



# MINISTRY OF ENVIRONMENT

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MALE' REPUBLIC OF MALDIVES

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## Technical Expert - Building and Appliance Energy Efficiency

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*[28th March 2019]*

*Prepared by:*

**Project Management Unit**

**Strengthening Low Carbon Energy  
Island Strategies (LCEI) Project**



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## 1. Introduction & Background

The Republic of the Maldives is highly dependent on imported fossil fuel to meet its energy needs. Furthermore, as a Small Island Developing State, it also relies on fossil-fuel based transport for the imports that provide the needs and wants of the population. As a result, the cost of energy generation and energy dependant appliances can be both high and unreliable, causing financial constraints on national budget and individual finances.

The Project “Strengthening Low Carbon Energy Island Strategies Project (LCEI)”, is designed with a goal of market transformation for energy efficient technologies in buildings and the built environment in the Maldives; and promotion of energy efficiency investments in buildings. The project will not only target energy efficient technologies, but will also promote emerging low carbon energy technologies for the building sector.

LCEI Project is funded by the Global Environment Facility (GEF) and implemented by the Ministry of Environment with support from UN Environment. The project aims to reduce greenhouse gas (GHG) emissions through energy efficiency in the building sector.

Components of the project;

- Component 1 - Adoption of policy, institutional and legislative framework to lower energy use in the building sector
  - Output 1.1. Energy efficiency requirements are incorporated in the Maldives’ building code
  - Output 1.2. Energy labelling program developed and implementation initiated
- Component 2 - Demonstration of innovative financing to lower energy use in the building sector
  - Output 2.1. Innovative financing is demonstrated for energy efficient design of buildings
  - Output 2.2. Innovative financing is demonstrated for energy efficiency retrofits in buildings
  - Output 2.3. Innovative financing is demonstrated for high-efficiency appliances
  - Output 2.4 Scaling up financing for energy efficient appliances and buildings
- Component 3 - Capacity enhancement to lower the energy use and GHG emissions in the building sector

- Output 3.1. Educational and training programs focused on climatically-suited low-energy building design are developed
- Output 3.2. Training programs focused on energy efficiency retrofits of buildings are developed
- Output 3.3. Training programs on energy efficient appliances are developed
- Component 4 - Monitoring and assessment system to measure effectiveness of the project interventions and to support replication
  - Output 4.1. A monitoring and assessment system is in place to measure effectiveness of project implementation
  - Output 4.2. Awareness and educational programs are developed to sensitize different stakeholders regarding building energy efficiency and to disseminate good practices for widespread replication

The project was initiated in September 2015 and is currently scheduled for technical completion by December 2020.

The LCEI project is seeking a qualified Technical Expert to support the implementation of technical activities of the project.

## **2. Objective of the assignment**

The objective of the assignment is to:

To provide technical strategic guidance and quality assurance to effectively implement key technical activities of the project. Technical Expert shall carry out the work in accordance with the terms of reference outlined in this document.

## **3. Scope of Work and Responsibilities**

The Technical Expert has the following main functions, specifically, he/she will provide:

- Advice on the activities and work to achieve the outputs including development of terms of reference for undertaking activities and outputs, review the reports and ensure quality of reports, advice on organizing the interaction with stakeholders and awareness and capacity building activities, and link with other projects and works.
- Technical expertise and strategic guidance to all project components, assuming quality control of interventions, and support the Project Manager in the coordination of the

implementation of planned activities under the GEF project as stipulated in the project document;

Technical Services:

**A. Incorporating energy efficiency requirements in Maldives' building code**

1. Review and provide technical assurance to the report that studies local conditions and building systems developed by the consultants that are recruited by the project
2. Provide technical assurance to the proposed guidelines for cost-effective and practical energy efficiency improvement in new and existing buildings in the context of Maldives
3. Provide technical assurance to the development and demonstration of certification scheme for Hulhumale' in collaboration with Housing Development Cooperation (HDC)

