$494,000 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\$494,000 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 Compressed Natural Gas (CNG) Infrastructure.

2.2 DEFINITIONS

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

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

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

2.3 DESK STUDY REPORT

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

2.4 EXAMINATION OF DOCUMENTS

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

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

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

2.5 PROJECT FUNDING SOURCE

The Feasibility Study will be funded under a grant from USTDA. The total amount of the grant is not to exceed US\$494,000.

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:

Oando Gas & Power
Tender Committee
9th Floor
No. 2 Ajose Adeogun Street
Victoria Island, Lagos

Attention: Ayokunle Iyanda
Phone No: +234 (1) 270 2400 Ext. 6441

An Original and eight (8) copies of your proposal must be received at the above address no later than 5:00 PM, Local (Lagos) Time on January 25, 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\$494,000, 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:

Technical Proposal

35 points

- Description of the approach for developing a reasonable forecast of future CNG demand for electric power, industrial, vehicle and other uses (10 points).
- Technical approach for developing and assessing alternative infrastructure development plans to effectively deliver CNG to market (15 points).
- Description and approach for establishing the financial and economic viability of the Project and developing a detailed Project Implementation plan. (10 points)

Personnel and Management Plan

35 points

- Experience and expertise of the Project Manager in designing and supervising the planning, design, and implementation of CNG infrastructure projects (15 points).
- Experience and expertise of the Team Personnel in handling the management of complex feasibility projects in a developing country context (10 points).

- Expertise and capabilities of staff to fulfill the various functions of each component of the feasibility study as spelled out in the terms of reference (10 points).

Firm Technical Capability and Past Performance

30 points

- Experience and years of performance in consulting in the area of natural gas infrastructure development, including CNG mother and refueling station planning, design, and construction (15 points).
- Experience working on complex energy sector projects in developing countries (15 points).

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

Price will not be a factor in contractor selection.

ANNEX 1

Oando Gas & Power Limited
Tender Committee
9th Floor
No. 2 Ajose Adeogun Street
Victoria Island, Lagos

Attention: Gboyega Akintobi
Phone No: +234 (1) 270 2400 Ext. 6446

Compressed Natural Gas (CNG) Infrastructure (USTDA Activity No. 2012-11031A)

POC: Anthony O'Tapi, USTDA, 1000 Wilson Boulevard, Suite 1600, Arlington, VA 22209-3901, Tel: (703) 875-4357, Fax: (703) 875-4009. Compressed Natural Gas (CNG) Infrastructure. Oando Gas & Power Limited (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 evaluate the technical feasibility and economic viability of deploying compressed natural gas (CNG) refueling stations around Lagos State (the "Project") in Nigeria. The feasibility study will consider the requirements and the viability of utilizing existing fuel retail outlets and constructing new CNG stations to strategically provide adequate spread and access across the state. The study will assess the requirements and develop plans for CNG infrastructure (i.e. gas supply sources, mother stations, transportation) and refueling stations (i.e. locations, gas supply, construction issues); identify and analyze policy and regulatory issues; perform an assessment of the demand for CNG from industry, electric power producers, vehicle, and other markets; and assess the economic and financial viability of the Project.

The Project will develop the CNG infrastructure off of Nigeria's growing pipeline network. It is anticipated that the first phase of the Project will rollout approximately ten to fifteen CNG daughter stations within the Lagos metropolitan region, which will be supplied with CNG by the mother station which is currently under construction by the Grantee. The second phase of the Project will likely implement an additional mother station with its own respective daughter stations in order to provide an adequate spread of refueling locations and access to CNG across Lagos State. In addition to the mother-daughter stations, it is estimated that at least ten CNG retrofit and CNG vehicle maintenance and repair facilities will need to be established throughout the state. The establishment of this CNG infrastructure will facilitate the development of multiple industries, likely including small scale captive electric power generation and industrial processing using CNG as feedstock or fuel.

The U.S. firm selected will be paid in U.S. dollars from a \$494,000 grant to the Grantee from the U.S. Trade and Development Agency (USTDA).

A detailed Request for Proposals (RFP), which includes requirements for the Proposal, the Terms of Reference, and portions of a background desk study report are available from USTDA, at 1000 Wilson Boulevard, Suite 1600, Arlington, VA 22209-3901. To

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

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

Interested U.S. firms should submit their Proposal in English directly to the Grantee by 5:00 PM, Local (LAGOS) Time, January 25, 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.

ANNEX 2

FINAL REPORT

DESK STUDY FOR

NIGERIA: LAGOS STATE CNG VEHICLES

USTDA 2011-11035A

Prepared By:

Emerging Markets Infrastructure LLC

316 Missouri Ave.

Herndon, VA 20170

February 9, 2012

Submitted to:

Ms. Jamie Merriman

Country Manager / COTR

US Trade and Development Agency



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

Mailing and Delivery Address: 1000 Wilson Boulevard, Suite 1600, Arlington, VA 22209-3901

Phone: 703-875-4357 • **Fax:** 703-875-4009 • **Web site:** www.ustda.gov • **email:** info@ustda.gov



The US Trade and Development Agency

The U.S. Trade and Development Agency helps companies create U.S. jobs through the export of U.S. goods and services for priority development projects in emerging economies. USTDA links U.S. businesses to export opportunities by funding project planning activities, pilot projects, and reverse trade missions while creating sustainable infrastructure and economic growth in partner countries.

Mailing and Delivery Address: 1000 Wilson Boulevard, Suite 1600, Arlington, VA 22209-3901
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A. Executive Summary

Despite having one of the world's largest gas reserves, Nigeria has been unable to exploit this natural resource to its full capacity. The result is that there is only limited natural gas infrastructure and gas usage in the country. Oando Gas & Power Limited (OGP), the country's largest natural gas distribution company, which also has a large gasoline/diesel refueling station network, has identified an opportunity to develop a large scale CNG refueling infrastructure for private and commercial vehicles in Lagos State.

OGP has requested USDA funding for a feasibility study (Study) to evaluate and develop plans for its CNG Refueling Stations Infrastructure project (Project). The Study would consider the various options for the deployment of CNG within the state. It would assess the requirements and develop plans for CNG infrastructure (i.e. gas supply sources, mother stations, transportation) and refueling stations (i.e. locations, gas supply, construction issues); identify and analyze policy and regulatory issues; perform an assessment of the demand for CNG from industry, electric power producers, domestic and commercial vehicles, and other markets; and assess the economic and financial viability of the Project.

The Project has the potential to play a critical role in the Government of Nigeria's efforts to implement its Gas Master Plan, which aims to broaden and deepen the country's domestic market for natural gas. The establishment of CNG infrastructure and a reliable system for the wholesale and retail delivery of natural gas to serve the needs of electric power generation, industry, and private vehicles and commercial fleets could have a dramatic impact on the economy of Lagos State and the country.

OGP is well established, has significant experience in the energy sector in Nigeria, has proven capabilities to implement a project of this scale, and has access to financing. Given OGP's position in the market as the largest distributor of natural gas, its established presence in the refueling station market, and its current development of a CNG mother station, it is likely the best qualified company in Nigeria to undertake the proposed Project.

{Redacted}

B. Project Description

Nigeria's Natural Gas Sector

Nigeria's current proven gas reserves are about 187Tcf and the Nigerian National Petroleum Corporation (NNPC) estimates that probable gas reserves may be over 600Tcf. This makes Nigeria the country with the largest gas reserves in Africa and the 7th largest reserves in the world. {Redacted}

However, the Government of Nigeria is moving towards the implementation of its Gas Master Plan, which provides a strategic outline for the development and utilization of Nigeria's natural gas resources. The Master Plan intends to turn the gas sector from its export orientation (primarily LNG) toward domestic market growth by promoting secure gas supply; affordability of gas and gas products; development of the required gas infrastructure; and establishment of a strong legal and regulatory framework for the sector. Under this plan, domestic gas supply is

expected to increase from the current 1 billion cubic feet per day (bcf/day) to 10bcf/day by 2020. The Government has encouraged development of the sector through the implementation of key infrastructure for delivery of gas to major markets, including a trunk line to serve Oando's gas pipeline network. The Government also ensures secure, long-term gas supply at stable prices to offtakers and is moving forward with plans for the construction of several large gas processing plants for the delivery of associated gas to market.

CNG Industry Background

The lack of a secure supply of a clean fuel like CNG would have far reaching impacts on Nigeria's population. Most of the country's 150 million residents go without electric service for weeks at a time, forcing companies and residences to rely on expensive generators versus large scale gas fired power generation. Those generators are often run in heavily populated areas using petrol and diesel. The use of CNG would bring immediate health and environmental benefits, as would conversion of vehicles to CNG.

Compressed Natural Gas (CNG) is natural gas compressed to high pressures of between 200 – 300 barg and stored in specialized cylinders for ease of transportation. In Nigeria, CNG would serve as an alternative to Diesel (AGO), Petrol (PMS), Liquefied Petroleum Gas (LPG), and Low Pour Fuel Oil (LPFO) and can be used in the following sectors:

- Power generation
- Industry for fuel and as feedstock
- Domestically as cooking fuel; and
- Transportation fuel

Nigeria's CNG infrastructure would be built off of the Nigeria's growing pipeline network, which has been supported by Government of Nigeria policies and financial support. The first commercial CNG refueling station for vehicles to be developed in Nigeria was commissioned in Benin City, Edo State. The station is jointly owned by the Nigerian Gas Company Ltd. and Nigerian Independent Petroleum Company Plc (NIPCO) under a joint venture called Green Gas Limited. Green Gas Limited operates three refueling stations with two additional stations under construction in Benin. It has two vehicle conversion workshops and has converted more than 120 cars since commencement of operation. It is primarily for private vehicle use versus government use.

Internationally, Pakistan currently has the highest number of vehicles running on CNG in the world followed by Iran, Argentina, and Brazil. Egypt is amongst the top ten countries in CNG adoption, with 128,754 CNG vehicles and 124 CNG fueling stations. In the US, there are 112,000 vehicles fueled by natural gas - more than the number of battery-powered electric cars- but still quite small given the total size of the market. There are 1,000 natural gas fueling stations and almost a quarter of all new transit vehicles run on natural gas.

Project Background

OGP owns and operates the country's largest natural gas distribution network, with 100 km of pipes already laid in Lagos State and another 128 km in progress in Akwalbom and Cross River States and is already in the construction phase of its first CNG mother station which will have a

DESK STUDY FOR NIGERIA: LAGOS STATE CNG VEHICLES

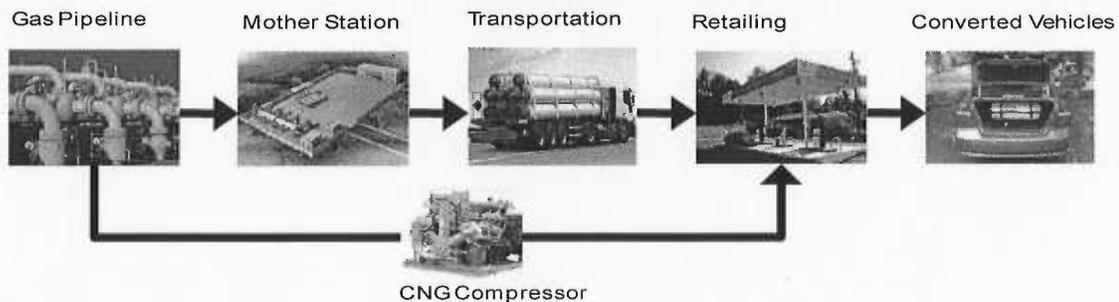
total throughput of 250,000 standard cubic meters (scm) per day. In the short term, the station will primarily serve small captive power stations which are off of the gas pipeline network, industrial users, and a small refueling station at the same site as the mother station.

Wholesale gas supply to the CNG system should be readily available. Oando's Gaslink pipeline has throughput capacity of 82 million standard cubic feet (mmscm) per day and its new East Horizon pipeline will have capacity of 100 mmscm per day with secure offtake of 22mmscf per day. At only 250 thousand scm per day each, two CNG mother stations would only use a fraction of the total capacity of the pipelines.

In a bid to expand its customer base, OGP intends to develop CNG retail refueling stations from which CNG would be dispensed to vehicles as a cheaper and cleaner alternative to other more commonly used fuels. The first phase of the project will involve the rollout of a minimum of 10 CNG retail refueling stations within the Lagos metropolitan region, utilizing the mother station under construction to supply the daughter stations. Online refueling stations (connected to Oando's gas pipeline infrastructure) would also be constructed depending on the feasibility analysis. Options for the Project would include building new CNG refueling stations and/or partnering with Oando Marketing PLC's liquid-fuel retail stations.

CNG Vehicular Fuel Value Chain

The mother-daughter concept is a 'virtual pipeline' where natural gas is drawn and compressed from the pipeline at the mother site and transported to the daughter site by truck and trailer. This is usually used to service sites that are not located near a natural gas pipeline. Once at the daughter station, vehicles can be filled directly from the trailer using a CNG dispenser. The mobile cylinders are filled to above 200 bar at the mother station but due to pressure drops during decanting, it is essential to have a compressor on site to ensure pressure in the delivery line remains above 200 bar. When the pressure in the trailer cylinders finally drops below 20 bar (when pressure is too low to deliver to the tanks), the trailer is returned to the mother station for refilling. A daughter station will usually have several trucks and trailers working on a shuttle system.



Transportation Fuel Market

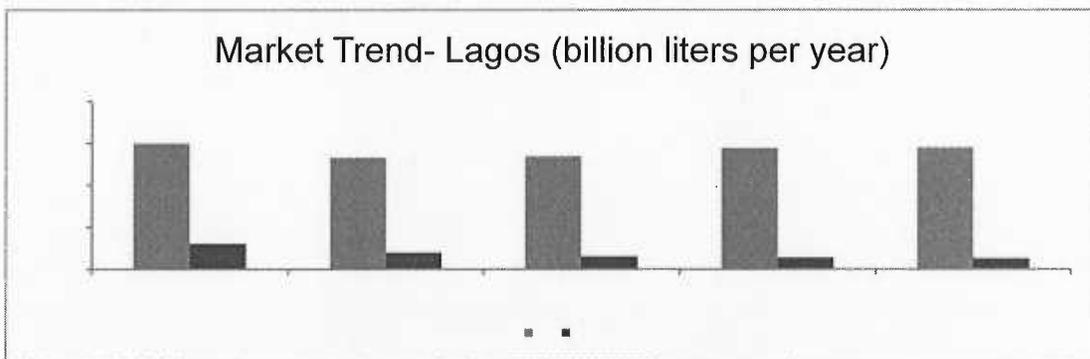
The adoption of CNG for vehicular use is largely dependent on the price advantage with respect to more widely used alternative fuels – diesel and petrol - and the cost of converting vehicles from gasoline/diesel or buying new CNG vehicles. Conversion costs for domestic vehicles (primarily gasoline fueled) is expected to cost \$500-1000 and heavy duty vehicles (primarily

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diesel fueled) would cost \$5,000-10,000. Conversion of domestic vehicles would likely be to a dual fuel vehicle (gasoline/CNG), as is done in other similar markets. Heavy duty fleets would be more likely to convert entirely to CNG and would be more likely to buy new CNG vehicles in addition to retrofitting existing vehicles. Large fleet operators may also consider developing dedicated refueling stations, which allows for a slower refueling option, which is less expensive than the retail refueling stations.

Oando has performed a preliminary market analysis for the vehicular market size of Lagos, shown in the diagrams below. Based on the current market conditions, the potential vehicular market size of Lagos for gasoline (PMS) is 1.45 billion liters and 130 million liters for diesel (AGO). This translates to a potential CNG vehicular market size of 1.445 billion scm, worth approximately N79.5 billion (\$530 million) annually.

Table1. Lagos Market for diesel (AGO) and gasoline (PMS)



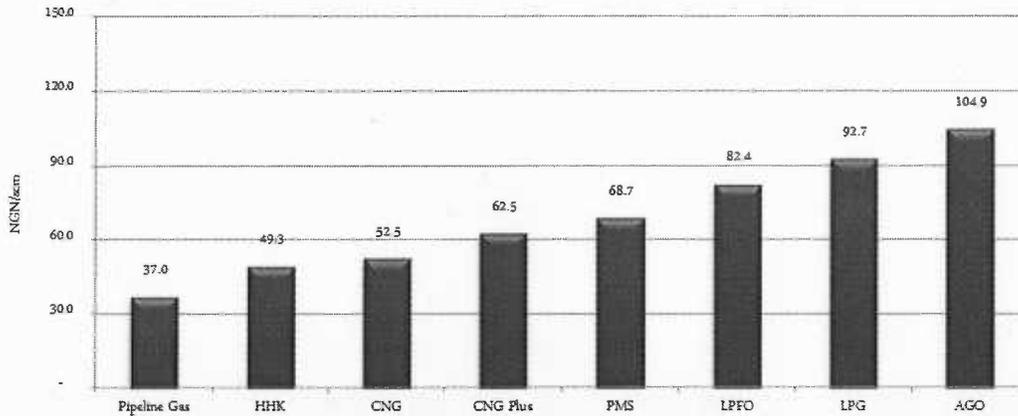
Data source: NNPC Annual Statistics Bulletin. Vertical axis is Billion Liters. Horizontal axis is year.

There is both local (Nigerian) and global increase in the demand and use of cheaper, cleaner alternative fuels such as CNG. This aligns with OGP’s plans to secure a 10% market share of the total vehicle market for the Lagos market. The following chart demonstrates that CNG and CNG Plus (which represents the cost of CNG plus transport and related costs where the refueling station is not located online) are both competitive with diesel (AGO) and liquefied petroleum gas (LPG) under current market conditions.¹ However, the price difference between CNG/CNG Plus and gasoline (PMS) is relatively small and may not be sufficient to incentivize vehicle or fleet conversions.

Table 2. Fuel Price Comparison (per scm equivalent) Under Current Market Conditions

¹ The market for clean burning liquefied petroleum gas has been complicated by market distortions and high costs of delivering product to market from the refining areas to the end users.

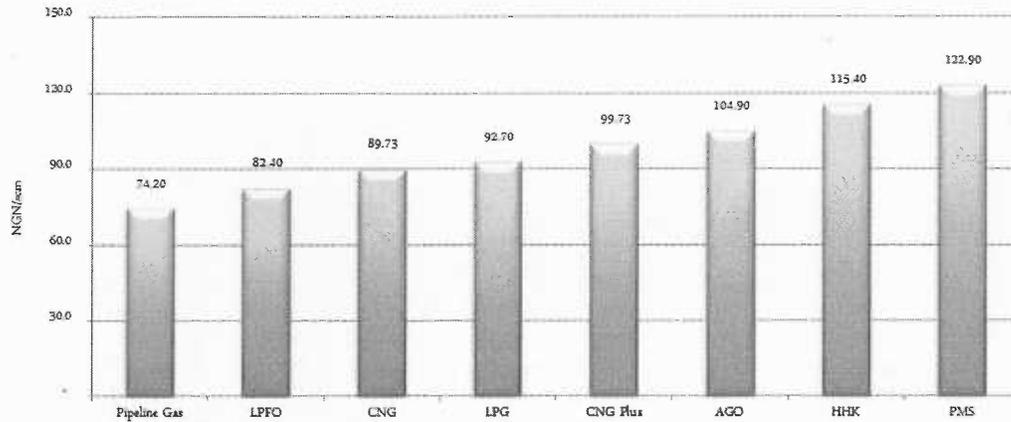
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The following table shows the market for CNG and competing fuels under import parity prices. While the price of diesel is currently deregulated, natural gas are subsidized. Under import parity, or liberalized market, prices, CNG/CNG Plus are competitive with diesel and petrol, the two major competing transportation fuels, although the difference with diesel is not as great as with gasoline.

After decades of debates, protests and controversy, the Government of Nigeria eliminated the subsidy for gasoline on January 1, 2012. The 2012 budget presented to the National Assembly on December 14, 2011 by President Goodluck Jonathan did not make any provision for subsidies. While natural gas prices are currently subsidized, the unsubsidized rates are still competitive and, based on the government's program to promote the use of natural gas, the forecast is that natural gas prices will remain stable at least through 2015.

Table 3. Import Parity Price Comparison (per scm equivalent)



Project Requirements

Oando Gas & Power Limited (OGP) wishes to commission a feasibility study to evaluate the technical and economic viability of a state-wide CNG Refueling Stations Infrastructure project (Project) in Lagos State, Nigeria. The Study will consider the various options for the deployment of CNG within the state. It will assess the requirements and develop plans for CNG infrastructure (i.e. gas supply sources, mother stations, transportation) and refueling stations (i.e. locations, gas supply, construction issues); identify and analyze policy and regulatory issues; perform an assessment of the demand for CNG from industry, electric power producers, vehicle, and other markets; and assess the economic and financial viability of the Project.

The objective of this Study is to evaluate the technical, financial, and economic viability of deploying CNG refueling stations around Lagos State. The study will consider the requirements and the viability of utilizing existing fuel retail outlets and constructing new CNG stations to strategically provide adequate spread and access across the state. It will also look at various business and operational models to most effectively deploy the Project, including options for promoting the establishment of CNG vehicle conversion facilities.

The broad aim of the feasibility study includes, but is not limited to, the following:

- Determine the feasibility of developing new CNG refueling stations where pipeline gas is already available;
- Prepare a market assessment report, including detailed enumeration of potential markets and segments throughout Lagos state, as well as an analysis of future potential demand and supply;
- Determine the feasibility of providing CNG services to industrial customers, to meet their captive power and other process requirements, throughout Lagos State;
- Determine the infrastructure requirements for providing CNG services to fuel private vehicles and commercial fleets throughout Lagos State;
- Provide a detailed description of the existing gas distribution infrastructure in Lagos with reference to potential locations for CNG refueling stations;

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- Determine the infrastructure architecture and schematic for the statewide deployment of CNG in Lagos state. This will involve identifying the locations to situate the CNG refueling stations and other needed infrastructure.
- Prepare cost estimates (+/- 20%) and budgets for the Project, including options for utilizing existing retail outlets for CNG refueling and for new stations;
- Determine the nature and scale of support infrastructure in the CNG value chain needed to deliver CNG services throughout Lagos state. This will include, but not limited to kit conversion centers, haulage and transport, etc.
- Provide an estimate of the land requirements associated with the development of the CNG refueling stations and associated facilities;
- Carry out a Preliminary Environmental Impact Assessment (EIA) on the recommended option;
- Carry out a financial and economic analysis of the Project;
- Evaluate and recommend business and operational models for the Project;
- Evaluate the human resource capacity required to execute and operate the Project; and
- Prepare a Project implementation plan, showing phased development of CNG refueling stations and deployment locations.

