



MINISTRY OF ENVIRONMENT

MALE' REPUBLIC OF MALDIVES

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Development of certification and licensing system for refrigeration and air-conditioning servicing technicians

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1. Introduction

As a party to the Vienna Convention and Montreal Protocol on Substances that Deplete the Ozone Layer, Maldives has phased out several ozone depleting substances (ODS). To comply with its obligations under the Montreal Protocol, Maldives is currently implementing the phase-out management plan of Hydro chlorofluorocarbons (HCFCs) by 2020.

The main focus of the phase-out in Maldives is the refrigeration and air-conditioning servicing sector. By adopting good practices during commissioning and decommissioning, maintenance and handling refrigerants and refrigeration/air-conditioning equipment, refrigeration and air-conditioning servicing technicians can play vital role in the protection of the ozone layer and minimizing global warming impact.

Refrigeration and air-conditioning industry witnessed rapid changes over the last three decades which led to phasing out the use of several refrigerants and introductions of new alternatives. While, HCFCs still exist in refrigeration and air-conditioning equipment being used by different end-users, the reliance on their alternative – HydroFluoroCarbons (HFCs) - and other new alternatives such as flammable refrigerants is increasing rapidly. Therefore, training and certifying servicing technicians is becoming critical to ensure correct techniques during the installation, servicing, handling and decommissioning practices that ensure safety, prevention of ODS and greenhouse gases, and energy efficiency of ht equipment. Licensing (or mandatory certification) is an important mechanism to verify such competence of refrigeration and air-conditioning servicing technicians.

2. Background

The Technical and Vocational Education and Training (TVET) is responsible for the development and management of comprehensive demand-oriented system for vocational education of the Maldives. The National Occupational Standards (NOS) developed by different sectors are reviewed and endorsed by the Employment sector Councils of the TVET. The endorsed NOS are up to the Maldives National Qualification Framework by Maldives Qualification Authority.

TVET programs are classified into two major types of trainings: Institutional Based Training (IBT) and Employer Based Training (EBT). IBT refers to the study in technical colleges or similar institutions in which students follow a full-time program leading to a certificate or diploma. EBT refers to organized learning provided by employees that takes place in the work.

To be a TVET training provider, each and every training provider whether it is an institution or employer should be registered under TVET Authority and seek the permission prior to commencing trainings. TVET Authority oversees the training providers registered at TVET



Authority to monitor whether the trainings are conducted according to the training guideline. There are 2 institutions namely, Maldives Polytechnic and Maldives Institute of Technology offering RAC courses.

In addition to above, Maldives introduced recently the Refrigerant Driving License (RDL) as part of the program’s pilot phase, which is currently implemented in limited number of countries. The program is focused on handling refrigerants but it addresses the requirements of the Montreal Protocol in terms of sound management of refrigerants.

3. Objective of the consultancy

The main objective of the assignment is to develop the license (or mandatory certification system) to the refrigeration and air-conditioning servicing technicians.

4. Scope of Assignment

The scope of work under this assignment includes three main elements, each composed of several elements. These are stipulated in the table below:

| Elements | Deliverables |
|--|--|
| A. Mapping of the baseline situation and needs | <ol style="list-style-type: none"> 1. Analyze of national occupational and educational programs for refrigeration and air-conditioning professions; 2. Identify the gaps in technical occupational documentation (codes of practice or competency levels) and curricula in terms of their coverage of the needs of Montreal Protocol 3. Analyze the local market acceptance and need for different types of certificates: (1) offered by TVET Authority, (2) through NOU or (3) international such as RDL |
| B. Development of Technical Documentation | <ol style="list-style-type: none"> 1. Propose changes to occupational standards and programs (different levels) to meet the needs of Montreal Protocol 2. Propose update and changes in relevant curricula 3. Develop instructional materials and reference guidelines for TVET authorities to assess and accredit local institutes (or service providers) qualified to conduct the relevant program |
| C. Institutional Setup and Enforcement | <ol style="list-style-type: none"> 1. Develop, consult and recommend local competency-based license system for servicing technicians 2. Develop a mechanism and standard operating procedures for the license system including roles of different authorities (issuing, training, enforcing) 3. Suggest a monitoring mechanism to evaluate the operation and effectiveness of the certification/license system and collect market feedback |



