



MALDIVES METEOROLOGICAL SERVICE (MMS)

Hulhule', Republic of Maldives

TERMS OF REFERENCE

Supply, Installation and commissioning of point-to-point link between MMS and Velanage

With reference to Advertisement Number: MMS-A/2018/04

1. INTRODUCTION

Maldives Meteorological Services (MMS) has received assistance from Italian Ministry of Environment, Land and Sea towards strengthening Maldives' efforts to address the impacts of climate change and reduce climate vulnerabilities and associated impacts and risks. Therefore, MMS intends to apply part of the proceeds to strengthen the capacity of MMS by implementing the project "Supply, Installation and commissioning of point-to-point link between MMS and Velanage"

2. SCOPE OF WORKS

The tasks to be undertaken by the selected party under this Terms of Reference are to supply and install point-to-point microwave link at MMS as one point and Velana building as the second point. The Contractor shall supply the needful equipment, cables and accessories as per the specification sheet in section 07 of this TOR.

The project shall be carried on turnkey basis in which the result of the project should be the establishment of live broadcasting of MMS weather presentations.

3. ADDITIONAL GUIDELINES

- ✓ Installation: Supplier must supply, install and configure the equipment (*as per 7 Equipment Specification*) and perform full capacity test run after the installation.
- ✓ Supplier shall bear all cost associated in the supply and delivery of the equipment to the final destination as required by the MMS
- ✓ The Goods supplied under this Contract shall conform to the technical specifications and standards mentioned in the ToR
- ✓ 5% retention of the total contract value will be held for 06 months to measure the quality of the products delivered and installed.
- ✓ The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the MMS shall not be responsible or liable for those costs, regardless of the conduct or outcome of the Bidding process.
- ✓ If the Supplier fails to deliver any or all of the Goods by the Date(s) specified above, MMS will follow accordingly as National Procurement Regulation.
- ✓ Upon the Supplier's fulfillment of all the obligations stipulated in the ToR and making a request for payment to the MMS in writing, accompanied by invoices describing, as

appropriate, the Goods delivered and installed, payments shall be made after being verified via technical engineers at MMS.

4. MANDATORY DOCUMENTATION REQUIREMENTS

The proponent must fulfill the following documentation requirements:

- a) **Total Price** as per the form in Annex 1
- b) Delivery period
- c) Bid validity: Bid validity shall be minimum **120 days** from the date of bid opening.
- d) Business details:
 - Business registration certificate copy
 - GST Registration Certificate copy (if applicable)
- e) Annex 2 – Warranty declaration form

5. BID EVALUATION CRITERIA

INDICATIONS	FORMULAE	POINTS
PRICE	$[(\text{Minimum Quoted Price}) / (\text{Quoted Price}) \times 70]$	70
DELIVERY*	$[(\text{Shortest Delivery Period}) / (\text{Quoted Delivery Period}) \times 05]$	05
Experience**	Points per number of projects completed during the past 5 years. 5 Projects or more completed : 25 points	25
		100

***Delivery period is the total number of work days (excluding public holidays) bidder has proposed to supply, deliver and install the equipment**

****Work experience points will be given based on documental proof of completion of similar projects during the past 5 years. This document shall be from the contract awarding body or organization.**

6. BID DISQUALIFICATION CRITERIA

Bids not conforming to any criteria given below shall be disqualified.

1. The bids not conforming to any technical requirement underlined in this document under section 7.
2. The documents submitted which do not include any mandatory requirements identified under “mandatory documentation requirements” in section 4.

7. EQUIPMENT SPECIFICATION

7.1 Point to Point wireless Gigabit radio

Specification	Requirement
Power Method:	Passive Power over Ethernet (PoE)
Mounting	Pole Mount Kit (included)
Minimum Range:	100 km

Interface:	(1) 10/100/1000 Ethernet Data port (1) 10/100 Ethernet Management Port (1) RJ-12, Alignment Tone Port
Throughput:	1.2+ Gbps
Latency: Full Duplex Mode Half Duplex Mode	< 5 ms at Full Throughput < 10 ms at Full Throughput
Encryption:	128-Bit AES
Automatic Transmit Power Control	Yes
Mode	Full Duplex Half Duplex
GPS:	GPS Clock Synchronization
Wind Survivability:	Up to 80 km/h
Operating Temperature:	-40 to 55° C (-40 to 131°F)

7.2 Fiber to Ethernet PoE Media Converter (1000 Gbps):

Specification	Requirement
Interface Connections	(1) Gbps SFP Port (1) DC Terminal Block (1) DC RJ45 Port DC Injection (1) 1000 Mbps* Ethernet PoE Port
Power Consumption	< 2W
Power Method	DC Terminal Block, 2-Wire, 24VDC or 50VDC DC In RJ45 Port, 2-Pair (4, 5+; 7, 8-) (24VDC Input), or 4-Pair (24VDC or 50VDC Input) Pass-through PoE RJ45 Port, 2-Pair (4, 5+; 7, 8-) (24VDC Input), or 4-Pair (24VDC or 50VDC Input) PoE Pass-through
PoE Output	PoE RJ45 Port, 2-Pair (4, 5+; 7, 8-) (24VDC), or 4-Pair (24VDC or 50VDC) PoE
DC Output	Terminal Block, 2-Wire (24VDC or 50VDC)
Input DC Voltage	16 to 57V
LED Indicators	Power On Connected Activity

7.3 Fiber Distribution Box (FDB):

- a) Fiber Distribution Box to be installed inside the terminal box on Velanage lift room.
- b) Able to input 2 fiber cables and out minimum of 4 LC connectors.
- c) Easy installation, convenience of use and maintenance.

