



## TERMS OF REFERENCE

Consultancy to conduct a tailored training program on Renewable Energy and Energy Management for Public health Facilities in Jamaica.

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### 1. BACKGROUND

The Deployment of Renewable Energy and Improvement of Energy Efficiency in the Public Sector project is being implemented from the 1<sup>st</sup> of September 2016 to the 31<sup>st</sup> of August 2019. The project is funded by the Global Environment Facility (GEF) Trust Fund and the Government of Jamaica through its agency the Petroleum Corporation of Jamaica (PCJ) and other partners. The project implementation is being executed by the United Nations Development Programme (UNDP) in Jamaica in partnership with PCJ.

This project seeks to advance a low carbon development path and reduce Jamaica's public sector energy bill through the introduction of renewable energy (RE) and improvement in energy efficiency (EE) in the health sector. The project will build relevant capacity in the public sector by increasing the knowledge base of its operatives on matters pertinent to RE and EE as well as developing the appropriate technical skills necessary to support investments in the sector. It will strengthen the regulatory framework that governs the development and deployment of RE and EE technologies. The project will support and investigate a potential mechanism involving public-private partnerships (PPPs) that will engender a greater uptake of RE and EE.

It has been recognized that there is limited technical expertise in public sector institutions (particularly in Jamaica's health sector) tasked to oversee electricity equipment purchases and performance. The project seeks to establish the basis for sustainability by developing a cadre of trained technicians to ensure that there is no dearth of technical skills in the country. This would include a series of trainings for key audiences who will successfully support the development of a scaled-up RE and EE market. This output will however seek to promote the development and upgrading of skills and competences within the health sector with an emphasis on energy management and solar photo-voltaic system operation and maintenance.

UNDP is looking for an experienced and knowledgeable training institution and/or company in the areas of energy management and renewable energy technology to develop and deliver a training program. The training will be expected to provide basic concepts for energy management as well as the operation, maintenance and monitoring of solar PV systems. The Key Performance Indicators of this capacity building initiative is to have fifty (50) technicians certified in RE and EE systems and thirty (30) other staff from

beneficiary hospitals trained in RE and EE technologies. The assignment should comprise of sensitization workshops on RE and Energy Management, a training of trainers program along with training sessions on energy management and solar PV operation and maintenance.

## **2. DUTIES AND RESPONSIBILITIES**

### **Objective:**

The objective of the assignment is to facilitate development of local technical capacities and increase knowledge on energy management and renewable energy technologies, particularly solar PV systems within the Health Sector. It is also geared at developing the national guidelines for the operation, maintenance and monitoring of solar PV systems. Therefore this assignment is intended to:

1. Build local technical capacities, increase knowledge on renewable energy and energy management within the health sector.
2. Develop a sustainable mechanism for renewable energy and energy management training for the health sector through a training of trainers program.
3. Support the development of national guidelines for solar PV operation, maintenance and monitoring for the public sector.

### **Scope of Work**

The institution or firm will be expected to:

- Validate Training Needs data collected at six (6) targeted health facilities and complete the Training Needs Analysis (TNA), to include gender constraints.
- Develop and submit a training program with a balance on theory and practice, as well as training methodology and learning objectives to UNDP for approval. The training must focus on:
  - fundamental concepts in renewable energy technology particularly the operation and maintenance and monitoring of solar PV systems, electrical concepts and safety issues and hands-on experience and real world applications of small scale grid connected system.
  - fundamental concepts in Energy Management, introduction to energy efficiency measures, the energy audit; energy management systems; ISO 50001 in organizations; indicators of energy consumption and methodologies for creating an energy management plan
- Provide training materials (e.g. worksheets and training manual) that will serve as an encompassing tool for participants to better understand subject matter and simplify practical application of energy management and solar PV systems.
- Facilitate two sensitization workshops for the health sector on the value of energy management and renewable energy technologies particular solar PV systems and solar water heaters.
- Facilitate a tailored 3-day solar PV operation and maintenance training for technicians in the health sector.
- Facilitate a tailored 2-day energy management training for technicians in the health sector.