5. Deliverables

| Details of deliverable | Duration |
|--|------------------------------------|
| Final report on baseline situation and needs | 3 weeks upon Signing the Contract |
| Amend national occupational standard (TVETA guidelines should be followed) | 7 weeks upon signing the contract |
| Revise curricula | 11 weeks upon signing the contract |
| Instructional materials and Reference guidelines | 14 weeks upon signing the contract |
| Competency-based license system for servicing technicians | 16 weeks upon signing the contract |
| Mechanism and Standard Operating Procedure for the license system | 18 weeks upon signing the contract |
| Monitoring Mechanism | 20 weeks upon signing the contract |

6. Duration of the Consultancy

Duration of the assignment is 5 calendar months upon signing the contract

7. Reporting Requirements

Consultants are expected to work closely with the National Ozone Unit of Ministry of Environment.

The consultants will report directly to the National Ozone Unit at the Ministry of Environment and will be closely working with the TVET AUTHORITY. Consultant will be home based, however, the Consultant will be required attend all the relevant meetings arranged by the TVET AUTHORITY, Ministry of Higher Education and Ministry of Environment.

The consultants shall attend progress meetings once every 3 weeks with the National Ozone Unit. For meetings held under this consultancy, the Minutes of Meeting must be provided to the NOU within 2 days of the meeting.

8. Qualification and Experience

To be eligible for this assignment consultant or consultancy firm must demonstrate capacity to undertake the assignment by fulfilling qualification criteria listed below. Consultant or firm must also prove the commitment of the qualified team members as listed.



1. Qualifications of the Firm

- Successful completion of 3 or more relevant assignments within the past 05 year-period. Evidence in the form of completion letters/certificates should be submitted to prove successful completion of the listed assignments.
- Relevant assignments will be considered based on scope (measured in duration or price of contract) and being comparable in terms of complexity involving multiple stakeholders

2. Qualifications of the Team Members

I. Education Qualifications of Lead Expert

- Minimum high school education in a related field with more than 5 years' experience in training and development
- Successful completion of at least 3 similar assignment
- Evidence of successful completion or completion letters/certificates should be submitted to prove successful completion of the listed projects.
- Prior experience in standards development, especially in the management of technical and vocational education sector, will be an added advantage.

II. Education Qualifications of Technical Support Staff

- Minimum high school education in a related field with more than 5 years' experience in training and development
- Prior experience in standards development, especially in the management of technical and vocational education sector, will be an added advantage.

9. Evaluation Criteria

- (i) Specific experience of the organization relevant to the assignment: [30]

General Experience of Consultancy Firm will be given marks on number of relevant assignments (10 marks per assignment, full marks will be achieved for organizations that have conducted 03 or more assignments in the past 05 years)

[Relevant completion letters/certificates should be submitted or proper contacts of referencing need to be submitted]

- (ii) Adequacy of the proposed methodology [15]
- a. Methodology [5]
- b. Work plan [10]
- (iii) Key professional staff qualification and competence [55]
- a. **Lead consultant [35]**



Terms of Reference

| | |
|----------------------------|------|
| i. Education Qualification | [15] |
| ii. General Experience | [10] |
| iii. Specific Experience | [10] |

b. Supporting Team [20]

| | |
|----------------------------|------|
| i. Education Qualification | [10] |
| ii. Specific Experience | [10] |

(Proof of experience: Relevant certificates / relevant reference letters)

Total technical score (s): **100**

The formula for determining the financial scores is the following:

$S_f = 100 \times F_m / F$, in which S_f is the financial score, F_m is the lowest price and F the price of the proposal under consideration. The proposal with the lowest financial score will get the maximum financial score of 100 points.