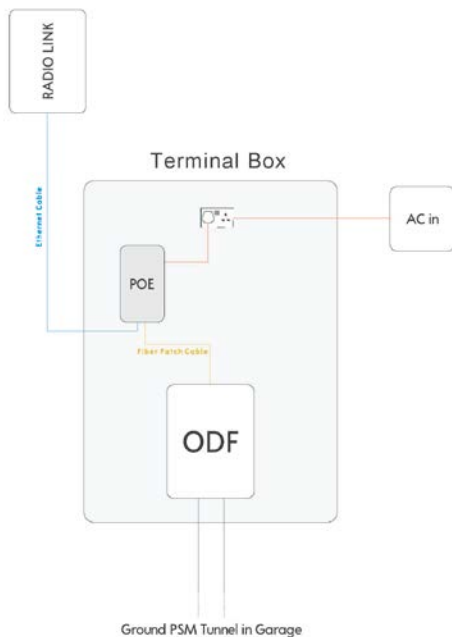
7.4 Box, cables, mounts and other accessories:

Item	Specification / Requirement
Ethernet cable	Cat 6 shielded

electric cable	2.5mm 3 core
Electric socket	13 A double gang
fiber optic cable	Single mode
Fiber patch cable with LC connector	
Single mode SFP	compatible with the PoE Media converter
Surge protector	

* Contractor shall include any other required accessories, mounting devices, cables to complete this project on turnkey basis

8. Installation guidelines



- ✓ Ethernet cable to run from radio link to Terminal box in Velanage. Shall ensure protection and water proofing of cable entry points.
- ✓ Ethernet cable to run from radio link to server room of MMS
- ✓ Terminal Box to be located inside lift room.
- ✓ Install PoE Media converter inside the terminal box.
- ✓ Install Fiber Distribution Box inside the terminal box
- ✓ Install 13A sockets inside the terminal box
- ✓ AC power to be connected to the 13A sockets inside the terminal box from nearest socket (approx. 10 feet).
- ✓ Fiber patch code to connect to the PoE Media converter from Fiber Distribution Box.
- ✓ Two single mode fiber optic cables to run from Fiber Distribution Box inside the terminal box to the PSM terminal box in Velanage ground floor garage area

*Detailed routes to run the cable will be given during the pre-bid meeting.

9. CLARIFICATION AND BID OPENING

9.1 CLARIFICATION

During the process, questions or clarifications regarding this tender document shall be requested by writing to the emails listed below. The last day to submit the queries is **1600hrs of 14th April 2018, Saturday**

Email: projects@meteorology.gov.mv , giyaas@meteorology.gov.mv

9.2 PRE-BID MEETING

Pre-bid meeting is scheduled to provide the needful information regarding this tender on, 09th April 2018, Monday at 13:30. **Kindly please note that attending to the pre-bid meeting is compulsory to be eligible for the tender.** The Pre-bid meeting will be held at the following address.

Maldives Meteorological Service,
Hulhule', 22000
Republic of Maldives
Tel: +960 332 3084, +960 3341554

Email: giyaas@meteorology.gov.mv , projects@meteorology.gov.mv

9.3 BID OPENING

Proposals must be delivered in sealed envelopes titled "*Installation of Fiber link and Live Broadcasting at MMS*" to the address below on **15th April 2018, Sunday at 11:00 hours local time**. Electronic bidding will not be permitted. Late bids will be rejected. Bids will be opened in the presence of the bidders' representatives, who choose to attend in person at the address below on **15th April 2018, Sunday at 11:00 hours local time**.

The **technical proposal** and **financial proposal** must be submitted in ONE sealed envelope with a written **CD** containing the soft copy in PDF format of the proposal and envelop shall be labelled clearly with the name of the assignment and the client name and address with one printed copy to the address.

Maldives Meteorological Service,
Hulhule', 22000
Republic of Maldives
Tel: +960 332 3084, +960 3341554

Email: projects@meteorology.gov.mv , giyaas@meteorology.gov.mv

10. CHECKLIST OF ITEMS TO BE INCLUDED

#	Items	✓/x
1	Annex 1 - Total Price	
2	Delivery period	
3	Bid validity	
4	Business registration certificate copy	
5	GST Registration Certificate copy	
6	Technical specification of each equipment listed under section 7	
7	Annex 2 – Warranty declaration form (Attached annex)	
8	CD containing soft copy of bid in PDF format	

* Please note that checklist above is not mandatory to submit, but included for bidder's reference to make sure they have included all the mandatory documents.

ANNEX 1: FINANCIAL PROPOSAL

#	Description	Qty	MVR
1	Wireless Gigabit Radio	02	
2	Fiber to Ethernet PoE Media Converter (1000 Gbps)	01	
3	Fiber Distribution Box (FDB)	01	
4	Fiber Optic Cable	230 Meters	
5	Other Accessories, Mounting devices and Cables:		
	Item	Qty	
	Ethernet cable	200 feet	
	Electric cable	10 feet	
	Electric socket	01	
	Fiber optic cable	230	
	Fiber patch cable with LC connector	04 units of 1 meter	
	Single mode SFP	02 units	
	Surge protector	02 units	
❖ Contractor shall quote for any other required accessories, mounting devices, cables to complete this project on turnkey basis			
6	Installation and Configuration charges	01	
Sub-total			
GST 6%			
Total with GST 6%			

ANNEX 2: WARRANTY DECLARATION FORM

We as bidder warrants smooth and efficient functioning of the proposed equipment against defects in material and workmanship for a period of one (1) year. Under normal use and service, the proposed equipment will be free from physical defects in material and workmanship during the warranty period, or the product will be repaired or replaced.

We remain,

Yours sincerely,

Authorized Signature:

Name and Title of Signatory:

Name of Firm / Company: