Request for Proposal

Consulting Services

To Design a Renewable Energy Generation System
For the ECCB Headquarters and To Provide Project Management Services

RFP Reference Number: ECCB/REG

Issued on: 1st November 2017

EASTERN CARIBBEAN CENTRAL BANK
ST KITTS

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1. TERMS OF REFERENCE

1.1. BACKGROUND

The Eastern Caribbean Central Bank (ECCB) is in the implementation stage of a "Greening of Our Campus Project". This Project falls under our strategic priority of *Enhancing Organisational Effectiveness* and aims to achieve carbon neutrality and to significantly reduce electricity costs. It is envisioned that the Project will be used as a model for the use of renewable energy across the Eastern Caribbean Currency Union.

There are four significant buildings on the ECCB's Headquarters located at Bird Rock Road, Basseterre, St Kitts - the Hon Sir K Dwight Venner Building (Phase 1), the Sir Errol N Allen Cafeteria Building (Cafeteria), the Phase 2 Building (Phase 2) and the Sir Cecil Jacobs Auditorium (Auditorium). The four buildings use approximately 3,344,000 kWh per annum.

The Project focuses on:

(i) The improvement in energy conservation habits;

(ii) The replacement of energy inefficient plant and equipment; and

(iii) The generation of electricity from renewable energy.

The Project is in line with the Paris Agreement, a United Nations Framework Convention on Climate Change (UNFCCC https://unfccc.int/2860.php) dealing with greenhouse gases emissions mitigation and adaptation, adopted by consensus in December 2015.

1.2. OBJECTIVES OF THE CONSULTANCY

(i) Conduct technical assessment followed by the design of Photovoltaic (PV) grid-tie systems for supplying electricity to the ECCB Campus while taking advantage of the net billing arrangements offered by the Government of St Kitts and Nevis' to corporate organisations to export power to the national grid;

(ii) Identify additional spaces beyond roof areas which would be suitable for the installation of PV systems, giving due consideration to aesthetics and shading impacts, etc.;

(iii) Design and specify appropriate energy performance system analysis and display feature to support education and greening efforts;

(iv) Develop and propose specifications and packages for design and implementation of a PV grid-tie system in line with ECCB's procurement guidelines;

(v) Provide technical assistance to the Project Committee in preparing and reviewing responses to the request for proposals in relation to the procurement of a Contractor;

(vi) Supervise, monitor and evaluate the installation of PV equipment.

1.3. **PROJECT SCOPE**

The project aims to develop a system that would deliver the maximum feasible amount of renewable power to the ECCB Headquarters with any excess being exported to the St. Kitts Electricity Company Limited (SKELEC) grid using available and feasible spaces at its facility. Installation of solar system of minimum capacity of approximately 410,000 kWh per annum of electricity annually in a grid-tie configuration which allows for sale of the excess electricity under license to the utility is contemplated.

As the demonstration effect is an important dimension of the project, the Consultant's design will also include specifications for:

(i) The monitoring of the installed PV systems by the ECCB staff as well as by the general public. The public viewing is intended for education and outreach regarding renewable energy production and information on avoided greenhouse gas production. The public viewing will be accomplished by LED monitors installed in the Hon Sir K Dwight Venner Building (Phase 1) and Phase 2 lobbies, displaying actual power production, accumulated energy production and avoided CO^2 emissions.

(ii) There should be also a provision for monitoring by an IP addressable device(s) connected to the Bank's internal network and displayed graphically in a user-friendly manner with the following parameters:

  (i) AC energy

  (ii) Solar irradiance

  (iii) Show status of all equipment.

This capability will allow for monitoring and evaluation of operational and performance data remotely.

1.4. PHASED IMPLEMENTATION

1.4.1. Phase I: System Design and Contractor Procurement

The Consultant will be required to:

(i) Review historical electricity billing for ECCB's headquarters at Bird Rock Road, Basseterre, St Kitts; survey the physical plant; propose a preliminary design, and conduct an economic cost analysis of the Project.

(ii) Review the Government of St Kitts and Nevis grid integration facility to identify how the ECCB can maximize opportunities under same; identify requirements to be met for securing a renewable energy grid-tied system license and assist in preparation of the relevant application.

(iii) Develop detailed design, planning, bidding and contractual documents after review of preliminary design and economic analyses by ECCB.

(iv) Develop bill of quantities and engineers estimates based on accepted design to serve as reference for evaluation of proposals for installation.

(v) Assist in the evaluation of the responses to the Requests for Proposal for a contractor.

1.4.2. Phase II: Supervision of Installation

The Consultant will be required to:

(i) Supervise, monitor and evaluate the works of various contractors and ensure that the tasks are satisfactorily completed in accordance with the design.

1.5. CONSULTANT'S SCOPE

The Consultant would be required to execute the following key tasks and responsibilities of the Project.

