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Caracol Power Utility Transaction Support

WORK PLAN – APRIL 2016

Deliverable #1

Submitted: April 20, 2016

This publication was produced for review by the United States Agency for International Development. It was prepared by Deloitte Consulting LLP.

WORK PLAN

HAITI

CARACOL POWER UTILITY TRANSACTION SUPPORT

**SECTOR REFORM AND UTILITY COMMERCIALIZATION
(SRUC) PROJECT**

CONTRACT NUMBER: AID-OAA-TO-14-00006

The following document was prepared by Deloitte Consulting LLP

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1. Introduction

This Work Plan describes the activities to be undertaken under the **Caracol Power Utility Transaction Support** project, which began on **March 2, 2016**.

1.1 PROJECT BACKGROUND

Operating since 2012, the Caracol Industrial Park (CIP) is a mixed-use manufacturing facility, located in the Commune of Caracol in the Northeastern administrative Department of Haiti. A primary US Government (USG) contribution to CIP has been the construction and initial management of the CIP Power Utility (CPU), an on-site 10 megawatt (MW) diesel/heavy fuel oil (HFO) dual-fired power plant, funded through the United States Agency for International Development (USAID). The CPU provides 24-hour electricity to the CIP tenants, as well to more than 8,000 residential and commercial customers within the neighboring communes of Caracol.

From May 2013 to May 2017, USAID/Haiti is funding the Pilot Project for Sustainable Electricity Distribution (PPSELD) to manage and operate the CPU. During this contractual period, the PPSELD implementers are responsible for the operation and maintenance (O+M) of the CPU's generation and distribution assets, have expanded electricity services to new customers, and established and maintain the CPU's billing and collections system and customer service/outreach activities.

The USG and GOH have collectively agreed that the sustainability of the CPU will be best served through a form of Public Private Partnership (PPP), through which a qualified, competitively-procured private firm will be selected to assume long term O+M responsibilities of the CPU.

USAID/Haiti aims to provide transaction advisory services to the GOH to assess the feasibility for and facilitate the establishment of a PPP for the sustainable management of the CPU. The objectives of this activity are to:

- (i) Determine and conduct the necessary research, assessments, and studies to assist the GOH in exploring options and in selecting the appropriate PPP model(s) to pursue; and
- (ii) Provide tailored transaction advisory technical assistance to support the GOH in the preparation of PPP documents and leading a competitive bidding process for the private sector management of the CPU.

1.2 DELIVERABLES

- (1) A **Work Plan** with a detailed timeline for the activity, descriptions of the technical deliverables and responsible team members, and a schedule of anticipated trips by the team to Haiti (Port-au-Prince and Cap-Haïtien).
- (2) **Monthly one-two page progress reports** in order to keep all of the relevant USG actors informed of the team's progress, meetings and discussions with CPU team and counterparts, anticipated challenges, and progress on the deliverables listed below.

Technical Component 1: Analysis of CPU Operations and Feasibility Assessments:

- (3) An **updated financial model** populated with PPSELD's most historical operational data, anticipated expansion plans and associated capital costs, load / demand forecasts, and consideration for the CPU's ability to switch from diesel combustion to HFO combustion.
- (4) **Updated Cost-of-Service study** – inclusive of Willingness-to-Pay and Ability-to-Pay analysis – for electricity services to existing and new potential CPU customers, using current studies available for the CPU as appropriate, and adding additional information and analysis as required.
- (5) Creation and population of a **CPU Asset Register** for transaction related discussions.
- (6) **Assessments associated with PPSELD's possible expansion of services** to the Communes of Ft. Liberté and Ouanaminthe, grid integration with the Electricité d'Haiti (EDH)-managed power plant in Ft. Liberté, and buying power from the Dominican Republic.
- (7) **Comprehensive Feasibility Study** – drawing on the findings of the aforementioned deliverables, this comprehensive study will document needs analysis, solution options analysis, due diligence and risk assessments/mitigation plans. It is expected that this deliverable will present verified recommendations of appropriate PPP models for the GOH to explore.