**B. Development and initiation Energy labelling program in the Maldives**

1. Provide advice and inputs to the development of labelling program after reviewing the reports developed.
2. Provide advice and inputs to the process and procedures for the implementation of the labelling schemes
3. Provide advice and inputs during the implementation of voluntary labelling scheme
4. Develop terms of reference to recruit a consultant to update government procurement policy to incorporate use of life-cycle costing to promote procurement of energy efficient appliances in public buildings. This should also include designing and conducting training program for appliance life cycle cost procurement procedures. Provide advice and inputs to the deliverables developed by the consultants.
5. Review and provide technical inputs to the capacity building program developed by the consultants to build institutional capacity on program design, institutional

mechanism, consumer awareness and M&V related to standards and labelling program

6. Provide advice and inputs to the capacity buildings programs developed by the consultants for importers and vendors of building appliances on the process of energy performance labelling of appliances

**C. Demonstration of innovative financing to lower energy use in the building sector**

1. Develop terms of reference for the recruitment of a consultancy firm to conduct activities listed under component 2 of the project. This should also include activity A3.1.3 (Develop and support training programs on financing low-energy buildings for banks and financial institutions that provide long-term building loans). The TOR will be approved with comments from stakeholders.
2. Provide inputs to the evaluation of the proposals received to conduct the activities under component 2.
3. Review and provide advice/inputs to the deliverables developed by the consultants

**D. Capacity enhancement to lower the energy use and GHG emissions in the building sector**

1. Develop terms of reference for the recruitment of consultancy firm to develop and conduct training programs for buildings and facilities managers on adopting energy management system for buildings. The TOR will be approved with comments from stakeholders. Provide inputs to the evaluation of the proposals received to conduct the activities under component. Review and provide advice/inputs to the deliverables developed by the consultants

**E. Monitoring the project interventions and facilitate widespread replication**

1. Review and provide technical inputs for the report on the analysis of energy use in different types of buildings (residential, commercial, public, hotels/guesthouses, mixed-purpose)

2. Provide support to the development of database of energy use in existing buildings and appliances and analysis of the annual trend to assess the impact of project interventions
3. Review and provide technical advice to the guidelines prepared to promote energy use monitoring in buildings
4. Develop the methodology and support the PMU to track the impact of the project interventions in terms of energy savings from buildings and appliances and the resulting GHG reductions
5. Develop documentations to demonstrate the experiences and good practices from the project for the benefit of different target groups in Maldives and other small island developing states

#### **4. Duration of the Consultancy**

Duration: Estimated 160 days from April 2019 to December 2020

Duty station: Home based and Male', Maldives. The expert will be expected to have a maximum of 20 working days for 2 missions to Male'. Exact dates and timing will be discussed and agreed prior to the visit.

#### **5. Final Products**

The following outputs are expected to be delivered during the period:

- 5.1 Written comments and inputs for the reports developed within the scope described in section 3.
- 5.2 Approved terms of references for the activities stated in clause 3 Scope of Work and Responsibilities
- 5.3 Report on project impacts assessment and GHG reduction from project interventions
- 5.4 Report on the lessons learned to demonstrate the experiences and good practices from the project for the benefit of other small island developing states

## **6. Provision of Monitoring and Progress Controls**

The Technical Expert will implement his/her functions and report to the LCEI Project Manager. The expert works in close collaboration with the Ministry of Environment (ME), PMU and national counterparts for ensuring knowledge sharing and the highest possible quality of expected products.

A detailed work plan for the assignment shall be prepared by the expert and agreed with ME prior to commencing this assignment.

A detailed monthly work-plan with number of required deliverables by the project and number of days required by the consultant to deliver these deliverables must be prepared, discussed and agreed between ME and the consultant before services are provided. This will be the basis for the payment schedule.

Monthly briefing and updates on new progress and results conducted for review and monthly report.

For meetings held under this consultancy, the Minutes of Meeting must be provided to the LCEI-PMU within 2 days of the meeting.

## **7. Degree of Expertise and Qualifications**

### **1) Academic qualification**

- Post Graduate degree (master's level, equivalent or higher) with knowledge in the field of energy, environment, engineering, architecture. The academic requirements can be lowered if possessing greater experience in this area.