C. Project Sponsor Capabilities and Commitment

OGP owns and operates the country's largest natural gas distribution network and currently serves about 90 industrial and power producing customers in the Lagos area. It pioneered the private sector piping and distribution of natural gas to industrial and commercial consumers, successfully reviving private sector participation in the gas distribution business. With 100 km of pipes already laid in Lagos State and another 128 km in progress in Akwalbom and Cross River States, OGP hopes to build the

West Africa region's largest gas pipeline network. Its investments include gas and power infrastructure that assures reliable supply of natural gas, including high pressure transmission pipelines and gas processing facilities. It plans to replicate the success in its Greater Lagos Natural Gas Distribution system in other parts of Nigeria and West Africa while expanding its operations in the independent power producer and captive power markets. OGP is the management company for all the subsidiary companies operating in the gas & power division, including: Gaslink Nigeria Limited, Akute Power Limited, East Horizon Gas Company Limited, and Gaslink Ghana.



File photo from Oando's website for its pipeline system in Nigeria.

OGP is well established, has significant experience in the energy sector in Nigeria, has proven capabilities to implement a project of this scale, and has access to financing. Given OGP's position in the market as the largest distributor of natural gas, and its current development of a CNG mother station, it is likely the best qualified company in Nigeria to undertake the proposed Project. The CNG mother station is being built by an Italian company, FornovoGas, which was awarded the EPC contract at a cost of about \$7 million.

D. Implementation Financing

The Project could be financed through either balance sheet or project financing. Commercial banks, bilateral export credit agencies, and international finance institutions could also provide loans, insurance, and guarantees for the Project. Vendor financing would also likely be available. Private equity from Nigerian and international investment banks and funds could also be utilized. It is possible that state or national government subsidies will be available for development of the Project and/or for CNG product sales in order to promote the growth of CNG use in the market.

Depending on ownership and US content, the Project would be eligible for Ex-Im Bank support, including loans up to 12-15 years, that would be available to US and foreign companies, including foreign leasing companies, for US-made equipment, provided that the transaction is guaranteed by the full faith and credit of the host government, or if the private sector buyers of the US goods and services are adequately capitalized to make the transaction sufficiently creditworthy. {Redacted}

The Overseas Private Investment Corporation recently approved \$100 million for the establishment of a private equity investment fund designed to make equity investments in nascent businesses with high growth potential. The fund will target sectors that are central to the function of African economies, and therefore geared to domestic economic growth. Sectors targeted for the fund's investments include power and utilities, among others. The fund's investments will focus on Nigeria, Ghana, Kenya, Angola, and South Africa, as well as Cote D'Ivoire, Tanzania, and Uganda.

Various multilateral funding sources may also be available to support funding requirements. The African Development Bank and the World Bank are potential multilateral sources for outside funding.

E. U S Export Potential

{Redacted}

F. Foreign Competition and Market Entry Issues

{Redacted}

G. Developmental Impact

Infrastructure – Full implementation of the Project would lead to a system of CNG mother-daughter stations, with one additional mother station and 30 daughter or online refueling stations throughout Lagos State. The infrastructure would vary depending on whether the refueling stations are greenfield or modifications of existing refueling stations. There would also be at least 10 CNG retrofit and CNG vehicle maintenance and repair facilities established throughout the state. The establishment of this CNG infrastructure will facilitate the development of multiple industries, including small scale captive electric power generation and industrial processing using CNG as feedstock or fuel.

Human Capacity Building – The implementation of this Project will generate an estimated 200 to 300 full time jobs during construction and some 100 full time jobs to maintain and operate the mother and daughter (refueling) stations and CNG vehicle facilities. Advanced training would be required for the operation and maintenance of all facilities as CNG vehicle infrastructure in Lagos State is an entirely new industry.

Technology Transfer and Productivity Improvement – As an entirely new industry in Lagos State, the installation, operation and maintenance of CNG infrastructure, including mother refueling stations and CNG vehicle retrofit, repair and maintenance facilities will require an extensive transfer of new technologies.

H. Impact on the Environment

The implementation of the Project would potentially have a huge net positive environmental impact for the State of Lagos. The replacement of diesel, heavy fuel oil, and gasoline for industrial and electric power fuel would have a major impact by reducing air pollution and greenhouse gasses. At full capacity the Project would produce clean burning natural gas equivalent to about 50 million gallons of gasoline per year. Regarding the conversion and switching to CNG vehicles and fleets, compared with vehicles fueled with conventional diesel and gasoline, natural gas vehicles can produce significantly lower amounts of harmful emissions such as nitrogen oxides, particulate matter, and toxic and carcinogenic pollutants as well as the greenhouse gas carbon dioxide.²

Light-Duty Vehicle Emissions: CNG vs. Gasoline

The U.S. Environmental Protection Agency (USEPA) calculated the potential benefits of CNG versus gasoline based on the inherently cleaner-burning characteristics of natural gas:

- Reduces carbon monoxide emissions 90%-97%
- Reduces carbon dioxide emissions 25%
- Reduces nitrogen oxide emissions 35%-60%
- Potentially reduces non-methane hydrocarbon emissions 50%-75%
- Emits fewer toxic and carcinogenic pollutants
- Emits little or no particulate matter
- Eliminates evaporative emissions

² http://www.afdc.energy.gov/afdc/vehicles/natural_gas_emissions.html

Heavy-Duty Vehicle Emissions: CNG vs. Diesel

The U.S. Environmental Protection Agency calculated the potential benefits of LNG versus diesel based on the inherently cleaner-burning characteristics of natural gas:

- Produce half the particulate matter of average diesel vehicles
- Significantly reduce carbon monoxide emissions
- Reduce nitrogen oxide and volatile organic hydrocarbon emissions by 50% or more
- Potentially reduce carbon dioxide emissions 25% depending on the source of the natural gas
- Drastically reduce toxic and carcinogenic pollutants

The potential negative environmental impacts from construction of mother and refueling stations, retrofit facilities and other infrastructure requirements, would be relatively minor but would be assessed during the USTDA study in the preliminary environmental impact assessment and through full environmental impact assessments prior to construction as required by Nigerian law.

I. Impact on US Labor

Based upon our review, we found that the Project does not provide: (a) any financial incentive to a business enterprise currently located in the United States for the purpose of inducing such an enterprise to relocate outside the United States if such incentive or inducement is likely to reduce the number of employees of such business enterprise in the United States because United States production is being replaced by such enterprise outside the United States; (b) assistance for any project or activity that contributes to the violation of internationally recognized workers' rights; or (c) direct assistance for establishing or expanding production of any commodity for export by any country other than the United States, if the commodity is likely to be in surplus on world markets at the time the resulting productive capacity is expected to become operative and if the assistance will cause substantial injury to United States producers of the same, similar, or competing commodity.

There would be a positive impact on US labor from the export of US goods and services during implementation of the Project.

J. US Contractor Qualifications and Award Criteria

Contractor Qualifications – This is a highly technical Project calling for strong working experience with CNG infrastructure, including mother and refueling stations and CNG vehicle facilities for, at a minimum, the Project Manager and the Senior CNG Technical Expert. Other important team members are the Market Analyst, Financial Specialist, and Economist. The qualifications of these experts and others are listed below:

The Project Manager should have solid experience in the CNG industry. This experience must include work at the executive level in designing and implementing CNG infrastructure projects, including CNG refueling stations. The Project Manager is the Team Leader with responsibility for

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the overall success of the mission. He/she should have a track record in managing complex industrial projects of similar content and size in foreign countries.

The Senior CNG Technical Expert should have a degree in engineering with significant experience in designing and implementing CNG infrastructure projects, including CNG refueling stations.

The Market Analyst should have experience performing detailed market analysis in developing countries, including experience in the energy and transportation fuels sectors.

The Finance Specialist should have a degree in accounting or finance and considerable experience in the design and use of financial models. He or she will be the lead person in doing the financial analysis described in the terms of reference.

The Economist should have a degree in economics, finance or related field. He/she will be responsible for assessing the economic impact of the project and justifying prospective subsidies from the national and/or state government. He/she will also be responsible for the assessment of the economic impact of the Project in the host country.

Evaluation Criteria – {Redacted}

K. Justification

The Project has the potential to play a critical role in the Government of Nigeria's efforts to broaden and deepen the country's domestic market for natural gas. The establishment of CNG infrastructure and a reliable system for the wholesale and retail delivery of natural gas to serve the needs of electric power generation, industry, and private and commercial vehicles could have a dramatic impact on the economy of Lagos State and the country. There are many benefits to using this abundant natural resource versus other fuels including increased long-term security of supply, lower costs, improved public health, and less environmental impacts.

L. Terms of Reference

{Redacted}

M. Budget

The recommended budget for the Technical Assistance is \$494,000. The constructed budget includes a Project Manager, Senior CNG Technical Expert, Market Analyst, Finance Specialist, Economist, Energy Sector Research Analyst, and an Environmental Specialist. The Energy Sector Research Analyst and Environmental Specialist were assumed to be local hires for Nigeria. Local labor accounts for about 13% of the total budget. Depending on the availability of local

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expertise in CNG, which we expect will be difficult to secure, the budget for local labor may increase up to 20%. Other direct costs, at about 20% of the total budget, include 9 person trips to Nigeria and a total of 162 person days in Nigeria.

Below is the proposed task completion schedule:

Task Completion Schedule

| Months | 1 | 2 | 3 | 4 | 5 |
|---------|---|---|---|---|---|
| Task 1 | █ | | | | |
| Task 2 | | █ | █ | | |
| Task 3 | | | █ | | |
| Task 4 | | | █ | | |
| Task 5 | | | | | |
| Task 6 | | | | | |
| Task 7 | | | | █ | |
| Task 8 | | | | █ | |
| Task 9 | | | | █ | |
| Task 10 | | | | █ | |
| Task 11 | | | | █ | |
| Task 12 | | | | | █ |
| Task 13 | | | | █ | |