10. Payment Schedule

Payments will be made in accordance with the schedule specified below:

| | REQUIREMENT | ALLOCATION |
|--------------|--|-------------|
| 1 | <ul style="list-style-type: none"> Submission and acceptance of the Report on Baseline situation and needs. | 10% |
| 2 | <ul style="list-style-type: none"> Submission and acceptance of amended national occupational standard and competency standard | 20% |
| 3 | <ul style="list-style-type: none"> Submission and acceptance of revised Curricula | 10% |
| 4 | <ul style="list-style-type: none"> Submission and acceptance of Instructional materials and Reference guidelines | 20% |
| 5 | <ul style="list-style-type: none"> Submission and acceptance of Competency-based license system for servicing technicians | 20% |
| 6 | <ul style="list-style-type: none"> Submission and acceptance of Mechanism and Standard Operating Procedure for the license system | 10% |
| 7 | <ul style="list-style-type: none"> Submission and acceptance of Monitoring Mechanism | 10% |
| Total | | 100% |

Note- Client will provide the facilitation and arrangement of workshops venue, food and in assist in arranging meetings with government institutions



11. Application

Registered entities under Maldives Inland Revenue Authority (MIRA) can apply for this consultancy.

Interested international firms who are not registered under MIRA may apply to this consultancy service through local consultancy firms.

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

- Completed proposal submission form
- **Form 1: Proposal Submission Form)**
- Completed Consultants’ Organization and Experience (**Form 2a: Organization and Form 2b: Experience)**
- Completed Methodology and Work plan (**Form 3: Methodology and Work plan)**
- Team Composition and task Assignment (**Form 4: Team Composition and Task Assignment)**
- Curriculum Vitae (CV) of the proposed team (**Form 5: Curriculum Vitae (CV) of proposed team)**
- Work Schedule (**Form 6: Work Schedule)**
- Financial Proposal (**Form 7: Financial Proposal)**
- Required experiences and other experiences relevant to this TOR must be specified separately or highlighted in their respective CVs.
- Copy of Company/Institution Registration
- Copy of GST Registration certificate issued from Maldives Inland Revenue Authority
- Tax Clearance Report issued from Maldives Inland Revenue Authority
- CD containing a soft copy of the proposal

12. Submission

| | |
|------------------------|---|
| Bid submission | On or before 19 July 2020 at 12:00(am) hours local time |
| Bid opening | 19 July 2020 at 12:00(am) 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 “Do not Open Before (insert date and time of bid opening) - Development of certification and licensing system for |



Terms of Reference

| | |
|---------------------------|---|
| | <p><i>refrigeration and air-conditioning servicing technicians” and the submitting party’s name and address</i> Electronic submission is not permitted. Late proposals will be rejected.</p> |
| <p>Submission address</p> | <p>Procurement Section Ministry of Environment Green Building, Handhuvaree Hingun, Maafannu Male’, 20392, Republic of Maldives procurement@environment.gov.mv</p> |



13. Annex 1: Standard Forms

Form 1: Proposal Submission Form

[Location, Date]

To: [Name and address of Client]

Dear Sirs:

We, the undersigned, offer to provide the consultancy service for “**Development of certification and licensing system for refrigeration and air-conditioning servicing technicians**” in accordance with your Request for Proposal dated [19 July 2020] and our Proposal. We are hereby submitting our Proposal, which includes all required documents as per Request for Proposal.

We hereby declare that all the information and statements made in this Proposal are true and accept that any misinterpretation contained in it may lead to our disqualification.

If negotiations are held during the period of validity of the Proposal, we undertake to negotiate on the basis of the proposed staff. Our Proposal is binding upon us and subject to the modifications resulting from Contract negotiations.

We undertake, if our Proposal is accepted, to initiate the services and fulfill the terms and conditions related this contract.

We understand you are not bound to accept any Proposal you receive.

We remain,

Yours sincerely,

Authorized Signature [In full and initials]: _____

Name and Title of Signatory: _____

Name of Firm: _____ Address: _____



Form 2: Consultants' organization and Experience

Form 2a: Organization

[Provide here a brief (two pages) description of the background and organization of your firm.]