### **2) Professional experience**

- At least 10 (ten) years of practical experience on energy efficiency policies and programs in the building sector; energy monitoring of energy-efficiency buildings or related fields
- Technical expertise in building science, design and construction, thermal engineering, energy efficiency and energy performance modeling in buildings
- Wide familiarity with current best practices in energy-efficient building design, with regard to both heating and cooling as well as other relevant issues

- Expertise and experience related to financing mechanism for energy efficiency and buildings sector investments
- Proven experiences in management and implementation of donor-funded projects on energy efficiency in buildings.
- Proven experience in preparation and writing of analytical reports, articles and published works.
- Relevant experience of Maldives or similar SIDs countries is an advantage.
- Must have excellent speaking, reading, report writing and presentation skills in English
- Should be able to travel to outer islands if needed

## 8. Administrative Support and Reference Documents

PMU will provide copy of the approved Project Detailed Outline and project documents and inception reports upon commencement of the assignment.

## 9. Review Time Required and Payment Term

The payments will be made upon satisfactory achieved deliverables as per approved work plan and time sheet in accordance with number of days worked based on the monthly work-plan agreed by the Ministry of Environment (ME) and the consultant. All payments are subject to the clearance and approval of Project Manager. Final payment shall require a signed performance evaluation of the consultant.

## 10. Evaluation and comparison of proposals

### 10.1 Preliminary Examination

The Client will examine the proposals to determine whether they are complete, the documents have been properly signed and the proposals are generally in order, and all the documents stated in [Section 12 \(Application\)](#) have been included in the proposal.

If a proposal is determined as incomplete or as not substantially responsive, Client has authority to reject the proposal. Criteria for determining completeness and substantial responsiveness is given in [Annex 2](#).

### 10.2 Evaluation of Proposals

Criteria	Weight
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<p>Technical Qualification (St)</p> <p>Refer to <a href="#">Annex 2</a> for details of evaluation criteria.</p>	60%
<p>Financial Offer (Sf)</p> <p>The proposal with the Lowest Financial Quote (Fq) will get the maximum Financial Score (Sf) of 100 points. The Financial Scores (Sf) of the other Financial offer will be computed according to the following formula:  <math>Sf = 100 \times Fq / F</math>, in which Sf is the financial score, Fq is the <u>Lowest Financial Quote received</u> and F is the price of the proposal under consideration.</p>	40%
<p>Total (S) = St x 60% + Sf x 40%</p>	100%

Interview with the candidates may be held if deemed necessary.

ME reserves the right to undertake a post-qualification exercise aimed at determining to its satisfaction, the validity of the information provided in the proposal. Such post-qualification shall be fully documented and, among those that may be listed in the Annex 2, may include, but need not be limited to, all or any combination of the following:

- a) Verification of accuracy, correctness and authenticity of information provided by the proponent on the legal, technical and financial documents submitted;
- b) Validation of extent of compliance to the TOR requirements and evaluation criteria based on what has so far been found by the evaluation team;
- c) Inquiry and cross-checking with other previous clients on the quality of performance on ongoing or previous contracts completed;

## 11. Additional Information

The LCEI-PMU of ME has overall responsibility for the management of the contract and contractual reporting obligations.

Documents and data provided by the government for the purpose of this assessment which is not of public nature shall be considered confidential and should not be disclosed to any other party.

All outputs and materials produced as part of this TOR shall be handed over to the LCEI-PMU at the end of the contract and will become the sole property of ME.

## 12. Application

Proponent should submit their proposals containing the following (Standard forms provided in Annex 1):

- Signed Curriculum Vitae
- Completed financial offer (**FORM-1**).
  - The financial proposal shall specify a total lump sum amount in **US Dollar** including consultancy fees and all associated costs i.e. airfares, travel cost, meal, accommodation, tax, insurance etc. – see format of financial offer in Annex 2.
  - Please note that the cost of preparing a proposal and of negotiating a contract, including any related travel, is not reimbursable as a direct cost of the assignment.
- Required experiences and other experiences relevant to this TOR must be specified separately or highlighted in their respective CV.
- Copy of 1-3 publications/writing samples on relevant subject.
- Reference contact details of past 4 clients for whom you have rendered preferably the similar service

## 13. Queries

For any queries please email to [procurement@environment.gov.mv](mailto:procurement@environment.gov.mv) and CC to [low.carbon@environment.gov.mv](mailto:low.carbon@environment.gov.mv) before **1300hrs on 07<sup>th</sup> April 2019**. Answers will be provided to all the queries received before the deadline and will be made available via the Ministry website ([www.environment.gov.mv](http://www.environment.gov.mv)) and Ministry Facebook page (<https://web.facebook.com/environment.gov.mv/>) on **09<sup>th</sup> April 2019**.

