



Ministry of Environment
Republic of Maldives

Recruitment of Third-Party Entity for JCM Validation and Verification for JFJCM Project under the Preparing Outer Islands for Sustainable Energy Development (POISED) Project

Terms of Reference

Third-Party Entity (hereinafter referred as the “TPE”)

- Expertise: Auditor (Validation and Verification of a JCM Project)
- Expertise Group: Economist, Engineer, etc.
- Source: International
- Consultant Type: Firm
- Selection Method: Consultants’ Qualifications Selection (CQS)
- Project Title: “JCM Validation and Verification for JFJCM Project under the Preparing Outer Islands for Sustainable Energy Development (POISED) Project ” (tentative)
- Engagement Period: 6 months (Tentative)

1. OBJECTIVES OF ASSIGNMENT

The Government of Maldives has initiated Preparing Outer Islands for Sustainable Energy Development (POISED) to utilize Maldives’ renewable energy resources, and implements installation of renewable energy generation systems, mainly solar power, as hybrid systems with existing diesel generation to enhance energy security and to improve financial condition.

International financing institutes including Asian Development Bank (ADB), ADB Strategic Climate Fund, Islamic Development Bank, and European Investment Bank provide financial supports for POISED program. The POISED project is implemented from 2014 to 2021.

The Japan Fund for the Joint Crediting Mechanism (JFJCM) under the ADB has provided a grant as an additional co-financing to the POISED project as per the grant agreement of No. 0429-

MLD for adoption of advanced low-carbon technologies. The grant finances a subcomponent of the POISED project introducing energy management system (EMS) and battery energy storage system (BESS) and associated technical services for optimum operation of the solar PV and diesel micro-grid system in Hithadhoo power station in Addu City (hereinafter called the Project). The recipients of the JFJCM grant, namely the Ministry of Environment of the Maldives and FENAKA Corporation Limited, are required to take actions necessary for registration of the Project as a JCM project and for issuance of JCM credits accrued from the project.

To comply with the requirement of the JFJCM grant, the Project Management Unit (PMU) of the POISED project will hire a firm from the list of third-party entities (TPEs) designated by the Joint Committee for the JCM between the Maldives and Japan in accordance with the Joint Crediting Mechanism Guidelines for Designation as a Third-Party Entity (the TPE Guidelines). The selected TPE will (i) conduct validation of the proposed JCM project and provide a validation report and (ii) conduct verification of the monitored greenhouse gas (GHG) emission reductions and provide a verification report to the Project Director of the PMU in accordance with the Joint Crediting Mechanism Guidelines for Validation and Verification (the Guidelines).

2. LOCATION OF VALIDATION AND VERIFICATION

Addu City, Maldives

3. SCOPE OF WORK

The TPE Firm shall conduct validation and verification for the Project.

The TPE will prepare validation and verification reports in accordance with the Guidelines and submit to the PMU.

The validation and verification shall be conducted simultaneously and one site visit will be conducted.

The JCM requirements as applicable at the time of validation and verification are as follows.

Table 1: JCM Requirements

Requirements	Details
As applied to validation and verification define what:	“Installation of Energy Management System and Battery Energy Storage System (EMS-BESS) with Solar PV System in Addu City”
As applied to the following methodology (if approved include reference):	<p>MV_PM002 (tentative as of September 2020, to be reviewed by the Joint Committee for approval) Installation of Energy Management System and Battery Energy Storage System (EMS-BESS) with Solar PV System https://www.jcm.go.jp/mv-jp/methodologies/121</p> <p>The latest version of the methodology shall be provided to the selected TPE by PMU.</p>
As applied to the following sectoral scope(s):	1. Energy industries (renewable/non-renewable sources)
As applied to the following project documents (list please):	<ul style="list-style-type: none"> - Draft PDD - Draft monitoring report - other related documents as necessary
As applied to the following project including sites, locations, technology and equipment (describe in simple terms):	<p>The micro-grid in Addu City consists diesel generators (DGs) and in total of 1.6 MW PV systems. The efficiency of DGs connected to the micro-grids is decreased due to PV system by 1) lower load operation of the DGs and 2) absorption of solar fluctuation by the DGs. To optimize operation, EMS and BESS are installed to enable the most efficient operation by the Economic Load Dispatching Control system and rapid charge-discharge, long-life battery system. The proposed JCM project aims to reduce GHG by optimized operation of DGs and PV systems supported by EMS and BESS in the micro-grid system.</p>
As applied to the following time frame for engagement:	November 2020 to March 2021 (tentative) – should be aligned with the project schedule being delayed by the COVID-19 impact.

4. DETAILED TASKS AND EXPECTED OUTPUTS

In accordance with the Guidelines (as of September 2020), the TPE shall conduct the following tasks, and the information necessary for the tasks will be provided by the PMU, consultants hired by PMU and/or ADB, ADB and other relevant members of the project. For the matters not clearly stipulated in the Guidelines, TPE may seek guidance from the Joint Committee through its secretariat.

- (a) Prepare a plan for validation and verification including schedule and list of requested materials within one month after contract signing, and explain the plan to the PMU;
- (b) Validate the Project as described in a PDD prepared by the PMU, in line with the Guidelines;
- (c) Inform the results of the assessment with a validation report and send the report to the PMU;
- (d) Verify GHG emission reductions achieved by the Project as described in the monitoring report prepared by the PMU, in line with the Guidelines;
- (e) Record the verification results in a verification report and send the report to the PMU;
- (f) Perform other activities necessary to accomplish the validation and verification of the Project.

The contract will be on lump sum basis and the payment shall be made upon completion of the validation report and verification report ready for submission from the PMU to the Joint Committee. The deliverables are summarized in Table 2:

Table 2: Deliverables

Deliverables	Estimated Submission Date	Payment Schedule
Final Validation Report	28 February 2021	50%
Final Verification Report	28 February 2021	50%

5. MINIMUM QUALIFICATION REQUIREMENTS

The TPE shall propose a competent team for validation and verification. The TPE and its team shall suffice the following qualification criteria:

- (a) The TPE shall be the an entity registered as the TPE of Maldives (<https://www.jcm.go.jp/mv-jp/tpes>) in accordance with the latest version of the Guidelines for TPE;
- (b) All team members shall have at least a bachelor's degree in relevant field;
- (c) The team leader shall have at least 3 years' relevant project experience in certification of the Clean Development Mechanism (CDM) and/or validation/verification of the JCM;
- (d) The team leader is desired to have at least experiences as a team leader of the TPE for validation of three (3) registered JCM projects and verification of three (3) JCM projects of which JCM credits have been issued. Such projects shall be under Sectoral Scope 1: Energy industries (renewable/non-renewable sources) respectively.
- (e) All team members shall have a good working knowledge of rules and guidelines under the JCM;
- (f) Excellent oral and written communication skills of English;
- (g) Regional/Country Experience: Desired.

The selected TPE will be accountable to PMU of Ministry of Environment (ME) and Project Director of ME. The contract of this validation and verification works will be made between the selected TPE and ME.

With particular reference to Covid-19, any need for international travel shall be assessed by ADB and TPE using ADB's advice at the time of travel. Subject to ADB's approval, TPE may use remote video technology meetings to replace face to face meetings as considered necessary.