Technical Component 2: CPU PPP Design and Competitive Procurement Support:

The work conducted through Technical Component 1 will guide the competitive procurement process for the establishment of the PPP. The various PPP models presented through this work should include a detailed description of the roles/responsibilities of the parties involved, and associated risk-mitigation strategies. A detailed procurement roadmap will be developed, outlining the

various deliverables that will need to be produced and milestones that will need to be achieved to facilitate the smooth transition from PPSEL to a competitively selected private operator.

- (8) Providing GOH decision-makers with a short analysis (in PowerPoint form) of the **mechanics and implications of using a variety of PPP models** to contract with a private partner. This deliverable will build upon and be additive to previous analysis already completed by Deloitte, for example, taking account of any changes in PPP related legislation or guidelines that have occurred within the last twelve months or are anticipated in the near future.
- (9) Providing GOH counterparts (in short report) with **examples of leading practice procurement methodologies and options** from 2-3 countries as they design and implement a procurement plan. Using these examples to assist GOH with developing a detailed procurement plan for a PPP for CIP.
- (10) Providing GOH counterparts with **examples of tender documentation and ranking criteria for bid selection** that have been successful elsewhere and may be applicable in this case. Using these examples to assist the GOH to develop sample tender documentation and ranking criteria for bid selection for the CPU.
- (11) Preparation and presentation of **guidelines and recommendations** for GOH consideration (in a PowerPoint format) **on conducting the competitive procurement process** – in compliance with relevant Haitian law and international best practices.
- (12) Provision of applicable and relevant on-the-job **training to GOH representatives** as they prepare for and implement a competitive procurement process.
- (13) **Provide examples of leading practices and language used in PPP contracts** (in a short report format) elsewhere that are considered to have been successful, highlight any challenges or specific issues, and summarize their applicability to the CPU project. Use these examples, including through on the job training, to build the GOH's capacity to develop tender documentation/ranking criteria for bid selection for the CPU.

All deliverables that are intended for Haitian audience will be produced in both English and French, as required.

1.3 OUR APPROACH

Deloitte's approach to implementing Caracol Power Utility Transaction Support is based on the following principles:

- **Stakeholder consultation and agreement.** Throughout the project, Deloitte will communicate and coordinate with USAID, relevant Haitian government officials, and CPU/NRECA. The initial three week trip in March to Caracol and Port-au-Prince served to establish working relationships between Team members and such stakeholders. The meetings and related research were fundamental to understanding the context in which the eventual PPP would be established, including opportunities and potential impediments. When appropriate, Deloitte will also consult with private sector players in the industry and with EDH; nevertheless the Team will be watchful for special interests and conflicts of interest that should constrain the disclosure of information to such parties.
- **Tariff reform and service area expansion prospects are priority subjects to be assessed.** Long-term cash flow projections, including operations and capital investments, will be fundamental to such assessments.
- **Tendering decisions are outside Deloitte's control.** Nevertheless, Deloitte will advise government decision makers for their consideration on tariff levels, service area options, PPP structures, tender design, and tender documentation. Preparation of all financial models, studies, training, and other information will have the specific purpose of supporting such decisions by government
- **Draw on international examples and case studies.** This may include the organization in collaboration with USAID of a visit by Haitian officials to a Caribbean country that may serve as a useful model.
- **Preferred solution.** *The ideal solution that Deloitte will pursue is a tender late 2016 and a contract between the Haitian government and a private partner by May 2017.* Nevertheless, there are potential political and regulatory impediments that are not within the control of USAID or Deloitte, for example, approval of commercially consistent tariff levels. Deloitte will collaborate closely with USAID and Haitian government officials to overcome such potential impediments.
- **Policy issues.** The more favorable are Haiti's electricity sector policies to private investment, the more likely will the PPP tender succeed. Therefore Deloitte is exploring potential collaboration with the **United**

States Energy Association (USEA) on its USAID-supported policy efforts in Haiti. This could involve USEA support of the GOH on the review and refinement of the generally favorable Energy Decrees of January, in particular regarding the proposed new regulator. USEA might also collaborate on a potential visit – as suggested by AID Haiti -- by selected Haitian officials to a country in the region that serves as a positive sector reform model. (In 2014 USEA conducted similar such missions to Colombia and El Salvador for Haitian officials at the time.)