DESK STUDY FOR NIGERIA: LAGOS STATE CNG VEHICLES

OANDO CNG REFUELING STATIONS INFRASTRUCTURE PROJECT

| TASK DESCRIPTIONS | | LABOR IN PERSON DAYS | | | | | | | | | | TOTAL LABOR COST | TRIPS | AVERAGE TRIP DAYS PER PERSON | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|-----------------------------|----------------|--------------------|-----------|--|-----------------------------|------------------|------------|---|------------------|-------|------------------------------|--------|---|----|---------|----------|-----|-----------|----------|-------------|----|------|---------|-----------|--|---|---------|---------|--|-------------------------------|-------|---------|--|------------|--|-----------|--|------------------|--|-----------|--------------------|--|--|-----------|
| TASK | DISCIPLINE | Project Manager | Senior CNG Technical Expert | Market Analyst | Finance Specialist | Economist | Energy Sector Research Analyst (Local) | Environ. Specialist (Local) | TOTAL DAYS | LABOR COST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Document Review, Kickoff Meeting, Stakeholder Consultations, and Work Plan | 10.0 | 10.0 | 5.0 | 5.0 | 5.0 | 10.0 | | 45.0 | \$49,000 | 2 | 22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Market Analysis | 5.0 | 5.0 | 20.0 | | | 5.0 | | 35.0 | \$36,800 | 1 | 22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Gas Supply Assessment | 5.0 | 5.0 | | | | 5.0 | | 15.0 | \$16,500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Preliminary Design | 10.0 | 10.0 | | | | 5.0 | | 25.0 | \$29,800 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | CNG Mother and Refueling Station Location Selection | 10.0 | 10.0 | 10.0 | | | 5.0 | | 35.0 | \$39,800 | 2 | 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Project Cost Estimates | 5.0 | 10.0 | 5.0 | 5.0 | | 5.0 | | 30.0 | \$31,800 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Policy and Regulatory Issues | 5.0 | 5.0 | | | | 5.0 | | 15.0 | \$16,200 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Institutional Framework, Business and Operational Models, and Risk Analysis | 10.0 | 5.0 | | | | 5.0 | | 30.0 | \$33,800 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | Preliminary Environmental Impact Assessment | 5.0 | 5.0 | | | | 5.0 | 20.0 | 30.0 | \$14,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | Financial and Economic Analysis | 5.0 | 5.0 | | 20.0 | 20.0 | 10.0 | | 60.0 | \$64,000 | 2 | 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | Developmental Impacts | | | | | 5.0 | 5.0 | | 10.0 | \$8,500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Implementation Plan | 5.0 | 5.0 | 3.0 | 3.0 | | 5.0 | | 21.0 | \$23,100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | Prepare Final Report | 10.0 | 10.0 | 3.0 | 3.0 | 3.0 | 5.0 | | 34.0 | \$39,100 | 2 | 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LABOR IN PERSON DAYS | | 80.0 | 80.0 | 46.0 | 36.0 | 33.0 | 70.0 | 20.0 | 365.0 | \$393,200 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LABOR INCLUDING OVERHEAD & GENERAL ADMINISTRATIVE | | \$1,400 | \$1,200 | \$1,000 | \$1,200 | \$1,000 | \$700 | \$700 | TOTAL LABOR COST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DAILY RATE | | \$112,000 | \$96,000 | \$46,000 | \$43,200 | \$33,000 | \$49,000 | \$14,000 | TOTAL LABOR COST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTAL LABOR: | | | | | | | | | \$393,200 | \$1,077 | | 12.8% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OTHER DIRECT COSTS (ODCs) | | <table border="1"> <thead> <tr> <th>Number</th> <th>Unit</th> <th>Cost/Unit</th> <th>Totals</th> </tr> </thead> <tbody> <tr> <td>9</td> <td>RT</td> <td>\$1,500</td> <td>\$13,500</td> </tr> <tr> <td>162</td> <td>Pers-Days</td> <td>\$52,045</td> <td>\$8,531,290</td> </tr> <tr> <td>92</td> <td>Days</td> <td>\$2,500</td> <td>\$230,000</td> </tr> <tr> <td></td> <td>Misc. Incl. Tel, Fax, Vises, Insur, Vaccination</td> <td>\$2,754</td> <td>\$2,754</td> </tr> <tr> <td></td> <td>Producing and Printing Report</td> <td>2,000</td> <td>\$2,000</td> </tr> <tr> <td></td> <td>TOTAL ODCs</td> <td></td> <td>\$100,000</td> </tr> <tr> <td></td> <td>TOTAL U.S. LABOR</td> <td></td> <td>\$383,200</td> </tr> <tr> <td colspan="3">TOTAL PROJECT COST</td> <td>\$494,000</td> </tr> </tbody> </table> | | | | | | | | | | Number | Unit | Cost/Unit | Totals | 9 | RT | \$1,500 | \$13,500 | 162 | Pers-Days | \$52,045 | \$8,531,290 | 92 | Days | \$2,500 | \$230,000 | | Misc. Incl. Tel, Fax, Vises, Insur, Vaccination | \$2,754 | \$2,754 | | Producing and Printing Report | 2,000 | \$2,000 | | TOTAL ODCs | | \$100,000 | | TOTAL U.S. LABOR | | \$383,200 | TOTAL PROJECT COST | | | \$494,000 |
| Number | Unit | Cost/Unit | Totals | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | RT | \$1,500 | \$13,500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 162 | Pers-Days | \$52,045 | \$8,531,290 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 92 | Days | \$2,500 | \$230,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Misc. Incl. Tel, Fax, Vises, Insur, Vaccination | \$2,754 | \$2,754 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Producing and Printing Report | 2,000 | \$2,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | TOTAL ODCs | | \$100,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | TOTAL U.S. LABOR | | \$383,200 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTAL PROJECT COST | | | \$494,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NOTES | | Indicates travel during task | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

N. Recommendation

We recommend USTDA funding in the amount of \$494,000 for a feasibility study to assess the technical, financial, and economic viability of Oando Gas and Power's CNG Refueling Stations Infrastructure Project. OGP is well established in the natural gas and energy sector in Nigeria and has the capabilities, commitment, and access to financing necessary to achieve full implementation of the Project. US companies are active and competitive in the export of CNG refueling and engine technologies and the Project would offer an excellent opportunity to engage these companies in Project implementation. There are strong, positive environmental and development impacts for the Project and the development of CNG infrastructure fits well with the Government of Nigeria's goals under the Gas Master Plan.

O. Contacts

{Redacted}

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 Oando Gas & Power Limited ("Grantee"). USTDA agrees to provide the Grantee under the terms of this Grant Agreement US\$494,000 ("USTDA Grant") to fund the cost of goods and services required for a feasibility study ("Study") on the proposed Compressed Natural Gas (CNG) Infrastructure Project ("Project") in Nigeria ("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 January 31, 2014, is the date by which the parties estimate that the Study will have been completed.

(B) Time Limitation on Disbursement of USTDA Grant Funds

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

9. USTDA Mandatory Contract Clauses

All contracts funded under this Grant Agreement shall include the USTDA Mandatory Contract Clauses set forth in Annex II to this Grant Agreement. All subcontracts funded or partially funded with USTDA Grant funds shall include the USTDA Mandatory Contract Clauses, except for clauses B(1), G, H, I, and 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 Chief Executive Officer. The parties hereto may, by written notice, designate additional representatives for all purposes under this Grant Agreement.

16. Addresses of Record for Parties

Any notice, request, document, or other communication submitted by either party to the other under the Grant Agreement shall be in writing or through an electronic medium that produces a tangible record of the transmission, such as a facsimile or e-mail message, and will be deemed duly given or sent when delivered to such party at the following:

To: Mr. Mobolaji Osunsanya
Chief Executive Officer
Oando Gas & Power Limited
2 Ajose Adeogun Street
Victoria Island
Lagos, Nigeria

Phone: +234 1 270 2400
+234 1 270 2798
E-mail: bosunsanya@oandopl.com

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

Phone: (703) 875-4357
Fax: (703) 875-4009
E-Mail: grantnotices@ustda.gov and
Africa@ustda.gov

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

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

Appropriation No.: 11 12/13 1001

Activity No.: 2012-11031A

Reservation No.: 2012309

Grant No.: GH201211309

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 (Termination) 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.

[THE REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK]

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

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

**For
Oando Gas & Power Limited**

By: _____

By: _____

Date: _____

Date: _____

Witnessed:

Witnessed:

By: _____

By: _____

Annex I -- Terms of Reference

Annex II -- USTDA Mandatory Clauses

Annex I

Terms of Reference

The purpose of this feasibility study is to evaluate the technical feasibility and economic viability of deploying compressed natural gas (CNG) refueling stations around Lagos State (the "Project"). The Study shall consider the requirements and the viability of utilizing existing fuel retail outlets and constructing new CNG stations to strategically provide adequate spread and access across the state. The Study shall assess the requirements and develop plans for CNG infrastructure (i.e. gas supply sources, mother stations, transportation) and refueling stations (i.e. locations, gas supply, construction issues); identify and analyze policy and regulatory issues; perform an assessment of the demand for CNG from industry, electric power producers, vehicle, and other markets; and assess the economic and financial viability of the Project.

The Contractor shall factor the following points into any relevant analyses during the study:

- CNG refueling stations shall be designed for an average gas pressure of 250 bar;
- Input gas may be sourced from pipeline connections to the existing metropolitan distribution network operating at 10 to 18 barg or high pressure systems at 40 to 75 barg; and
- The gas that will be utilized in the Project will have Nigeria's typical gas properties (i.e. content, purities, pressure that are standard to Nigeria).

The Contractor shall perform the following Tasks:

Task 1: Document Review, Kickoff Meeting, Stakeholder Consultations and Work Plan

1.1: Document Review: The Grantee shall provide the Contractor with all available information related to the Project, including but not limited to all relevant data, maps and reports, as well as studies, plans and existing operations for delivery of CNG within Lagos State. The Contractor shall review all of the information collected and provided by the Grantee and other stakeholders identified by the Grantee. The Contractor shall provide the Grantee with a summary of the document review performed.

1.2: Kickoff Meeting and Stakeholder Consultations: The Contractor shall conduct a kickoff meeting with the Grantee and other stakeholders as specified by the Grantee at the Grantee's facilities or at another appropriate venue in Nigeria agreed upon by the Contractor and the Grantee and provided for at no cost to the Contractor. The Grantee shall identify appropriate personnel and other relevant stakeholders to participate in the kickoff meeting. During the kickoff meeting, the Contractor shall gain an understanding of the perspectives and priorities of officials within the Grantee and other relevant agencies and stakeholders for the Project. Oando shall form a work committee from these key stakeholders with a planned meeting schedule to provide input and perspectives throughout the Study. The Contractor shall provide the Grantee with a copy of all kickoff

meeting records, including the agenda, any handouts and presentation materials, a list of all meeting participants, and the meeting summary. The Contractor shall create a draft Work Plan for the performance of the Study and submit it to the Grantee for the Grantee's approval.

Task 1 Deliverable: The Contractor shall prepare a report of all work performed under Task 1. The Task 1 Deliverable shall be included in the Final Report.

Task 2: Market Analysis

The Contractor shall perform a detailed market analysis with a twenty (20) year forecast for the supply and demand of CNG to industrial customers, retail refueling stations, and vehicle fleets throughout Lagos State. The supply and demand assessments shall account for baseline (current) fuel demand, segregated into distinct market segments including, but not limited to, gasoline fuel, diesel fuel, liquefied petroleum gas (LPG), small scale industrial use, and small-scale self-generated power, as well as anticipated volume growth of this fuel demand in a time-phased approach. The market analysis shall analyze several different types of stations including, but not limited to, in-line, daughter, retail, and low compression fleet stations. At a minimum, the Contractor shall include the following as part of the market analysis:

- Data collection and analysis of CNG market prices, taking into account pricing policies including, but not limited to, subsidies;
- Preparation of a twenty (20) year price forecast for CNG and competing fuels including, but not limited to, gasoline, diesel, and LPG;
- Visits to twenty (20) prospective customers as specified by the Grantee, as well as prospective customers recommended by the Contractor, within Lagos State. Based on these discussions, the Contractor shall recommend appropriate volumes of CNG demand. The Contractor shall note the contact details of the prospective customers and provide a detailed account of the discussions to the Grantee;
- Visits to twenty (20) prospective sites as specified by the Grantee, as well as prospective sites recommended by the Contractor, within Lagos State. The Contractor shall conduct a survey to determine the suitability of specific sites for CNG refueling stations to serve the demand of potential customers;
- Data collection for potential retail demand and the establishment of baseline and projected demand over a twenty (20) year period; and
- Data collection for potential supply of CNG and competing fuels including, but not limited to, gasoline, diesel, and LPG, as well as the establishment of projected retail supply for each competing fuel over a twenty (20) year period.

Task 2 Deliverable: The Contractor shall prepare a report of all work performed under Task 2. The Task 2 Deliverable shall be included in the Final Report.

Task 3: Wholesale Gas Supply Assessment

3.1: Gas Supply Requirements: The Contractor shall establish the minimum wholesale gas supply requirements for the Project.

3.2: Gas Availability Forecast: The Contractor shall undertake an assessment of the availability of natural gas to serve the anticipated demand for a twenty (20) year period.

3.3: Source Options: The Contractor shall assess the gas sourcing and supply options in relation to the Nigerian Gas Master Plan (NGMP) for the anticipated gas demand.

3.4: Gas Composition: Based on the market analysis, the Contractor shall recommend the ideal gas composition which is at the lowest cost and least environmental impact for supply to the mother stations, including upper limits for non-methane components, and requirements for additional processing.

Task 3 Deliverable: The Contractor shall prepare a report of all work performed under Task 3. The Task 3 Deliverable shall be included in the Final Report.

Task 4: Preliminary Design

The Contractor shall develop a preliminary design for each type of the refueling stations including, but not limited to, in-line, daughter, retail, and low compression fleet stations. The Contractor shall reference the outcomes of the market analysis on these different types of stations. The design shall be in accordance with the “Code of Practice for Design, Construction, Installation, Operation, Maintenance, and Abandonment of a CNG Refueling Station” issued by Nigeria’s Department of Petroleum Resources. The refueling station storage vessels shall comply with the American Society of Mechanical Engineers (ASME) (Boiler and Pressure Vessel Code) Section VIII-Div. 1. The Contractor shall advise on the type and size of the storage vessel as well as CNG dispenser type and volume metering system to be used. The Contractor shall provide an opinion on the maximum capacity of the storage vessel and state the assumptions used in providing the opinion. The Contractor shall also recommend a reasonable capacity for projected long-term growth.

The Contractor shall establish the design philosophy for the refueling stations, including operation, control, safety, maintenance, remote monitoring, safeguard of technical integrity, leak detection, and emergency shutdown.

The Contractor shall develop a conceptual design for each type of the refueling stations which shall include, but not be limited to, the following:

- An opinion on the maximum capacity of the CNG refueling stations which notes any assumptions used;
- Sizing of the compressor stations and a determination of their respective deployment locations;
- Establishment of the design for civil structures including, but not limited to, buildings and roads;

- Advice on testing and commissioning aspects of the refueling stations and small-scale compression stations;
- A determination of the preliminary implementation schedule and strategy to capture identified market windows; and
- Preparation of preliminary project engineering specifications documents and bill of quantities.

Task 4 Deliverable: The Contractor shall prepare a report of all work performed under Task 4. The Task 4 Deliverable shall be included in the Final Report.

Task 5: CNG Station Location Selection and Overall Project Schematic

The Contractor shall develop a detailed plan for a statewide deployment of CNG throughout Lagos State, including, but not limited to, mother stations, related infrastructure, daughter stations, and CNG delivery routes.

The Contractor shall develop location options to situate mother stations and refueling stations in different areas of Lagos State. The Contractor shall select the locations using clearly defined criteria accounting for safety, supply, demand, and cost. The selected locations shall be the safest, most strategic and most economical with due regard to the design premise and other factors such as community, and environmental and ground conditions. In particular, when recommending the locations of the refueling stations, the Contractor shall:

- Determine possible locations for refueling stations using existing retail outlets across Lagos State and consider new refueling stations. The Contractor shall recommend optimal locations which account for future expansion;
- Undertake reconnaissance surveys of critical areas including, but not limited to, fifteen (15) recommended locations of refueling stations, gas connection points, road networks, and traffic, in order to determine the best option;
- Provide a detailed description of the existing gas distribution infrastructure in Lagos State with reference to identified locations for CNG refueling stations;
- Determine the most economic maximum distance for CNG transportation where the refueling station will be supplied from the either of the two mother stations;
- Recommend an appropriate transportation schedule for CNG transportation to the refueling station, or recommend a supply connection point to the gas distribution grid;
- Avoid, as far as practical, identified areas with a high incidence or likelihood of criminal or terrorist activity;
- Identify sites with minimal potential hazards to refueling station integrity and pipeline integrity, where applicable;
- Avoid sensitive areas such as designated areas of environmental sensitivity, forestry areas, and wetlands as much as possible;
- Account for locations that are accessible for construction and operation;
- Select a strategic location for fleets and dedicated customers; and

- Outline the optimum locations on 1:25,000 scale maps and indicate at the minimum:
 - The CNG transportation route(s) from the mother station(s);
 - The position of the proposed CNG refueling stations showing ease of access to customers (i.e. station location relative to road network)

The Contractor shall prepare a report detailing the installation and construction aspects of the stations, including:

- *Land Requirements* – The Contractor shall assess the land required to enable the development of new CNG refueling stations.
- *Transportation Routes* – The Contractor shall provide the Grantee with a data table/report showing transportation routes to the recommended CNG refueling station locations, including a description of alternative routes and a risk and mitigation analysis of the transportation of CNG to the refueling stations from the mother station(s).
- *Access of Construction Materials and the Supply of CNG* - The Contractor shall assess the means by which construction materials and CNG trailers would gain access to the refueling location sites, including the identification of any significant traffic management requirements.
- *Ground Conditions* – The Contractor shall assess the ground conditions for the proposed refueling station locations from publicized information. The Contractor shall identify conditions that are considered to pose a degree of difficulty (i.e. traffic situation, proximity to customers, and possible health, safety, and environmental hazards).
- *Sensitive Areas* - The Contractor's report shall provide a view of the likelihood of possible delays in gaining consents where the pipeline extension route or construction activity unavoidably impinges on sensitive areas.

Task 5 Deliverable: The Contractor shall prepare a report of all work performed under Task 5. The Task 5 Deliverable shall be included in the Final Report.

Task 6: Project Cost Estimates

The Contractor shall perform an assessment of the cost estimates for the development of the CNG mother and refueling stations and any alternatives established for the Project. The cost items shall cover the capital and operational cost estimates for all Project requirements, including, but not limited to: storage vessels, metering and dispensing units, CNG trailers and trucks, pipeline extensions, compressor stations, SCADA and telecoms, detailed design, and Engineering, Procurement, and Construction (EPC) contract supervision and contingencies.

Cost estimates shall be based on prices received from U.S. suppliers, prices and costs from comparable projects, and sound engineering judgment based on the Contractor's experience. To ensure the level of accuracy required, the Contractor shall:

- Identify all major cost items associated with the design, construction and installation of CNG refueling stations;
- Use the reconnaissance surveys performed in Task 5 to assess major cost items (i.e. mother stations, daughter stations);
- Obtain quotations for all major cost items (items that require long lead times for manufacture/delivery) from at least three (3) suppliers/construction companies. For minor cost items (off-the-shelf items with short lead times), a minimum of two (2) quotations are required; and
- Provide appropriate contingencies based on Contractor's experience.

The Contractor shall develop a Project implementation budget and schedule. The Contractor's budget cost estimate shall be produced in spreadsheet format. The estimate shall have an accuracy of +/- 20% and assume that construction and commissioning takes place during the period 2013 to 2015.

The budget estimates shall include, but not be limited to, the following key activities:

- Detailed design;
- Detailed environmental impact assessment;
- Preparation, issue, and assessment of construction tenders;
- Legal aspects for land purchase, way-leave (easements) and consents;
- Inlet gas pipeline connection and compression (where applicable), including all mechanical, electrical and control and instrumentation requirements;
- Refueling station construction, including all mechanical, electrical, control and instrumentation and corrosion protection requirements;
- Commissioning and validation activities;
- CNG mother and refueling stations safety documentation, emergency response, operational and maintenance manuals; and
- Project management to oversee contractors; health and safety issues; environmental issues; community/landowner liaison; local authorities' liaison; and public relations.

The Contractor shall conduct an assessment of available U.S. sources of supply for the Project. U.S. sources of supply shall include U.S. providers of the different categories of goods and services required for Project implementation. For each source identified, the Contractor shall include: company name, point of contact, address, telephone, fax, e-mail, and relevant goods and services that can be provided. The Contractor shall contact at least twenty-five potential U.S. equipment, technology, and service providers for the Project and compile a list of those companies that express interest in participating in the Project. The Contractor shall provide the comprehensive list of potential U.S. sources of supply for the Project to the Grantee. The list shall be provided in spreadsheet format. The Contractor shall deliver a report of assessment of availability of prospective U.S. suppliers, list of U.S. companies, and summary of discussions with U.S. companies.

Task 6 Deliverable: The Contractor shall prepare a report of all work performed under Task 6. The Task 6 Deliverable shall be included in the Final Report.

Task 7: Policy and Regulatory Issues

The Contractor shall review regulations and policies on the local, state, and federal level that may impact the Project's viability or implementation, as well as identify all of the likely policy issues of concern as they relate to the different interest groups including, but not limited to, customers, governments, regulatory agencies, parastatals, sellers, transporters, dedicated buyers, and Independent Power Producers (IPPs). The Contractor's review shall include, at least:

- Nigeria's Gas Master Plan;
- Nigeria's proposed Petroleum Industry Bill;
- binding engineering standards;
- environmental standards;
- regulations that impact operations;
- health and safety regulations;
- environmental regulations;
- regulations that constrain commerce;
- regulations that constrain labor;
- regulatory constraints on obtaining and servicing commercial loans;
- regulations on land acquisition and right-of-way;
- taxes and other levies; and
- regulations that impact the ability to do business.

At a minimum the Contractor shall:

- Examine the current policy issues and institutional requirements associated with the implementation of the Project and other interlinked issues common to existing retail outlets that create conflicting interests among station owners, governments, transporters, buyers and sellers of gas;
- Identify key financial, fiscal, legal, commercial, and regulatory issues and propose measures to address these issues. The Contractor shall conduct a review of existing and potential legislation with respect to the construction and operation of CNG mother and refueling stations and associated infrastructure, including but not limited to the following areas: legislation for review in the areas of oil and gas; environmental; health and safety; and other relevant areas; and
- Identify all the likely legal issues posed by the Project at the community level, specifically those that require early resolution by the governments (Local and State) where the refueling stations would be situated.

Initial consultation with relevant local authorities, statutory bodies and other interest groups that could be affected by the refueling stations shall be undertaken by the Contractor and their views and comments included in the report.

The Contractor shall identify potential regulatory obstacles which must be overcome to successfully implement the Project and make recommendations on means of implementing the Project in a manner consistent with Nigeria's regulatory environment. The Contractor shall make recommendations on potential regulatory changes which would be beneficial to the implementation of the Project, if any. The Contractor shall make recommendations on means of promoting long-term cooperation and good relations amongst the institutions, regulatory agencies, and communities which will be affected by the Project.

Task 7 Deliverable: The Contractor shall prepare a report of all work performed under Task 7. The Task 7 Deliverable shall be included in the Final Report.

Task 8: Institutional Framework, Business and Operational Models, and Risk Analysis

The Contractor shall assess options for business and operational models for development of the Project and provide the Grantee with a recommended model. Models shall include various options for Grantee and/or independent company ownership and/or operation of the facilities for the implementation and operation of the Project, including construction and operation of mother stations and retail refueling stations (public and fleet specific); transportation of CNG from mother station to refueling stations; and the establishment and operation of CNG retrofit facilities within Lagos State.

Various business and operational models shall be considered, including, but not limited to, concessions, leases, turnkey contracts, direct management, partnerships, management contracts, and independent operators. Based on the assessment and consultation with the Grantee, the Contractor shall propose a preferred business and operational model for the Project.

The Contractor shall identify and recommend options for the structure and type of corporate entity best suited for the efficient construction, management, and operation of the Project.

The Contractor shall examine the requirements for establishing third party access and non-discriminatory pricing for the Project.

The Contractor shall examine the requirements that will promote long-term cooperation and good relations amongst the institutions, regulatory agencies, the gas sector companies and the communities where the CNG refueling stations are to be located.

The Contractor shall evaluate the human resource capacity required to execute and operate the Project and recommend a plan for achieving the required capacity.

