



MINISTRY OF ENVIRONMENT

MALE' REPUBLIC OF MALDIVES

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TERMS OF REFERENCE

For

REFRIGERATION AND AIR-CONDITIONING EQUIPMENT RETROFIT OR/AND REPLACEMENT PROGRAM FOR AN ESTABLISHMENT/FACILITY IN MALDIVES

07th October 2020

Prepared by:

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1. Introduction

Maldives is a Party to the Montreal Protocol on Substances that Deplete the Ozone Layer and has acceded to the Vienna Convention and Montreal Protocol in May 1998. 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 of Hydrochlouroflourocarbons (HCFCs) by 2020.

With the import control on HCFCs accompanied with the ban on HCFC based equipment in December 2015, a tremendous increase in the import of Hydroflourocarbons (HFCs) has been observed in the recent years. The ODS survey carried in the Maldives in 2016 shows that with the implementation of HPMP in 2010 and subsequent enforcement of regulations, the percentage of HCFC consumption has gradually decreased and consumption of ODS alternative refrigerants have increased.

The report shows that the consumption level of HCFCs at the end of 2015 was at 40% while ODS alternatives accounts for 60% of the total refrigerant consumed in the country. Consumption of all ODS alternatives are projected to grow more than 250% during 2016-2030 period.

Maldives has ratified the Kigali Amendment (KA) which proposes to phase down the production and usage of hydrofluorocarbons (HFCs) by mid-2040. HFCs are man-made chemicals that are widely used in air-conditioning, refrigeration and foam insulation and are powerful greenhouse gases, more potent than carbon dioxide. As such they contribute significantly to climate change. KA is therefore a significant milestone in the international environmental protection as its achievement could help to reduce the global temperature rise by 0.5 degree Celsius by the year 2100.

The Fisheries Sector and Tourism sector are the largest consumers of ODS and ODS alternatives in the Maldives. Maldives being a tropical island country with a hot and humid climate, various types of cooling, refrigeration and air conditioning equipment are used in various establishments such as resorts, hotels, guesthouse, safari vessels, schools, hospitals and in fisheries complexes.

The Government of the Republic of Maldives through the Ministry of Environment is implementing “Go Green” financed by the New Zealand government and the Kigali Enabling



7. Pre- Qualification

The establishment/facility should have HCFC or HFC based equipment installed.

8. Evaluation Criteria

The establishment/facility will be selected based on the following criteria:

Criteria	Weightage
Proposed HCFC or HFC phase-out in kilogram (formulae to calculate this – proposed total number of HCFC/HFC phase-out from this project (kg) / total number of HCFC/HFC in the premises (kg))	30%
Cost of retrofitting/replacement per kg of refrigerant (least cost proposal per kg / proposed cost per kg * 40)	40%
Proposed co-financing from the establishment Co-financing should be at least 10% of the total price of retrofitting/replacement proposed) (above 50% co-financing – 15Marks, 49%-20% co-financing – 10 marks, 19%-10% co-financing – 10 marks)	15%
Demonstrate availability of a Refrigeration and Air conditioning technician to carry out the servicing and maintenance of the systems (At least one technician with - Minimum 2 years of experiences in the field)	15%

Note: depending on the least proposed price for retrofitting and the availability of budget, more than one proposal can be selected.

9. Payment Schedule

The payment will be released as follows

- 10% upon submission and approval of the work plan
- 10% upon submission and approval of Analysis report of the past one year energy usage of the facility and information of all the existing Refrigeration and air-conditioning systems
- 40% upon submission of the shipment order
- 30% upon completion of retrofitting the systems with funds provided by Ministry
- 10% upon completion of total retrofitting the systems with co-financing from the establishment and monitoring report.



Terms of Reference

- Tax clearance report (Provided from Maldives Inland Revenue Authority with in the past 3 months)
- Bid security as per the instructions given in the advertisement.

Interested establishments may submit their proposals no later than **1100hrs of 20th October 2020** to the following address. Electronic submission is not permitted. Late proposals will be rejected.

Procurement Section
Ministry of Environment
Green Building, Handhuvaree Hingun, Maafannu
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For further information please contact the following.
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11. Annex 1: Standard Forms

Form 1: Profile of the establishment

[Provide here a brief description of the background and organization of the establishment.]



Form 2: Present mechanism for servicing and maintenance of the current systems

[Provide here the current practice of maintaining and servicing the systems. Whether it is done by an in-house technician or contracted to a servicing workshop, etc



Form 3: Proposed HCFC/HFC elimination, and cost for replacing/retrofitting

Information of the existing HCFC/HFC based units			Proposed HCFC/HFC elimination		Cost of retrofitting		
Equipment category (AC, refrigerator, Freezer, etc)	HCFC/HFC based Units in the premises	HCFC/HFC Refrigerant (in kg)	Number of units	Refrigerant (in kg)	Proposed Price for retrofitting / replacing	Co-financing from the establishment	Total Cost of retrofitting or and replacing
Eg: Air Conditioner (9000BTU)	2	1.6	2	1.6	A	B	A+B
Eg: Air Conditioner (18000BTU)	2	3	1	1.5	C	D	C+D
Eg: Cold Room (10HP)	1	11	1	11	E	F	E+F
..	..						
..						
.....						
Total	5	16.6	4	14.1			

- Note: The total cost should be quoted inclusive of Goods and Services Tax (GST) or any applicable Maldivian taxes as per the Tax Legislation
- If HCFC/HFC weight for an item is not given, the cost of that item will not be added to the total proposed cost.
- The Total cost for retrofitting is (proposed price + co-financing amount from the establishment)