- **Decision process for a PPP tender.** The following steps were cited to Deloitte by the national procurement commission -- Commission Nationale des Marché Publics (CNMP):
 - 1) Work with relevant line ministry to address any strategic or regulatory issues related to the proposed PPP. In the case of CPU, this would be the **Ministry of Travaux Publics**, principally with regard to tariffs and potential service area expansion. If the Autorité Nationale de la Régulation du Secteur d'Énergie" (ANARSE) is established as proposed by a January Decree, then it will assume this role.
 - 2) **PPP Unit of the Ministry of Finance** -- with which the Deloitte team had also met.—will be consulted on the design of the PPP documentation.
 - 3) **CNMP** must then review and approve the tender documentation and any subsequent changes. CNMP should make its decisions within ten days, unless it cites any “misunderstandings,” in which case such issues should be resolved within 20 days total. In the case of a proposed PPP, CNMP will also verify whether the draft contract meets requirements, as in the *Cahier de Charges* for concession agreements (<http://cnmp.gouv.ht/documentstypes/index>).
 - 4) **Cour Supérieur des Comptes** must give final approval to government contracts, as required by the Constitution. (Reference Articles 200 to 205: http://www.haiticulture.ch/Const_Titre6.html#Titre6B) The law requires that the Court make its decision within five days. When approved, the document is returned to CNMP for final signature.

1.4 PROJECT TEAM

The Deloitte team assembled to implement the Haiti Caracol Power Utility Transaction Support consists of the following advisors:

- Adrian Rouse, SRUC COP
- Bruce MacQueen, Team Lead
- Monique Bolmin, Legal Specialist
- Ian Yhap, Utility Commercialization Specialist
- Colin McColleston, Project Manager/Energy Specialist
- Peter Berini, Engagement Coordinator/Financial Modeler

Adrian Rouse, the **SRUC COP** will manage the Deloitte team, provide technical guidance and oversight, and review the final deliverable. He has over 20 years of experience advising on energy infrastructure transactions in emerging markets. Currently, he is acting as the transaction advisor to a similarly sized project in the Caribbean where a commercial developer has been successfully procured using a competitive procurement process. He is also a specialist in the use of PPP structures.

Bruce MacQueen, as the **Team Lead** will oversee all of the work under Component 1 and Component 2 of the SOW and the staff working on this engagement. He will manage the delivery of the activity according to the Work Plan and work directly with the USAID/SRUC Activity Manager, the USAID/Haiti team, and the GoH counterparts. He will provide technical oversight on all aspects of the program and review deliverables for quality control. Mr. MacQueen will be GoH's primary point of contact for all activities.

Monique Bolmin, as the **Legal Specialist** will work under Component 2. She will provide insight and leading practice expertise on the legal components of the transaction structure and the PPP design and competitive procurement process. She leads legal, policy, regulatory, governance and institutional efforts in emerging and post-conflict countries on energy and infrastructure related issues. Her work is often focused on advising on legislative initiatives and contractual measures necessary to secure infrastructure investment from the private sector while ensuring that political support for structural longer-term reform is maintained.

Ian Yhap, as **Utility Commercialization Specialist** will work under Component 1 on the Cost of Service study, the analysis of the CPU's expansion of services, and oversee the structure of the CPU asset registry. He has over 30 years of experience in the power sector, and has focused his career on the development of sustainable energy initiatives to ensure financial and operational viability. He is a former Chairman of the Board and Managing Director of the Liberia Electricity Corporation where he helped complete the Master Energy Recovery and Development Plan.

Colin McCollester, as **Project Manager / Energy Specialist** will act as the Project Manager for this engagement, ensuring adherence to the Work Plan. He will also contribute technically, primarily supporting the Expansion of Service Assessments and the Comprehensive Feasibility Study under Component 1. He has over 5 years of energy experience primarily working on power utility operations and has worked on a multitude of engineering and technical aspects from generation to distribution. Mr. McCollester has worked as a systems engineer for a major U.S. utility, developed a U.S. energy market, policy, and price analysis. Under the SRUC Program he is currently leading a study of utility employee incentives, and their ability use in combatting nontechnical losses.