Form 2b: Experience

*[Using the format below, provide information on each contract/assignment for which your Organisation, individually as a corporate entity or as one of the major companies within an association, for carrying out **similar consultancy programmes**. Use 5 pages.] Each project should be accompanied by reference letters from the client to be counted as a valid experience.*

| | |
|---|--|
| Contract/Activity Name: | value of the contract (in MVR): |
| Country: Location within country: | Duration of assignment/activity (months): |
| Name of Client: | Total NO of staff-months of the assignment: |
| Address: | Approx. value of the services provided by your firm under the contract (in MVR): |
| Start date (month/year): Completion date (month/year): | NO of professional staff-months provided by associated Proponents: |
| Name of associated Parties, if any: | Name of senior professional staff of your firm involved and functions performed: |
| Narrative description of Activities/Project: | |
| Description of actual services provided by your staff within the Activities: | |
| Description of institutions dealt with and nature and frequency of interaction: | |

Firm's Name: _____



Form 3: Methodology and Work plan

Technical approach, methodology and work plan are key components of this Proposal. You are suggested to submit your Proposal with the following areas clearly described:

- a) *Methodology for each activity,*
- b) *Work Plan*

a) Technical Approach and Methodology. *In this chapter you should explain your understanding of the objectives of the assignment, approach to the services, methodology for carrying out the activities and obtaining the expected output, and the degree of detail of such output. You should highlight the problems being addressed and their importance, and explain the technical approach you would adopt to address them. You should also explain the methodologies you propose to adopt and highlight the compatibility of those methodologies with the proposed approach.*

b) Work Plan. *In this chapter you should highlight the main activities and sub-activities of the assignment, their content and duration, phasing and interrelations, milestones (including interim approvals by the Client), and delivery dates of the reports. The proposed work plan should be consistent with the technical approach and methodology, showing understanding of the TOR and ability to translate them into a feasible working plan.*



Form 4: Team Composition and Task Assignment

| Professional Staff | | | | |
|--------------------|--------------|-------------------|-------------------|---------------|
| Name of Staff | Organisation | Area of Expertise | Position Assigned | Task Assigned |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |



Form 5: Curriculum Vitae (CV) of proposed team

- 1. **Proposed Position** [*only one candidate shall be nominated for each position*]: _____

- 2. **Name of Firm** [*Insert name of firm proposing the staff*]: _____

- 3. **Name of Staff** [*Insert full name*]: _____

- 4. **Date of Birth**: _____ **Nationality**: _____

- 5. **Education** [*Indicate college/university and other specialized education of staff member, giving names of institutions, degrees obtained, and dates of obtainment*]: _____

- 6. **Membership of Professional Associations**: _____

- 7. **Other Training** [*Indicate significant trainings since degrees under 5 - Education were obtained*]: _____

- 8. **Countries of Work Experience**: [*List countries where staff has worked in the last ten years*]: _____

- 9. **Languages** [*For each language indicate proficiency: good, fair, or poor in speaking, reading, and writing*]: _____



10. Experience/ Employment Record (pertaining to general experience clause in the evaluation criteria set in the TOR, [Starting with present position, list in reverse order every employment held by staff member since graduation, giving for each employment (see format here below): dates of employment, name of employing organization, positions held.]:

From [Month/Year]: To [Month/Year]: _____

Employer: _____

Positions held: _____

Summary of Projects Undertaken/Role: _____

11. Specific Experience (Part A) Successfully completed at least 3 similar assignments relevant to this assignment Starting with latest assignment, list in reverse order (see format here below)::

From [Month/Year]: To [Month/Year]: _____

Assignment Title: _____

Client: _____

Positions held: _____

Summary of assignment/Role by the professional: _____



Form 6: Work Schedule

Please indicate the work schedule with the major and sun activities to achieve the deliverables

| | <i>[1st, 2nd, etc. are days from the start of assignment.]</i> | | | | | | | | | | | | |
|-----------------|--|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|-----|
| | 1st | 2nd | 3rd | 4th | 5th | 6th | 7th | 8th | 9th | 10th | 11th | 12th | ... |
| Activity (Work) | | | | | | | | | | | | | |
| _____ | | | | | | | | | | | | | |
| _____ | | | | | | | | | | | | | |
| _____ | | | | | | | | | | | | | |



Form 7: Financial Proposal

| | Description | MVR |
|--|---------------------------------------|-----|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | Total : | |
| | GST/Applicable tax : | |
| | Total with GST/Applicable tax: | |

Indicate the total cost with detail cost to be paid in Maldivian Rufiyaa.

Note: The total contract price should be quoted inclusive of Goods and Services Tax (GST) or any applicable Maldivian taxes as per the Tax Legislation and must be shown in the breakdown.

*For the dissemination workshop: invitations, catering and venue will be financed directly by the project. This cost should NOT be included in the price quotation.

