



# **MALDIVES METEOROLOGICAL SERVICE (MMS)**

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**Hulhule' Republic of Maldives**

## **TERMS OF REFERENCE**

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### **PROCUREMENT OF 20KVA UPS TO MMS**

[August 2020]

## 1) Introduction

Maldives Meteorological Service (MMS) is in need of a 20KVA UPS system for its Doppler Weather Radar, located at Hulhule', Velana International Airport. Due to requirement MMS is looking to vendors that meet the technical specification outlined under "Technical Requirements" of this document.

## 2) Technical Requirements

<b>Power</b>	
<b>Ratings (kVA/Watts)</b>	<b>20KVA at minimum 0.9 power factor</b>
<b>Input</b>	
Nominal Input Voltage(s) Supported	230/400VAC
Nominal Input Voltage Description	3-Phase Wye, 4 wire (L1, L2, L3, N, G)
Input Current Distortion	<5% THD
Input Phase	3-Phase
Frequency	50 Hz - 60 Hz
Power Factor	Minimum 0.9
<b>Output</b>	
Nominal Output Voltage(s) Supported	230/400VAC
Nominal Output Voltage Description	3-Phase Wye, 4 wire (L1, L2, L3, N, G)
Output kVA Capacity (kVA)	20
AC-AC efficiency (nominal)	> 91%
DC-AC efficiency (nominal)	> 91%
Frequency (in free-running mode)	50 Hz +/- 0.05
Unbalanced load	<b>Support for 100% unbalanced load</b>
<b>Battery</b>	
Battery type	Valve-Regulated Lead Acid (VRLA) Battery
Battery Housing	Organized and mountable in a rack enclosure (Provide needed rack enclosure and mounting accessories)
Battery replacement	Field replaceable
Battery compartment connectivity	Connection accessories and cabling for battery compartment and UPS unit to be provided.
Battery Autonomy	Minimum 15 minutes at 100% (20kva) UPS load
<b>General</b>	
UPS bypass	Automatic on overload or UPS failure, manual bypass button/switch
Overload	150 % for 5 sec / 125 % for 1 min (online), 110 % for 10 min
Ambient temperature;	
operation:	20 °C to +40 °C
storage:	20 °C to +60 °C
Relative humidity	95 % max, non-condensing
EMC	IEC 62040-2, under EMC 2004/108EC
Emergency Power Off (EPO)	Local EPO with provision for Remote EPO
<b>Battery Runtime</b>	
with 100 % load	minimum 15 min
with 50 % load	minimum 30 min
<b>Communications</b>	
LCD display	Graphical LCD display for control buttons

Audible alarms	Yes
<b>General and Environmental</b>	
Protection Degree	IP 20
Minimum hardware Warranty Period	<b>1 year</b>
<b>User interface, alerts and controls</b>	
Switches	ON button turns UPS Invert on. OFF button turns UPS invert off. And select items displayed on LCD screen
Audible alarm	Alarms signal a variety of operational conditions: low battery, overload, shutdown, bypass and more
LED Indicators	4-LED Display: Displays normal AC input, on battery power, bypass input and fault conditions
<b>Surge / Noise Suppression</b>	
EMI/RFI AC Noise Suppression	Yes
AC Suppression Response Time	Instantaneous
<b>Communications / Management</b>	
communications Interface	Ethernet Interface (UPS system to be manageable via local area network)
Management Interface	Manageable Interface to be available via software or web browser
communication cable	required
Alarm Messages	Configurable email messaging(SMTP) option via network management interface

- a. Vendor must specify delivery period. If a range is given for the delivery period, the maximum of the given range will be assumed for delivery date.
- b. Vendor must provide a minimum of 1 year hardware warranty for the system.
- c. The vendor must also quote for delivery of the system to Velana International Airport, Hulhule’.

The vendor shall address shipment to the following:  
**MALDIVES METEOROLOGICAL SERVICES**  
**Velana International**  
**Airport HULHULE 22000**  
**MALDIVES CONTACT:**  
**ABDULLAH WAHID**  
**TEL: +960 3323084**

- d. **Vendor must quote for Installation and commissioning** of the UPS system, battery compartments and accessories at Maldives Meteorological Service, Radar site located at Velana International Airport.

### 3) Mandatory Documents and Technical Requirements

- a) Financial Proposal
  - Financial Break down
  - CIF to Male', Maldives
- b) Duration of Delivery in days.
- c) Company Registration Certificate
- d) Technical Specification of proposed product
- e) Workplan or Scheduled timeline for project activities (including delivery and installation timelines)
- f) Third-party reference letters of similar works conducted. Projects considered under this category are supply / delivery / installation or a combination of any of the items with the project price above MVR 50,000. Bidder shall provide a minimum of 1 reference letter to indicate bidders competency in the execution of this project.

### 4) Evaluation Criteria

#### Pre Evaluation

Pre Evaluation is a preliminary evaluation done based on the documentation requirement before moving on to the Technical Evaluation. Pre Evaluation determines if bidder is substantially responsive to the terms of this ToR as specified below;

- Bidder conforms to all requirements identified under Section 3. Mandatory Documents and Technical requirements.

Substantially non-responsive bids at this pre evaluation stage will be rejected from further stages of evaluation.

Substantially responsive bids at this pre evaluation stage shall be qualified for further evaluation (Technical Evaluation).

#### Technical Evaluation

Technical evaluation is to confirm if the proposed UPS comply with all the in the technical requirements listed under the requirements. MMS holds the authority to qualify any proposal technically based on their proposed features, only if the evaluation committee finds it acceptable and would achieve the objective fully. Technically non responsive bids from this stage would not be qualified to the financial evaluation.

## Final Evaluation

The proposal would be qualified to this stage after being assessed and passed through both pre evaluation and in Technical Evaluation. In this evaluation, the proposals would be compared to their proposed price, duration of delivery and experience to complete the project. Point system set for the final evaluation is:

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#	Detail	Point
1	Pricing [ ( least bid price / proposed price )x 85 ]	85 %
2	Duration of delivery in days [ ( least duration / proposed duration)x5 ]	05 %
3	Experience [ two point for each document up to maximum 5 documents ]	10 %

Experience would be considered to all submitted letters which is addressed to relevant works completed within the past 5 years.

Projects considered under this category are supply / delivery / installation of UPS or Power backup systems or a combination of any of the items with the project price above MVR 50,000.

Each valid letter would carry 2 points. If the submitted letters are 5 or more it is considered as 10%.

## 5) Payment

**Payment Description and Requirements:** Upon delivery of the goods and completion of onsite installation of the UPS systems, our staff will assess and approve the works to be in compliance with requirement, full payment shall be made as per Financial Regulation of the Republic of Maldives

## 6) Bid Opening Meeting

**Terms:** Bids will be opened immediately in the presence of the candidates or their representatives who choose to attend at the Bid Opening Meeting.

**Date:** 09 September 2020

**Time:** 1300 hrs local time

**Venue:** Sunshine meeting room, Maldives Meteorological Service, Hulhule', Maldives

## **7) Further Information**

Interested bidders may obtain further information by submitting a query by email to the address [info@met.gov.my](mailto:info@met.gov.my) before 1200PM, 06 September 2020.