The Contractor shall carry out a risk assessment of the Project in terms of main risk factors, including, but not limited to technical; commercial; cost appreciation; health,

safety, and environment; political; market; legal; transportation; scheduling; and station operational risks.

Task 8 Deliverable: The Contractor shall prepare a report of all work performed under Task 8. The Task 8 Deliverable shall be included in the Final Report.

Task 9: Preliminary Environmental Impact Assessment

The Contractor shall prepare a preliminary assessment of the Project's anticipated impact on the environment. The Contractor's assessment shall make reference to local requirements and those of multilateral lending agencies, such as the World Bank. The Contractor shall identify potential negative impacts, discuss the extent to which they can be mitigated, and develop plans for a full environmental impact assessment if and when the Project moves forward to the implementation stage. This includes the identification of steps that will need to be undertaken by the Grantee subsequent to the completion of the Study and prior to Project implementation. The Contractor shall identify areas requiring special consideration for environmental controls, including any aspect that may influence selection of the optimum station location. The Contractor's assessment shall also include any potential positive impacts, including the reduction in emissions of greenhouse gases, etc. The Contractor shall not be expected to prepare a complete environmental impact assessment.

Task 9 Deliverable: The Contractor shall prepare a report of all work performed under Task 9. The Task 9 Deliverable shall be included in the Final Report.

Task 10: Financial and Economic Analysis

10.1: Financial Analysis: The Contractor shall perform high level investment appraisals of the refueling station location options. These appraisals shall establish capital and operating expenditures and use discounted cash flow methods to identify the internal rate of return (IRR) for the stations. The Contractor shall conduct sensitivity analysis for the refueling stations based on the likely demand growth profiles in the areas to be served by the refueling stations under evaluation from the market analysis. The financial analysis shall examine the annual cash flow over a ten (10) and twenty (20) year period for the CNG stations.

The Contractor shall perform a financial analysis of the overall Project. The key inputs to this analysis shall include, but not be limited to, the following: capital costs; operating costs of the refueling stations; CNG tariffs; projected annual demand volumes and growth during lifetime cycle; peak day demand volumes and growth during lifetime cycle; input gas pricing over the assessed period; inflation; taxation and investment taxation relief; fiscal terms; cost of funding; and station construction in a phased approach.

The Contractor shall perform a sensitivity analysis for each parameter that would have a significant impact on the Project's internal rate of return, including those listed above, and the outcomes clearly presented using appropriate tables and charts (e.g. Tornado

plots). The analysis shall be robust enough to identify appropriate breakeven points (price, time, volume, etc.).

The Contractor shall evaluate the investment against a target IRR of 15% real-time and is required to consider demand growth scenarios during the life cycle and to reflect this in the analysis.

The Contractor shall make recommendations regarding financing options, including debt to equity ratio. The Contractor shall make recommendations concerning the structure of the corporate vehicle(s) required for the efficient construction, management and operation of the Project.

10.2: Economic Analysis: The Contractor shall perform an economic analysis of the Project and highlight the key sensitivities likely to have significant impacts on the Project. Where the analysis identifies a negative rate of return, then the Contractor shall provide an estimate of the level of government subsidy required to balance the rate of return over the project life cycle. The analysis shall identify appropriate breakeven points and prescribe the most economical expansion phasing for the project.

4.3: Sources of Financing: The Contractor shall make recommendations on options for financing the Project including the Grantee's budgetary resources, equity investment, commercial lenders, the U.S. Export-Import Bank, World Bank, and African Development Bank. The Contractor shall identify and contact potential sources of financing to assess the likelihood of financing.

Task 10 Deliverable: The Contractor shall prepare a report of all work performed under Task 10. The Task 10 Deliverable shall be included in the Final Report.

Task 11: Developmental Impact Assessment

11.1: Developmental Impact: The Contractor shall conduct a development impact assessment of the Project. The purpose of the development impact assessment is to provide the Project's decision makers and interested parties with a broader view of the Project's potential effects on Nigeria. The development impact assessment shall identify the anticipated impacts of the Project in the following categories:

- (1) Infrastructure: The Contractor shall identify the anticipated infrastructure impacts of the Project, giving a brief synopsis and concrete examples of such impacts, specifically addressing new infrastructure that would be developed for the exploration, extraction, and processing of methane, nitrogen, and helium and production of high quality gas and value added products.
- (2) Human Capacity Building: The Contractor shall identify the anticipated number and types of local jobs that will be created as a result of the Project. The Contractor shall also identify the number of local people who would receive training and the types of training programs required for the Project.

- (3) Technology Transfer and Productivity Enhancement: The Contractor shall identify the anticipated advance in technologies that would be mobilized through this Project, and especially any technologies which would be new to the Nigerian market. The Contractor shall also identify anticipated efficiencies that would be gained as a result of the Project.
- (4) Market Oriented Reform: The Contractor shall provide a description of any regulations, laws, or institutional changes that are recommended pursuant to these Terms of Reference and the effect they would have if implemented.
- (5) Other: The Contractor shall identify any other anticipated development impacts or benefits that would result from the Project such as positive spin-off effects on unrelated economic sectors, increased good governance and transparency, private sector participation, etc.

Task 11 Deliverable: The Contractor shall prepare a report of all work performed under Task 11. The Task 11 Deliverable shall be included in the Final Report.

Task 12: Detailed Implementation Plan

Based upon the previous tasks, the Contractor shall develop a detailed Implementation Plan with appropriate phasing and sequencing of business priorities and milestones. The Contractor shall provide a draft version of the Implementation Plan to the Grantee for review and consideration. The Grantee may require changes in order to more effectively meet its goals. Once the draft has been approved, the Contractor shall provide a final version of the document. The Contractor shall:

- Develop a preliminary budget for the overall cost of implementing the proposed systems over a ten (10) year period;
- Develop an implementation schedule taking into consideration construction in a stage-by-stage approach;
- Develop a capital investment plan and milestone schedule for construction project financing;
- Present a detailed schedule of activities necessary to realize the proposed Implementation Plan. This schedule shall include a set of targets, milestones and financial outlays;
- Develop a risk mitigation strategy to ensure reliability and safety of facilities.

Task 12 Deliverable: The Contractor shall prepare a report of all work performed under Task 12. The Task 12 Deliverable shall be included in the Final Report.

Task 13: Final Report

The Contractor shall prepare and deliver to the Grantee and USTDA a substantive and comprehensive final report of all work performed under these Terms of Reference (“Final

Report"). The Final Report shall be organized according to the above tasks, and shall include all deliverables and documents that have been provided to the Grantee. The Final Report shall be prepared in accordance with Clause J of Annex II of the Grant Agreement.

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 Oando Gas & Power Limited ("Client"), dated _____ ("Grant Agreement"). The Client has selected _____ ("Contractor") to perform the feasibility study ("Study") for Compressed Natural Gas (CNG) Infrastructure Project ("Project") in Nigeria ("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 January 31, 2014, is the date by which the Contract Parties estimate that the Study will have been completed.

(2) Time Limitation on Disbursement of USTDA Grant Funds

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

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.: 11 12/13 1001

Activity No.: 2012-11031A

Reservation No.: 2012309

Grant No.: GH201211309

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: Ayokunle Iyanda

Title: Business Development Manager

Phone: +234 (1) 270 2400 Ext. 6441; +234 (0) 8058201453

E-Mail: aiyanda@Oandopl.com

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

Terms of Reference

The purpose of this feasibility study is to evaluate the technical feasibility and economic viability of deploying compressed natural gas (CNG) refueling stations around Lagos State (the "Project"). The Study shall consider the requirements and the viability of utilizing existing fuel retail outlets and constructing new CNG stations to strategically provide adequate spread and access across the state. The Study shall assess the requirements and develop plans for CNG infrastructure (i.e. gas supply sources, mother stations, transportation) and refueling stations (i.e. locations, gas supply, construction issues); identify and analyze policy and regulatory issues; perform an assessment of the demand for CNG from industry, electric power producers, vehicle, and other markets; and assess the economic and financial viability of the Project.

The Contractor shall factor the following points into any relevant analyses during the study:

- CNG refueling stations shall be designed for an average gas pressure of 250 bar;
- Input gas may be sourced from pipeline connections to the existing metropolitan distribution network operating at 10 to 18 barg or high pressure systems at 40 to 75 barg; and
- The gas that will be utilized in the Project will have Nigeria's typical gas properties (i.e. content, purities, pressure that are standard to Nigeria).

The Contractor shall perform the following Tasks:

Task 1: Document Review, Kickoff Meeting, Stakeholder Consultations and Work Plan

1.1: Document Review: The Grantee shall provide the Contractor with all available information related to the Project, including but not limited to all relevant data, maps and reports, as well as studies, plans and existing operations for delivery of CNG within Lagos State. The Contractor shall review all of the information collected and provided by the Grantee and other stakeholders identified by the Grantee. The Contractor shall provide the Grantee with a summary of the document review performed.

1.2: Kickoff Meeting and Stakeholder Consultations: The Contractor shall conduct a kickoff meeting with the Grantee and other stakeholders as specified by the Grantee at the Grantee's facilities or at another appropriate venue in Nigeria agreed upon by the Contractor and the Grantee and provided for at no cost to the Contractor. The Grantee shall identify appropriate personnel and other relevant stakeholders to participate in the kickoff meeting. During the kickoff meeting, the Contractor shall gain an understanding of the perspectives and priorities of officials within the Grantee and other relevant agencies and stakeholders for the Project. Oando shall form a work committee from these key stakeholders with a planned meeting schedule to provide input and perspectives throughout the Study. The Contractor shall provide the Grantee with a copy of all kickoff meeting records, including the agenda, any handouts and presentation materials, a list of all meeting participants, and the meeting summary. The Contractor shall create a draft Work Plan for the performance of the Study and submit it to the Grantee for the Grantee's approval.

Task 1 Deliverable: The Contractor shall prepare a report of all work performed under Task 1. The Task 1 Deliverable shall be included in the Final Report.

Task 2: Market Analysis

The Contractor shall perform a detailed market analysis with a twenty (20) year forecast for the supply and demand of CNG to industrial customers, retail refueling stations, and vehicle fleets throughout Lagos State. The supply and demand assessments shall account for baseline (current) fuel demand, segregated into distinct market segments including, but not limited to, gasoline fuel, diesel fuel, liquefied petroleum gas (LPG), small scale industrial use, and small-scale self-generated power, as well as anticipated volume growth of this fuel demand in a time-phased approach. The market analysis shall analyze several different types of stations including, but not limited to, in-line, daughter, retail, and low compression fleet stations. At a minimum, the Contractor shall include the following as part of the market analysis:

- Data collection and analysis of CNG market prices, taking into account pricing policies including, but not limited to, subsidies;
- Preparation of a twenty (20) year price forecast for CNG and competing fuels including, but not limited to, gasoline, diesel, and LPG;
- Visits to twenty (20) prospective customers as specified by the Grantee, as well as prospective customers recommended by the Contractor, within Lagos State. Based on these discussions, the Contractor shall recommend appropriate volumes of CNG demand. The Contractor shall note the contact details of the prospective customers and provide a detailed account of the discussions to the Grantee;
- Visits to twenty (20) prospective sites as specified by the Grantee, as well as prospective sites recommended by the Contractor, within Lagos State. The Contractor shall conduct a survey to determine the suitability of specific sites for CNG refueling stations to serve the demand of potential customers;
- Data collection for potential retail demand and the establishment of baseline and projected demand over a twenty (20) year period; and
- Data collection for potential supply of CNG and competing fuels including, but not limited to, gasoline, diesel, and LPG, as well as the establishment of projected retail supply for each competing fuel over a twenty (20) year period.