- Facilitate a 5-day training of trainers program for a select number of persons from identified regional health authorities on energy management and solar PV operation and maintenance.
- Prepare training reports outlining the findings of the evaluation assessment, final exam results, general trainers' reflections on training events, overview of most common issues or concern, recommendations for improvement and statistical results of trainee satisfaction forms.
- Draft guidelines on solar PV systems operation, maintenance and monitoring through consultation with the Petroleum Corporation of Jamaica (PCJ), the Jamaica Solar Energy Association (JSEA), and any other key stakeholder.
- Present guidelines using PowerPoint or equivalent method to key stakeholders, including UNDP for feedback.
- Submit final guidelines for solar PV systems operation, maintenance and monitoring

### **3. REQUIRED EXPERTISE AND QUALIFICATION**

The consultancy will be undertaken by a reputable firm with a competent team to perform the services outlined in the scope of work above. At a minimum, the team should comprise individuals with the minimum qualification and experience as per the requirements below:

#### **A. Team Leader – Energy Specialist**

- Master's Degree or higher in Renewable Energy or Engineering Disciplines with specialized training in solar PV systems.
- Post graduate certification in Energy Management, Energy Auditing or related field is required
- Demonstrated experience in facilitating similar training sessions/programs (at least 3 training sessions)
- Minimum of 5 years' practical experience in operation and maintenance of renewable energy systems
- Demonstrated experience in the field of energy management (at least 2 projects)
- Demonstrated experience engaging national/project stakeholder using participatory methodologies.
- Strong communication skills including presentation and report writing
- Experience working with UN agencies and in Small Island Development States will be an asset.
- Fluency in English

#### **B. Renewable Energy Consultant**

- Minimum BSc. in Mechanical/Industrial/Electrical Engineering with
- Certification in Renewable Energy Systems or related field is required
- Demonstrated experience in facilitating similar training sessions/programs (at least 3 training sessions)
- Minimum 3 years' experience in operation, maintenance and/or monitoring of solar PVs.
- Demonstrated experience engaging national/project stakeholder using participatory methodologies will be an asset.

- Experience working with UN agencies and in Small Island Development States will be an asset.
- Strong communication skills including presentation and report writing
- Fluency in English

#### **C. Energy Management Consultant**

- Minimum BSc. in Mechanical/Industrial/Electrical Engineering
- Certification in Energy Management or related field is required
- Minimum of 5 years' experience supporting energy management projects/initiatives or related fields.
- Demonstrated experience in supporting training sessions/initiatives on energy management or energy auditing (at least 3 training session)
- Demonstrated experience engaging national/project stakeholder using participatory methodologies, will be an asset.
- Experience working with UN agencies and in Small Island Development States will be an asset.
- Strong communication skills including presentation and report writing
- Fluency in English

### **5. TRAVEL**

The consultancy may require visits to the educational institutions under consideration or other travel to gather data. All costs related to travel and accommodation related to undertaking this consultancy are to be included in the ***financial proposal***. No separate travel or subsistence allowances will be given consideration.

### **6. IMPLEMENTATION AND REPORTING ARRANGEMENTS**

The consultancy will be for **65 non-consecutive working days over a five (5) month period**. The institution or firm will report directly to the Project Manager and under the overall direction of the UNDP Jamaica Deputy Resident Representative (DRR). Payments will be made upon receipt and approval by the Project Management Unit (PMU) and the DRR or her designate. All work/documents and tools associated with this consultancy is the property of UNDP and should be submitted with the final report. Training institutions or consultant firms are advised to read carefully the General Terms and Conditions for firms available on the UNDP website at <http://www.jm.undp.org/>