Peter Berini, the **Home Office Coordinator / Financial Modeler**, will carry out administrative tasks needed to enable other team members to meet their obligations under the scope of work. He will also assist on Component 1 by conducting home and field based research and developing/updating excel-based models for the Financial Model, Cost of Service Study, and the Expansion of Service Assessment. Peter will also provide support to Component 2 through the preparation of training materials. Peter has advanced skills in Excel, and professional experience in renewable energy and PPPs.

2. Work Plan by Deliverable

This section provides some detail on the work and activities in which the project team will engage while working towards completion of the SOW. The Work Plan is based upon the assumption that *potential impediments can be avoided or overcome so as to launch a tender no later than mid-November 2016 and to contract with a private partner by May 2017.*

2.1 OVERALL DELIVERABLES & TRIP SCHEDULE

The dates between the scheduled trips, below, will be used by the Team to:

- (i) Follow up on actions relating to the preceding trip, including reports;
- (ii) As preparation for the succeeding trip, conducting financial analyses, strategy assessments, and tender documentation, to the extent appropriate during each such period.

Trip Schedule:

Trip	Sub-Activity Description	Consultants*	Dates
#1	Initial trip to meet with stakeholders in USAID, NRECA, government, and private sector	Bruce MacQueen Colin McCollester	March 13 - April 1 2016
#2	Prepare or revise drafts related to Deliverables #3, #4, #5, #6, and #7. Initiate work on Component 2	Bruce MacQueen Monique Bolmin Peter Berini Ian Yhap	May 1 – June 30 2016
#3	Presentation of assessments to date on Deliverables #7, #8, #9	Adrian Rouse Bruce MacQueen Monique Bolmin Colin McCollester	July 14 – 28 2016
#4	Deliverables #7, #10, #11, #12, #13 reflecting PPP recommendations and proposal for final approval of tender. (Participate in possible USEA study trip to a Caribbean country offering positive PPP example.)	Bruce MacQueen Monique Bolmin Peter Berini	Sep 9 – Oct 1 2016
#5	Final approval of tender documents and launch of tender by mid-November.	Adrian Rouse Bruce MacQueen	Oct 17 – Nov 18 2016

#6	In context of pre-qualification of bidders that expressed interest, advise on implementation of Deliverables #10 & #11	Bruce MacQueen	Jan 3 – 11 2017
#7	In the context of final bids received Deliverable #10, advise on announcement of winning bidder, and negotiation & execution of final contract.	Bruce MacQueen Monique Bolmin	March 11 - April 8 2017

*Note: Not all consultants will be in Haiti for the full period of the respective trips.

2.2 DELIVERABLES 3, 4, AND 5: ANALYSIS OF CPU OPERATIONS

Under this activity, Deloitte will develop and conduct the analyses required to understand the CPU's financial standing. Specifically, Deloitte intends to build an **Excel-based financial model** designed to project the long-term performance of the CPU and its future investments. An **asset registry** – reflecting CPU's present fixed assets – will be prepared for inclusion in the tender documentation to be drafted. Additionally, Deloitte will develop an **Updated Cost-of-Service study**, to better understand the discrepancies in the price paid for electricity and the cost of supplying it; this will further support recommendations and government decisions on tariff reforms and tender design. The aforementioned deliverables will be submitted initially in draft form, followed up by a final version.

Step Number	Sub-Activity Description	Associated Output	Due Date
#1	Determine the level of detail and sensitivity analysis requirements for the financial model	<ul style="list-style-type: none"> • Example models • Notes 	April, 2016
#2	Gather NRECA and external resource costs related to the generation, distribution and transmission of the CPU, and owned assets	<ul style="list-style-type: none"> • Excel sheet, notes • Draft CPU Asset Register • Trip to Haiti 	May 2016
#3	Validate costs with NRECA	<ul style="list-style-type: none"> • Excel Sheet • Trip to Haiti 	May - June 2016
#4	CPU Asset Register (Deliverable 5)	<ul style="list-style-type: none"> • Excel Sheet 	June 2016
#5	Draft Excel financial model	<ul style="list-style-type: none"> • Excel financial model 	May - June 2016
#6	Draft Cost-of-Service Study	<ul style="list-style-type: none"> • Word Cost-of-Service Study 	July 2016
#7	Final Excel financial model (Deliverable 3)	<ul style="list-style-type: none"> • Excel financial model 	June 2016
#8	Final Cost-of-Service Study (Deliverable 4)	<ul style="list-style-type: none"> • Word Cost-of-Service Study 	July 2016

