بسم الله الرحمن الرحيم

Ministry of Environment
Male', Republic of Maldives.

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މާލެ، ދިވެހިރާއްޖެ.

Accelerating Sustainable Private Investment in Renewable Energy (ASPIRE)

Terms of Reference

Civil Engineer (Part-time)

A. BACKGROUND

The Scaling-Up Renewable Energy Program in Low Income Countries (SREP) is a program that demonstrates, through pilot operations in selected countries, the economic, social and environmental viability of a low-carbon development pathway to increasing energy access using renewable energy (RE) and creating new economic opportunities.

Maldives is one of the pilot countries selected to benefit from the SREP operating under the Strategic Climate Fund (SCF) of the umbrella Climate Investment Funds (CIF) that supports programs with potential for scaled-up, transformational action aimed at a specific climate change challenge. SREP resources are available through partner Multilateral Development Banks (MDBs), and in the case of the SREP program for the Maldives, the Asian Development Bank (ADB) and the World Bank Group (WBG), including the International Finance Corporation (IFC).

As a first step, the Government of Maldives has prepared an Investment Plan which outlines the support it seeks for the scale up of renewable energy development in the Maldives and tackling the risks and barriers to its development. In turn, SREP is expected to catalyze additional financial resources and contribute to larger co-benefits for Maldivian communities. The SREP Investment Plan includes a program of activities in partnership with the MDBs to implement these initiatives. The Plan was endorsed by the SREP Sub-committee in November 2012. The main objective of SREP-Maldives is to develop renewable energies on a large scale, to effectively contribute to poverty reduction and sustainable development. Achieving this objective would be a step forward towards adopting low carbon growth in the Maldives along with the fiscal and energy security benefits that it brings for and ultimately greater social-economic benefits for the country.

In the context of the SREP assistance, the Government of Maldives (GoM) has launched a project, with assistance from the World Bank, entitled: Accelerating Sustainable Private Investment in Renewable Energy (ASPIRE).

B. COUNTRY AND PROJECT CONTEXT

The ASPIRE which will support, among other things, the financing of renewable energy investments under a Government Feed-in-Tariff mechanism (FIT) for up to 20 MW of grid-tied Solar PV (Photovoltaic) / wind in the Greater Male' Area and up to 3 MW of grid-tied PV / wind on medium to large island to offset the daytime peak load (approximately 30 percent of daily energy output), while the primary technology expected to be deployed in the Maldives in the short to medium term is Solar PV.

The overall project development objective of ASPIRE Project is to increase PV generation in Maldives through private sector investment, with the beneficiaries being citizens and consumers in the Maldives. The initial subprojects target consumer populations in Male' and Hulhumale' islands. The consumer base would later expand to other islands in Maldives. Consumers would receive improved electricity services, with lower local environmental externalities.

On the basis of the investment framework proposed, the GoM has already prepared an initial subproject for buildings in Male' and Hulhumale'. In keeping with the investment framework, provision of security package support is envisioned for this initial subproject, to mitigate first mover risks and to make the subproject attractive for investment. As the GoM and private investors will develop operational experience under the first subproject, incentives for later subprojects are expected to be tapered down, moving subsequent subprojects towards greater risk taking by the private sector.

The ASPIRE Project design envisages resource allocation to cover tariff buy down and payment guarantee support for around 20 MW of cumulative generation. The IDA Guarantee will cover termination payments; and if fully utilized, will support around 8 MW of solar PV installations. In reality, it is expected that the level of support needed will taper down over time; hence, more MWs may be covered.

While this first subproject is situated in Greater Male', similarly structured subprojects will also be designed for outer islands, where power demand loads, and hence subproject generation sizes, may be smaller. It is expected that the key parameters of each subproject including technology, economic and financial outcomes and environmental and social aspects will be materially similar.