Logistical arrangements and coordination of the training events will be taken over by UNDP, based on an agreed schedule developed by the service provider. **The provider will, however, be expected to print out and distribute all relevant training materials to participants as well as to provide its own equipment and learning aids.**



## 7. PAYMENT SCHEDULE

Deliverables	Estimated Duration	Payment Percentage
1. Inception Report to include : - Detailed work-plan for delivery - Methodologies - Risk & Mitigating measures - Data collection instruments	5	5%
2. Training Needs Analysis	10 Days	10%
3. A detailed training outline and materials for all three (3) modules for approval	20 Days	20%
4. Deliver two (2) Sensitization Workshops on the value of Renewable Energy and Energy Management and associated workshop report	3 Day	50%
5. 3-Day Training Session on operation and maintenance of solar PVs and prepare associated training report	4 Days	
6. 2-Day Training Sessions on Energy Management and prepare associated training report	3 Days	
7. 5-Day Training of Trainers programme on energy management and operation and maintenance of solar PVs, and prepare associated training report	5 Days	
8. Draft national guidelines for the operation, maintenance and monitoring of Solar PV systems	10 Days	15%
9. Final national guidelines for the operation, maintenance and monitoring of Solar PV systems	5 Days	
Total	65 Days	100%

## 10. EVALUATION

Consultant Firms will be evaluated based on the following methodology:

*The criteria which shall serve as basis for evaluating offers will be:*

*Combined Scoring method – where the qualifications and methodology will be weighted a max. of 70%, and combined with the price offer which will be weighted a max of 30%*

The award of the contract will be made to the firm whose offer has been evaluated and determined as:

- Responsive and acceptable
- Having received the highest score out of a predetermined set of weighted technical and final criteria specific to the solicitation
- Only the highest ranked firm who would be found qualified for the job will be considered for the Financial Evaluation.
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- 1. *Technical Criteria* - 70% of total evaluation – max points: 70
- 2. *Financial Criteria* - 30% of total evaluation – max points: 30

***Below is the breakdown of evaluation criteria for assessing technical proposal.***

Summary of Technical Proposal Evaluation Forms		Score Weight	Points Obtainable
1.	Expertise of Firm / Organisation submitting Proposal	20%	200
2.	Proposed Work Plan and Approach	30%	300
3.	Personnel	50%	500
<b>Total</b>			<b>1000</b>

#### **Evaluation Criteria – Technical Proposals**

<b>Expertise of Firm/ Organization submitting Proposal Form 1</b>		<b>Points obtainable</b>
1.1	Reputation of Organisation and Staff (Competence / Reliability) - <i>Please provide a link to your organization's website and another relevant publication that can attest to a strong reputation.</i>	35
1.2	Litigation and Arbitration history - <i>(firms are expected to mention all litigation and arbitration matters and indicate none if necessary)</i>	10
1.3	General Organisational Capability which is likely to affect implementation (i.e. loose consortium, holding company or one firm, size of the firm / organisation, strength of project management support e.g. project financing capacity and project management controls)	60
1.4	Extent to which any work would be subcontracted (subcontracting carries additional risks which may affect project implementation, but properly done it offers a chance to access specialized skills - <i>Please clearly identify all sub-contractors where necessary</i>	10



1.5	Quality assurance procedures, warranty - <i>firms are expected to indicate measures that will be used to guarantee the highest level of quality and integrity of the deliverables</i> )	15
1.6	Relevance of: <ul style="list-style-type: none"> <li>Specialised Knowledge</li> <li>Experience on Similar Programme / Projects in Jamaica</li> <li>Experience on Projects in the Region</li> <li>Work for UNDP/ major multilateral/ or bilateral programmes</li> </ul>	70
		200