1.5.1. Phase I: System Design and Contractor Procurement

(i) Develop detailed design and technical specification of equipment to meet requirements of the Organisation of Eastern Caribbean Sates (OECS) Electrical Code; mounting structures for PV Modules to meet requirements of the OECS Building Code; inverter (capacity technical requirements), cabling; monitoring device; metering while also giving due consideration to climatic conditions, and local support for maintenance;

(ii) Prepare bidding documents for PV Installation Contractor and engineer's estimate for installation;

(iii) Prepare the contractor recruitment package for selection of the contractor(s) and the overall scope for the Project for contractor(s) to implement;

(iv) Develop suitable evaluation criteria for the proposals in collaboration with the ECCB, and participate in the evaluation/review process;

(v) Prepare an overall and time sensitive implementation plan and work plan (for the overall project) considering the contractors detailed implementation and work plans;

(vi) Support application for Net Billing/Metering License (discussions with relevant agencies, completion of applications, advise ECCB on requirements).

1.5.2. **Phase II: Supervision of Installation**

(i) Supervise the contractor works and monitor the project for quality, rigor, and timeliness;

(ii) Confirm satisfactory completion of works for payment to the contractor;

(iii) Advise on a maintenance and sustainability plan;

(iv) Any other related issue that would arise during the implementation of the initiative.

1.6. **DELIVERABLES**

The Consultant will undertake to achieve the following project deliverables:

(i) Develop the technical specifications of PV system and the Contractor Recruitment Package (Preparation of Contractor Terms of Reference, Implementation Plan and Work plan, Bill of Quantities [to be prepared by contractors], Preparation of Evaluation Criteria for Proposals).

(ii) Review and evaluation of contractor submissions in collaboration with ECCB.

(iii) Assist in the application for Net Billing/Metering License (discussions with relevant agencies, completion of applications, advise the ECCB on requirements).

(iv) Report on the installation works (installation of solar panels, mounting hardware, inverters, etc.)

1.7. COST SCHEDULE

The consultant is required to provide the total cost to complete the required tasks as set forth in the Terms of Reference (including any proposed reimbursable expenses) and a breakdown that contains proposed milestones and the associated payment amount. The pricing schedule should also include unit rates for any additional services (hourly/daily/weekly rate) which may be required by the ECCB.

1.8. APPROACH/METHODOLOGY

A description of the proposed approach/methodology, which will be used to deliver the tasks outlined in the Terms of Reference, must be included and should contain but not limited to;

(i) Technical Approach and Methodology

(ii) Work Plan

(iii) Organization and Staffing Requirements

1.9. WORK/IMPLEMENTATION PLAN

The proposed work plan should be consistent with the technical approach and methodology, showing a full understanding of the scope of work and ability to translate them into a feasible working plan. The work plan should include the following.

(i) The main activities of the assignment, their content and duration.

(ii) Phasing and interrelations of the main activities.

(iii) Milestones.

1.10. STATEMENT OF RISKS

The consultant should identify the potential risks which, in their experience, occur on projects of this type. In addition, the consultant should identify steps that can be taken to avoid or mitigate these risks.

1.11. CONSULTANT CAPABILITY

The Consultant should meet the following criteria:

(i) Registered Professional Electrical or Mechanical Engineer;

(ii) At least 5 years' experience in the design and installation of Photovoltaic systems in commercial/institutional building context;

(iii) At least 5 years' Experience in designing and installing renewable energy and energy efficient technologies;

(iv) Demonstrated high level technical writing and communications skills particular in the preparation of technical reports, technical specifications, technical training materials and presentations;

(v) Highly developed personal communication and people skills with evidence of track record in effective team work and collaboration;

(vi) Knowledge of National Electrical and Building Codes of OECS.

1.12. COMPANY INFORMATION

The selected consultant is required to provide a description of the firm/entity and each associate firm or staff member who will work on this project. The description should include information on the following:

(i) Company legal name and status (type of legal entity) and supporting documentation;

(ii) The financial status and overview of the Company;

(iii) Description of core business activities and key consulting competencies;

(iv) Name(s) of the Principal(s) and Director(s) of the company and the company address;

(v) Whether the company has any involvement with other entities or projects that may present a conflict of interest, and if so, please ensure details are provided;

(vi) The firm's experience with projects of a similar nature in the last five (5) years;

(vii) An overview of those projects including duration; and

(viii) References for at least three of those projects, including names and full contact information.

2. INSTRUCTIONS FOR SUBMISSION OF PROPOSAL

The proposal must be placed in a sealed envelope and clearly marked '**Private and Confidential**' "**Tender for Consultancy to Design a Renewable Energy Generation System for the ECCB Headquarters and to Provide Project Management Services**" and must be addressed to:

Governor
Eastern Caribbean Central Bank
P O Box 89
Basseterre, St Kitts
ATTENTION: Senior Adviser, Governor's Immediate Office

The proposal must reach the Eastern Caribbean Central Bank by 29 December 2017. A Soft Copy may also be submitted to the ECCB at the email address: gio@eccb-centralbank.org**.**