The policy objective on scaling up renewable energy is a high priority and so in 2014 the project framework of ASPIRE was developed under a *Design Build Finance Own Operate Transfer* (DBFOOT). This includes standardized documents including the Request for Proposal (RFP), Power Purchase Agreement (PPA), Roof Leasing Agreement (RLA), Escrow Agreement (EA), and Implementation Agreement (IA). The construction of the first phase (subproject) of 1.5MW had already been completed and commissioned in 2018

C. OBJECTIVES OF ASSIGNMENT

The objective of the assignment is to provide technical/engineering input, advice, and related administrative support for the activities undertaken under projects managed by PMU.

D. OVERALL RESPONSIBILITY

The overall responsibilities of the Civil Engineer include, but are not limited to the following:

- Technical coordination of the projects;
- Conduct and provide support for the assessments for sub-project development;
- Develop concept designs and related drawings in line with project requirements
- Oversight of construction related activities.
- Provide administrative support for construction relevant contract management and other overall coordination and administrative support.

E. SPECIFIC TASKS

Under the supervision of the Project Manager / Specialist Coordinator, the Civil Engineer will carry out the following activities:

- Conduct all necessary surveys and assessments for all potential existing sites for solar PV installations as maybe required under the project whilst also having the responsibility of reviewing all assessments done by other consultants and ensuring feasibility of selected sites;
- Develop concept designs, detailed designs and BOQs (with price estimates) suitable for rooftops, terraces, open spaces, roads, lagoons, etc. to complement site specific feasibility studies and information packaging for potential bidders;
- To the extent possible, conduct surveys and assessments (related to civil engineering aspects) of candidate sites identified under the project that are required to support feasibility studies of other renewable energy technologies such as wind, ocean currents, tidal, etc;
- Liaise with Projects stakeholders to ensure technical compliance of projects components with Project Approval/Appraisal/Operational Documents, Operational Standards of donors, and all relevant local regulations and standards;
- Develop standard/common methodology applicable for all solar PV sites' civil assessments required in line with all the requirements of the projects as well as local laws, regulations and standards;
- Provide technical input on projects consultancy documents as required;
- When and as required, carry out monitoring and inspection of construction activities during civil works and equipment installations of sub-projects, and maintain regular meetings, logs and records of the progress, issue of change notices and approval of payments as may be required from time to time;
- Participate in documents reviews, evaluation and other relevant committees that may be formed under PMU Projects as required including but not limited to World Bank, donors, ME and other stakeholder organizations.

- Participate in monitoring and evaluation for the contracts issued for projects managed by PMU including but not limited to the following:
  a) Implementation schedules and budget;
  b) The performance of the component against the component objectives;

Travel to sites at islands identified under the project may be required.

F. REPORTING OBLIGATIONS

Report and advise the Project Manager / Specialist Coordinator or his designate on behalf of the Client, on all aspects of Project Implementation throughout the duration of the contract.

The Consultant shall ensure that all the required reports for the project are prepared on time in accordance with the requirements of Client and the World Bank.

G. KEY QUALIFICATIONS AND EXPERIENCE

- A Bachelor degree or higher in Civil Engineering. Having studied environment or energy elective subjects will be an added advantage.
- Must have professional work experience of minimum three (03) years. Having experience in structural engineering will be an added advantage
- Must be a registered Civil Engineer at Ministry of Housing and Urban Development. Accredited professional engineer - structural design compliance (possessing Structural Checker Stamp) is preferred.
- Should possess sound knowledge of computer aided design software/applications commonly used in the industry.
- Should have excellent command over English with proven communication and, presentation and interpersonal skills

In addition, the individual's reputation of integrity and impartiality routed in independent from third parties shall be considered.

The successful candidate must understand the objectives and delivery mechanisms of the projects portfolio. He/she must be willing to work in a team, be flexible to emerging or changing conditions, and undertake initiative in his/her broad field of actions.

H. SCHEDULE FOR THE ASSIGNMENT

The duration of the assignment is initially for **06 months** on a part-time basis from the commencement of the consultancy with potential extension based on performance and need. The successful candidate must be available to commence the position in **June 2019**.

I. FACILITIES TO BE PROVIDED BY THE CLIENT

The Consultant will be provided office space and office facilities in the PMU set up in ME (whenever necessary). If required local transport between Male', inter-Atolls and inter-islands will be provided.