Proposed Work Plan and Approach / Technical Proposal Evaluation Form 2		Points Obtainable
2.1	To what degree does the Offeror understand the task?	40
2.2	Have the important aspects of the task been addressed in sufficient detail?	40
2.3	Is the proposal based on a survey of the project environment and was this data input properly used in the preparation of the proposal? (For example, did the consultant undertake any research of the market for this consultancy? What were the findings?	30
2.4	Have the risk/limitations been identified and proposal for addressing same proposed?	60
2.5	Is the scope of task well defined and does it correspond to the TOR?	80
2.6	Is the presentation clear and is the sequence of activities and the planning logical, realistic and promise efficient implementation to the project?	50
		300

Management Structure and Key Personnel Evaluation Firms are to clearly identify who performs what function on the team. Form 3			Points Obtainable 500
3.1	Task Manager/Team Leader		300
	Team Leader – Energy Specialist		
	Master’s Degree or higher in Renewable Energy or Engineering Disciplines with specialized training in solar PV systems. (40 points awarded for Master’s degree; Full awarded for higher certification)	50	
	Post graduate certification in Energy Management/Energy Auditing or related field (15 points per certification relevant to the consultancy)	30	

	Demonstrated experience in facilitating similar training sessions/programs (at least 3 training sessions) – 50 points awarded for having the minimum requirement of 3 training sessions. 10 points awarded for each session above the minimum requirement.	80	
	Minimum of 5 years’ practical experience in operation and maintenance of renewable energy systems (40 points awarded for having the minimum requirement of 5 years. 5 points awarded for each year above the minimum requirement)	70	
	Demonstrated experience in the field of energy management (at least 2 projects) (60 points awarded for having the minimum requirement of 2 projects, 2 additional points per project that is above the minimum requirement)	55	
	Demonstrated experience engaging national/project stakeholder using participatory methodologies. (Consultants are to clearly demonstrate where experience has been gained in engaging national/project stakeholders using participatory methods – Full points awarded)	10	
	Language Qualifications (fluency in English Language is required)	5	
3.2	<b>Renewable Energy Support Consultant</b>		100
	Minimum BSc. in Mechanical/Industrial/Electrical Engineering with or related field. - (20 points awarded for Bachelor’s Degree; Full awarded for higher certification)	25	
	Certification in Renewable Energy Systems or related field	5	
	Demonstrated experience in supporting similar training sessions/programs (at least 3 training sessions) - 20 points awarded for having the minimum requirement of 3 training sessions. 5 points awarded for each session above the minimum requirement.	30	
	Minimum 3 years’ experience in operation, maintenance and/or monitoring of solar PVs. – (20 points awarded for having the minimum requirement of 3 years. 5 points awarded for each year above the minimum requirement)	35	
	Language Qualifications (fluency in English Language is required)	5	
3.3	<b>Energy Management Support Consultant</b>		100
	Minimum BSc. in Mechanical/Industrial/Electrical Engineering with or related field. - (20 points awarded for Bachelor’s degree; Full awarded for Masters or higher certification)	25	
	Certification in Energy Management or related field	5	
	Minimum of 5 years’ experience supporting energy management projects/initiatives or related fields. - 20 points awarded for having the minimum requirement of 5 years. 1 point awarded for each year above the minimum requirement)	30	
	Demonstrated experience working on or supporting training sessions/initiatives on energy management or energy auditing (at least 3 training session) (Consultants are to clearly demonstrate where experience has been gained in supporting training sessions – Full points awarded)	35	



	Language Qualifications (fluency in English Language is required)	5	
	Total Part 3		500

Total Technical Score 70%

The lowest financial offer among technically compliant firms will be given the maximum score of thirty (30) points and the remaining offers will be assigned a score in inverse proportion.

The firm that obtains the highest cumulative score by adding both the weighted technical score and the financial score will be selected.

UNDP is committed to achieving workforce diversity in terms of gender, nationality and culture. Individuals from minority groups, indigenous groups and persons with disabilities are equally encouraged to apply. All applications will be treated with the strictest confidence.

This TOR is approved by:

Signature: Bruno P. Pouezat

Name and Designation: **Bruno Pouezat, Resident Representative**

Date: 08/02/18