## 14. Submission

Bid submission	On or before <b>15<sup>th</sup> April 2019 at 1100</b> hours local time
Bid opening	<b>15<sup>th</sup> April 2019 at 1115</b> hours local time  Proposals will be opened in the presence of the proponents’ representatives who choose to be present at the address below at the time of proposal opening.
Submission instruction	Proposals must be delivered in sealed envelopes titled  <b><i>“Do not Open Before 15th April 2019 at 1115 - Technical Expert - Building and Appliance Energy Efficiency”</i></b> and the submitting party’s name and address

	Electronic submission is not permitted. Late proposals will be rejected.
Submission address	Procurement Section Ministry of Environment Green Building, Handhuvaree Hingun, Maafannu Male', 20392, Republic of Maldives <a href="mailto:procurement@environment.gov.mv">procurement@environment.gov.mv</a>

# ANNEX 1: STANDARD FORM

**1. STANDARD FORMS**

**FORM-1: FINANCIAL OFFER**

Having examined the Solicitation Documents, I, the undersigned, offer to provide all the services in the TOR for the sum of USD .....

This is a lump sum offer covering all associated costs for the required service (fee, meal, accommodation, travel, taxes etc).

**Cost breakdown:**

No.	Description	Number of days	Rate (USD)	Total
1.	Consultancy fee			
2.	Out of pocket expenses			
2.1	Travel			
2.2	Per diem			
2.3	Others (please specify)....			
			<b>Total</b>	

I undertake, if my proposal is accepted, to commence and complete delivery of all services specified in the contract within the time frame stipulated.

I agree to abide by this proposal for a period of 60 days from the submission deadline of the proposals.

Date:

Signature

## ANNEX 2: EVALUATION CRITERIA

<b>Criteria for Preliminary Examination of Proposals</b>	<p><b>Document pre check</b></p> <ol style="list-style-type: none"> <li>1. Proposal is received on or before the date and time specified</li> <li>2. Proposal is properly sealed / un-tampered</li> <li>3. Proposal bears the (i) name of the submitting entity and (ii) title of the Contract outside the envelope</li> <li>4. Completed Form-1: Financial Offer</li> <li>5. Signed CV of the expert</li> <li>6. Minimum 60 days proposal validity provided</li> </ol>
<b>Criteria for Essential Eligibility/Qualification of key personnel</b>	Refer to <a href="#">Section 7</a> of this TOR
<p><b>Note:</b></p> <ol style="list-style-type: none"> <li>1. If proponents do not meet any of the above listed criteria, their proposal may not be considered for further evaluation.</li> <li>2. Proponents meeting above listed criteria are required to submit evidences (details / documents) in support – otherwise proposal may be disqualified.</li> </ol>	

### Detail technical evaluation criteria

Consultants experience/qualification related to the services		
Criteria		Points Obtainable
1	Post Graduate degree (master’s level, equivalent or higher) with knowledge in the field of energy, environment, engineering, architecture. The academic requirements can be lowered if possessing greater experience in this area.	150
2	At least 10 (ten) years of practical experience on energy efficiency policies and programs in the building sector; energy monitoring of energy-efficiency buildings or related fields	200
3	Technical expertise in building science, design and construction, thermal engineering, energy efficiency and energy performance modelling in buildings	150

4	Wide familiarity with current best practices in energy-efficient building design, with regard to both heating and cooling as well as other relevant issues	150
5	Expertise and experience related to financing mechanism for energy efficiency and buildings sector investments	100
6	Proven experiences in management and implementation of donor-funded projects on energy efficiency in buildings.	50
7	Relevant experience of Maldives or similar SIDs countries is an advantage.	100
8	Strong skill of English is a must with proof of 1-2 writing samples. Experience in preparation and writing of analytical reports, articles and published works	100
	<b>Total</b>	<b>1000</b>