2.3 DELIVERABLES 6 AND 7: EXPANSION OF SERVICES AND FEASIBILITY STUDY:

Under this activity, Deloitte will conduct assessments in regard to PPSELD's possible expansion plans, which could enhance the financial positioning of the utility and

improve/expand electricity access to surrounding neighborhoods. The level of detail in the analysis for possible expansion of services will be determined by the Team Lead. Drawing on the findings of the aforementioned deliverables (3, 4, 5, 6, and 7) the Deloitte team will develop a Comprehensive Feasibility Study, which will work to recommend of appropriate PPP models for the GOH to explore. The study will be word based and provided initially in draft form.

Step Number	Sub-Activity Description	Associated Output	Due Date
#1	Analyze possible expansion of service plans into Fort Liberté, Ouanaminthe, and Cap Haïtien. (Deliverable 6)	<ul style="list-style-type: none"> Excel/Word sheet, notes 	June 2016
#2	Draft Comprehensive Feasibility Study; document needs analysis, solution options analysis, due diligence and risk assessments/mitigation plans	<ul style="list-style-type: none"> Draft Report 	July 2016
#3	Final Comprehensive Feasibility Study (Deliverable 7)	<ul style="list-style-type: none"> Final Report 	August 2016

2.4 DELIVERABLES 8, 9, AND 11: CPU PPP DESIGN AND COMPETITIVE PROCUREMENT SUPPORT

Under this activity, Deloitte will leverage the work conducted through Technical Component 1 to guide the competitive procurement process for the establishment of the PPP. In doing so, the team will provide various analyses in Word and PowerPoint formats to help guide GOH decision makers in conducting a successful competitive procurement. The Deloitte team will work to supply a short analysis on the implications of using a variety of PPP models, examples of leading practice procurement methodologies, and guidelines and recommendations on conducting a competitive procurement process.

Step Number	Sub-Activity Description	Associated Output	Due Date
#1	Identification of potential PPP models, referencing the Comprehensive Feasibility Study	<ul style="list-style-type: none"> Notes 	May 2016
#2	Short-analysis of the mechanisms and implications of identified PPP models (Deliverable 8)	<ul style="list-style-type: none"> Notes 	July 2016
#3	Short-analysis of leading practice procurement methodologies from 2-3 comparable countries (Deliverable 9)	<ul style="list-style-type: none"> Notes 	July 2016
#4	Recommend PPP model, referencing the Comprehensive Feasibility Study (Deliverable 11)	<ul style="list-style-type: none"> Short report 	August 2016
#5	Presentations to key GOH officials	<ul style="list-style-type: none"> PowerPoint Presentation 	July - September 2016

2.5 DELIVERABLES 10, 12, AND 13: CPU PPP DESIGN AND TENDER SUPPORT

Under this activity, Deloitte will provide examples of tender documentation, ranking criteria for bid selection, and leading practices and language used in PPP contracts. Additionally, the team will provide on the job training to support the GOH as they prepare for a competitive procurement process. For the on the job training, we expect to have our team in Haiti between August – September.

Step Number	Sub-Activity Description	Associated Output	Due Date
#1	Identification and preparation of tender documentation and ranking criteria for bid selection (Deliverable 10)	<ul style="list-style-type: none"> Notes Draft tender documentation 	September 2016
#2	Identification and preparation of leading practices and language used in PPP Contracts (Deliverable 13)	<ul style="list-style-type: none"> Notes Draft PPP contract 	September 2016
#3	Provision of ongoing training and advice to GOH representatives on tender preparation and implementation (Deliverable 12)	<ul style="list-style-type: none"> Formal training, including possible trip to a Caribbean country as model On the job training during preparation & implementation periods 	August 2016 – May 2017; Ongoing