Task 2 Deliverable: The Contractor shall prepare a report of all work performed under Task 2. The Task 2 Deliverable shall be included in the Final Report.

Task 3: Wholesale Gas Supply Assessment

3.1: Gas Supply Requirements: The Contractor shall establish the minimum wholesale gas supply requirements for the Project.

3.2: Gas Availability Forecast: The Contractor shall undertake an assessment of the availability of natural gas to serve the anticipated demand for a twenty (20) year period.

3.3: Source Options: The Contractor shall assess the gas sourcing and supply options in relation to the Nigerian Gas Master Plan (NGMP) for the anticipated gas demand.

3.4: Gas Composition: Based on the market analysis, the Contractor shall recommend the ideal gas composition which is at the lowest cost and least environmental impact for supply to the mother stations, including upper limits for non-methane components, and requirements for additional processing.

Task 3 Deliverable: The Contractor shall prepare a report of all work performed under Task 3. The Task 3 Deliverable shall be included in the Final Report.

Task 4: Preliminary Design

The Contractor shall develop a preliminary design for each type of the refueling stations including, but not limited to, in-line, daughter, retail, and low compression fleet stations. The Contractor shall reference the outcomes of the market analysis on these different types of stations. The design shall be in accordance with the “Code of Practice for Design, Construction, Installation, Operation, Maintenance, and Abandonment of a CNG Refueling Station” issued by Nigeria’s Department of Petroleum Resources. The refueling station storage vessels shall comply with the American Society of Mechanical Engineers (ASME) (Boiler and Pressure Vessel Code) Section VIII-Div. 1. The Contractor shall advise on the type and size of the storage vessel as well as CNG dispenser type and volume metering system to be used. The Contractor shall provide an opinion on the maximum capacity of the storage vessel and state the assumptions used in providing the opinion. The Contractor shall also recommend a reasonable capacity for projected long-term growth.

The Contractor shall establish the design philosophy for the refueling stations, including operation, control, safety, maintenance, remote monitoring, safeguard of technical integrity, leak detection, and emergency shutdown.

The Contractor shall develop a conceptual design for each type of the refueling stations which shall include, but not be limited to, the following:

- An opinion on the maximum capacity of the CNG refueling stations which notes any assumptions used;
- Sizing of the compressor stations and a determination of their respective deployment locations;
- Establishment of the design for civil structures including, but not limited to, buildings and roads;
- Advice on testing and commissioning aspects of the refueling stations and small-scale compression stations;
- A determination of the preliminary implementation schedule and strategy to capture identified market windows; and
- Preparation of preliminary project engineering specifications documents and bill of quantities.

Task 4 Deliverable: The Contractor shall prepare a report of all work performed under Task 4. The Task 4 Deliverable shall be included in the Final Report.

Task 5: CNG Station Location Selection and Overall Project Schematic

The Contractor shall develop a detailed plan for a statewide deployment of CNG throughout Lagos State, including, but not limited to, mother stations, related infrastructure, daughter stations, and CNG delivery routes.

The Contractor shall develop location options to situate mother stations and refueling stations in different areas of Lagos State. The Contractor shall select the locations using clearly defined criteria accounting for safety, supply, demand, and cost. The selected locations shall be the safest, most strategic and most economical with due regard to the design premise and other factors such as community, and environmental and ground conditions. In particular, when recommending the locations of the refueling stations, the Contractor shall:

- Determine possible locations for refueling stations using existing retail outlets across Lagos State and consider new refueling stations. The Contractor shall recommend optimal locations which account for future expansion;
- Undertake reconnaissance surveys of critical areas including, but not limited to, fifteen (15) recommended locations of refueling stations, gas connection points, road networks, and traffic, in order to determine the best option;
- Provide a detailed description of the existing gas distribution infrastructure in Lagos State with reference to identified locations for CNG refueling stations;
- Determine the most economic maximum distance for CNG transportation where the refueling station will be supplied from the either of the two mother stations;
- Recommend an appropriate transportation schedule for CNG transportation to the refueling station, or recommend a supply connection point to the gas distribution grid;
- Avoid, as far as practical, identified areas with a high incidence or likelihood of criminal or terrorist activity;
- Identify sites with minimal potential hazards to refueling station integrity and pipeline integrity, where applicable;
- Avoid sensitive areas such as designated areas of environmental sensitivity, forestry areas, and wetlands as much as possible;
- Account for locations that are accessible for construction and operation;
- Select a strategic location for fleets and dedicated customers; and
- Outline the optimum locations on 1:25,000 scale maps and indicate at the minimum:
 - The CNG transportation route(s) from the mother station(s);
 - The position of the proposed CNG refueling stations showing ease of access to customers (i.e. station location relative to road network)

The Contractor shall prepare a report detailing the installation and construction aspects of the stations, including:

- *Land Requirements* – The Contractor shall assess the land required to enable the development of new CNG refueling stations.
- *Transportation Routes* – The Contractor shall provide the Grantee with a data table/report showing transportation routes to the recommended CNG refueling station locations, including a description of alternative routes and a risk and mitigation analysis of the transportation of CNG to the refueling stations from the mother station(s).
- *Access of Construction Materials and the Supply of CNG* - The Contractor shall assess the means by which construction materials and CNG trailers would gain access to the refueling location sites, including the identification of any significant traffic management requirements.
- *Ground Conditions* – The Contractor shall assess the ground conditions for the proposed refueling station locations from publicized information. The Contractor shall identify conditions that are considered to pose a degree of difficulty (i.e. traffic situation, proximity to customers, and possible health, safety, and environmental hazards).
- *Sensitive Areas* - The Contractor's report shall provide a view of the likelihood of possible delays in gaining consents where the pipeline extension route or construction activity unavoidably impinges on sensitive areas.

Task 5 Deliverable: The Contractor shall prepare a report of all work performed under Task 5. The Task 5 Deliverable shall be included in the Final Report.

Task 6: Project Cost Estimates

The Contractor shall perform an assessment of the cost estimates for the development of the CNG mother and refueling stations and any alternatives established for the Project. The cost items shall cover the capital and operational cost estimates for all Project requirements, including, but not limited to: storage vessels, metering and dispensing units, CNG trailers and trucks, pipeline extensions, compressor stations, SCADA and telecoms, detailed design, and Engineering, Procurement, and Construction (EPC) contract supervision and contingencies.

Cost estimates shall be based on prices received from U.S. suppliers, prices and costs from comparable projects, and sound engineering judgment based on the Contractor's experience. To ensure the level of accuracy required, the Contractor shall:

- Identify all major cost items associated with the design, construction and installation of CNG refueling stations;
- Use the reconnaissance surveys performed in Task 5 to assess major cost items (i.e. mother stations, daughter stations);
- Obtain quotations for all major cost items (items that require long lead times for manufacture/delivery) from at least three (3) suppliers/construction companies. For minor cost items (off-the-shelf items with short lead times), a minimum of two (2) quotations are required; and
- Provide appropriate contingencies based on Contractor's experience.

The Contractor shall develop a Project implementation budget and schedule. The Contractor's budget cost estimate shall be produced in spreadsheet format. The estimate shall have an

accuracy of +/- 20% and assume that construction and commissioning takes place during the period 2013 to 2015.

The budget estimates shall include, but not be limited to, the following key activities:

- Detailed design;
- Detailed environmental impact assessment;
- Preparation, issue, and assessment of construction tenders;
- Legal aspects for land purchase, way-leave (easements) and consents;
- Inlet gas pipeline connection and compression (where applicable), including all mechanical, electrical and control and instrumentation requirements;
- Refueling station construction, including all mechanical, electrical, control and instrumentation and corrosion protection requirements;
- Commissioning and validation activities;
- CNG mother and refueling stations safety documentation, emergency response, operational and maintenance manuals; and
- Project management to oversee contractors; health and safety issues; environmental issues; community/landowner liaison; local authorities' liaison; and public relations.

The Contractor shall conduct an assessment of available U.S. sources of supply for the Project. U.S. sources of supply shall include U.S. providers of the different categories of goods and services required for Project implementation. For each source identified, the Contractor shall include: company name, point of contact, address, telephone, fax, e-mail, and relevant goods and services that can be provided. The Contractor shall contact at least twenty-five potential U.S. equipment, technology, and service providers for the Project and compile a list of those companies that express interest in participating in the Project. The Contractor shall provide the comprehensive list of potential U.S. sources of supply for the Project to the Grantee. The list shall be provided in spreadsheet format. The Contractor shall deliver a report of assessment of availability of prospective U.S. suppliers, list of U.S. companies, and summary of discussions with U.S. companies.

Task 6 Deliverable: The Contractor shall prepare a report of all work performed under Task 6. The Task 6 Deliverable shall be included in the Final Report.

Task 7: Policy and Regulatory Issues

The Contractor shall review regulations and policies on the local, state, and federal level that may impact the Project's viability or implementation, as well as identify all of the likely policy issues of concern as they relate to the different interest groups including, but not limited to, customers, governments, regulatory agencies, parastatals, sellers, transporters, dedicated buyers, and Independent Power Producers (IPPs). The Contractor's review shall include, at least:

- Nigeria's Gas Master Plan;
- Nigeria's proposed Petroleum Industry Bill;
- binding engineering standards;
- environmental standards;

- regulations that impact operations;
- health and safety regulations;
- environmental regulations;
- regulations that constrain commerce;
- regulations that constrain labor;
- regulatory constraints on obtaining and servicing commercial loans;
- regulations on land acquisition and right-of-way;
- taxes and other levies; and
- regulations that impact the ability to do business.

At a minimum the Contractor shall:

- Examine the current policy issues and institutional requirements associated with the implementation of the Project and other interlinked issues common to existing retail outlets that create conflicting interests among station owners, governments, transporters, buyers and sellers of gas;
- Identify key financial, fiscal, legal, commercial, and regulatory issues and propose measures to address these issues. The Contractor shall conduct a review of existing and potential legislation with respect to the construction and operation of CNG mother and refueling stations and associated infrastructure, including but not limited to the following areas: legislation for review in the areas of oil and gas; environmental; health and safety; and other relevant areas; and
- Identify all the likely legal issues posed by the Project at the community level, specifically those that require early resolution by the governments (Local and State) where the refueling stations would be situated.

Initial consultation with relevant local authorities, statutory bodies and other interest groups that could be affected by the refueling stations shall be undertaken by the Contractor and their views and comments included in the report.

The Contractor shall identify potential regulatory obstacles which must be overcome to successfully implement the Project and make recommendations on means of implementing the Project in a manner consistent with Nigeria's regulatory environment. The Contractor shall make recommendations on potential regulatory changes which would be beneficial to the implementation of the Project, if any. The Contractor shall make recommendations on means of promoting long-term cooperation and good relations amongst the institutions, regulatory agencies, and communities which will be affected by the Project.

Task 7 Deliverable: The Contractor shall prepare a report of all work performed under Task 7. The Task 7 Deliverable shall be included in the Final Report.

Task 8: Institutional Framework, Business and Operational Models, and Risk Analysis

The Contractor shall assess options for business and operational models for development of the Project and provide the Grantee with a recommended model. Models shall include various options for Grantee and/or independent company ownership and/or operation of the facilities for the implementation and operation of the Project, including construction and operation of mother stations and retail refueling stations (public and fleet specific); transportation of CNG from mother station to refueling stations; and the establishment and operation of CNG retrofit facilities within Lagos State.

Various business and operational models shall be considered, including, but not limited to, concessions, leases, turnkey contracts, direct management, partnerships, management contracts, and independent operators. Based on the assessment and consultation with the Grantee, the Contractor shall propose a preferred business and operational model for the Project.

The Contractor shall identify and recommend options for the structure and type of corporate entity best suited for the efficient construction, management, and operation of the Project.

The Contractor shall examine the requirements for establishing third party access and non-discriminatory pricing for the Project.

The Contractor shall examine the requirements that will promote long-term cooperation and good relations amongst the institutions, regulatory agencies, the gas sector companies and the communities where the CNG refueling stations are to be located.

The Contractor shall evaluate the human resource capacity required to execute and operate the Project and recommend a plan for achieving the required capacity.

The Contractor shall carry out a risk assessment of the Project in terms of main risk factors, including, but not limited to technical; commercial; cost appreciation; health, safety, and environment; political; market; legal; transportation; scheduling; and station operational risks.

Task 8 Deliverable: The Contractor shall prepare a report of all work performed under Task 8. The Task 8 Deliverable shall be included in the Final Report.

Task 9: Preliminary Environmental Impact Assessment

The Contractor shall prepare a preliminary assessment of the Project's anticipated impact on the environment. The Contractor's assessment shall make reference to local requirements and those of multilateral lending agencies, such as the World Bank. The Contractor shall identify potential negative impacts, discuss the extent to which they can be mitigated, and develop plans for a full environmental impact assessment if and when the Project moves forward to the implementation stage. This includes the identification of steps that will need to be undertaken by the Grantee subsequent to the completion of the Study and prior to Project implementation. The Contractor shall identify areas requiring special consideration for environmental controls, including any aspect that may influence selection of the optimum station location. The Contractor's assessment shall also include any potential positive impacts, including the reduction in emissions of

greenhouse gases, etc. The Contractor shall not be expected to prepare a complete environmental impact assessment.

Task 9 Deliverable: The Contractor shall prepare a report of all work performed under Task 9. The Task 9 Deliverable shall be included in the Final Report.

Task 10: Financial and Economic Analysis

10.1: Financial Analysis: The Contractor shall perform high level investment appraisals of the refueling station location options. These appraisals shall establish capital and operating expenditures and use discounted cash flow methods to identify the internal rate of return (IRR) for the stations. The Contractor shall conduct sensitivity analysis for the refueling stations based on the likely demand growth profiles in the areas to be served by the refueling stations under evaluation from the market analysis. The financial analysis shall examine the annual cash flow over a ten (10) and twenty (20) year period for the CNG stations.

The Contractor shall perform a financial analysis of the overall Project. The key inputs to this analysis shall include, but not be limited to, the following: capital costs; operating costs of the refueling stations; CNG tariffs; projected annual demand volumes and growth during lifetime cycle; peak day demand volumes and growth during lifetime cycle; input gas pricing over the assessed period; inflation; taxation and investment taxation relief; fiscal terms; cost of funding; and station construction in a phased approach.

The Contractor shall perform a sensitivity analysis for each parameter that would have a significant impact on the Project's internal rate of return, including those listed above, and the outcomes clearly presented using appropriate tables and charts (e.g. Tornado plots). The analysis shall be robust enough to identify appropriate breakeven points (price, time, volume, etc.).

The Contractor shall evaluate the investment against a target IRR of 15% real-time and is required to consider demand growth scenarios during the life cycle and to reflect this in the analysis.

The Contractor shall make recommendations regarding financing options, including debt to equity ratio. The Contractor shall make recommendations concerning the structure of the corporate vehicle(s) required for the efficient construction, management and operation of the Project.

10.2: Economic Analysis: The Contractor shall perform an economic analysis of the Project and highlight the key sensitivities likely to have significant impacts on the Project. Where the analysis identifies a negative rate of return, then the Contractor shall provide an estimate of the level of government subsidy required to balance the rate of return over the project life cycle. The analysis shall identify appropriate breakeven points and prescribe the most economical expansion phasing for the project.

4.3: Sources of Financing: The Contractor shall make recommendations on options for financing the Project including the Grantee's budgetary resources, equity investment, commercial lenders,

the U.S. Export-Import Bank, World Bank, and African Development Bank. The Contractor shall identify and contact potential sources of financing to assess the likelihood of financing.

Task 10 Deliverable: The Contractor shall prepare a report of all work performed under Task 10. The Task 10 Deliverable shall be included in the Final Report.

Task 11: Developmental Impact Assessment

11.1: Developmental Impact: The Contractor shall conduct a development impact assessment of the Project. The purpose of the development impact assessment is to provide the Project's decision makers and interested parties with a broader view of the Project's potential effects on Nigeria. The development impact assessment shall identify the anticipated impacts of the Project in the following categories:

- (1) Infrastructure: The Contractor shall identify the anticipated infrastructure impacts of the Project, giving a brief synopsis and concrete examples of such impacts, specifically addressing new infrastructure that would be developed for the exploration, extraction, and processing of methane, nitrogen, and helium and production of high quality gas and value added products.
- (2) Human Capacity Building: The Contractor shall identify the anticipated number and types of local jobs that will be created as a result of the Project. The Contractor shall also identify the number of local people who would receive training and the types of training programs required for the Project.
- (3) Technology Transfer and Productivity Enhancement: The Contractor shall identify the anticipated advance in technologies that would be mobilized through this Project, and especially any technologies which would be new to the Nigerian market. The Contractor shall also identify anticipated efficiencies that would be gained as a result of the Project.
- (4) Market Oriented Reform: The Contractor shall provide a description of any regulations, laws, or institutional changes that are recommended pursuant to these Terms of Reference and the effect they would have if implemented.
- (5) Other: The Contractor shall identify any other anticipated development impacts or benefits that would result from the Project such as positive spin-off effects on unrelated economic sectors, increased good governance and transparency, private sector participation, etc.

Task 11 Deliverable: The Contractor shall prepare a report of all work performed under Task 11. The Task 11 Deliverable shall be included in the Final Report.

Task 12: Detailed Implementation Plan

Based upon the previous tasks, the Contractor shall develop a detailed Implementation Plan with appropriate phasing and sequencing of business priorities and milestones. The Contractor shall

provide a draft version of the Implementation Plan to the Grantee for review and consideration. The Grantee may require changes in order to more effectively meet its goals. Once the draft has been approved, the Contractor shall provide a final version of the document. The Contractor shall:

- Develop a preliminary budget for the overall cost of implementing the proposed systems over a ten (10) year period;
- Develop an implementation schedule taking into consideration construction in a stage-by-stage approach;
- Develop a capital investment plan and milestone schedule for construction project financing;
- Present a detailed schedule of activities necessary to realize the proposed Implementation Plan. This schedule shall include a set of targets, milestones and financial outlays;
- Develop a risk mitigation strategy to ensure reliability and safety of facilities.

Task 12 Deliverable: The Contractor shall prepare a report of all work performed under Task 12. The Task 12 Deliverable shall be included in the Final Report.

Task 13: Final Report

The Contractor shall prepare and deliver to the Grantee and USTDA a substantive and comprehensive final report of all work performed under these Terms of Reference (“Final Report”). The Final Report shall be organized according to the above tasks, and shall include all deliverables and documents that have been provided to the Grantee. The Final Report shall be prepared in accordance with Clause 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 [To be completed by USTDA] | <input type="checkbox"/> Feasibility Study | <input type="checkbox"/> Technical Assistance | <input type="checkbox"/> Other (specify) |
| Activity Title [To be completed by USTDA] | | | |
| Full Legal Name of U.S. Firm | | | |
| Business Address (street address only) | | | |
| Telephone | | Fax | |
| | | Website | |
| Year Established (include any predecessor company(s) and year(s) established, if appropriate). Please attach additional pages as necessary. | | | |
| Please provide a list of directors and principal officers as detailed in Attachment A. Attached? | | | <input type="checkbox"/> Yes |
| Type of Ownership | <input type="checkbox"/> Publicly Traded Company | | |
| | <input type="checkbox"/> Private Company | | |
| | <input type="checkbox"/> Other (please specify) | | |
| If Private Company or Other (if applicable), provide a list of shareholders and the percentage of their ownership. In addition, for each shareholder that owns 15% or more shares in U.S. Firm, please complete Attachment B. | | | |
| Is the U.S. Firm a wholly-owned or partially owned subsidiary? | <input type="checkbox"/> Yes | | |
| | <input type="checkbox"/> No | | |
| If so, please provide the name of the U.S. Firm's parent company(s). In addition, for any parent identified, please complete Attachment B. | | | |
| Is the U.S. Firm proposing to subcontract some of the proposed work to another firm? | <input type="checkbox"/> Yes | | |
| | <input type="checkbox"/> No | | |
| If yes, U.S. Firm shall complete Attachment C for each subcontractor. Attached? | <input type="checkbox"/> Yes | | |
| | <input type="checkbox"/> Not applicable | | |
| Project Manager | | | |
| Name | Surname | | |
| | Given Name | | |
| Address | | | |
| Telephone | | | |
| Fax | | | |
| Email | | | |
| Negotiation Prerequisites | | | |
| Discuss any current or anticipated commitments which may impact the ability of the U.S. Firm or its subcontractors to complete the Activity as proposed and reflect such impact within the project schedule. | | | |
| Identify any specific information which is needed from the Grantee before commencing negotiations. | | | |

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

U.S. Firm's Representations

U.S. Firm shall certify to the following (or provide any 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.
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 | | Date | |
| Organization | | | |



ATTACHMENT B

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

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

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] | | |
| Activity Title [To be completed by USTDA] | | |
| Full Legal Name of U.S. Firm | | |
| Full Legal Name of Shareholder | | |
| Business Address of Shareholder (street address only) | | |
| Telephone number | | Fax Number |
| Year Established (include any predecessor company(s) and year(s) established, if appropriate). Please attach additional pages as necessary. | | |
| Country of Shareholder's Principal Place of Business | | |
| Please provide a list of directors and principal officers as detailed in Attachment A. Attached? | | <input type="checkbox"/> Yes |
| Type of Ownership | <input type="checkbox"/> Publicly Traded Company | |
| | <input type="checkbox"/> Private Company | |
| | <input type="checkbox"/> Other | |
| If applicable, provide a list of shareholders and the percentage of their ownership. In addition, for each shareholder that owns 15% or more shares in Shareholder, please complete Attachment B. | | |
| Is the Shareholder a wholly-owned or partially owned subsidiary? | <input type="checkbox"/> Yes | |
| | <input type="checkbox"/> No | |
| If so, please provide the name of the Shareholder's parent(s). In addition, for any parent identified, please complete Attachment B. | | |

Shareholder may attach additional sheets, as necessary.



ATTACHMENT C

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

Subcontractor Information Form

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

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|---|------------|--|
| USTDA Activity Number [<i>To be completed by USTDA</i>] | | |
| Activity Title [<i>To be completed by USTDA</i>] | | |
| Full Legal Name of Prime Contractor U.S. Firm ("U.S. Firm") | | |
| Full Legal Name of Subcontractor | | |
| Business Address of Subcontractor (street address only) | | |
| Telephone Number | | |
| Fax Number | | |
| Year Established (include any predecessor company(s) and year(s) established, if appropriate). Please attach additional pages as necessary. | | |
| Subcontractor Point of Contact | | |
| Name | Surname | |
| | Given Name | |
| Address | | |
| Telephone | | |
| Fax | | |
| Email | | |

Subcontractor's Representations

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

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

duly organized, validly existing and in good standing under the laws of: [insert state (if U.S.) or country] .

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

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

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

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

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

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

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

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

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|--------------|--|-----------|--|
| Name | | Signature | |
| Title | | | |
| Organization | | Date | |