

**DEPARTMENT OF OCEAN ENGINEERING
INDIAN INSTITUTE OF TECHNOLOGY MADRAS
CHENNAI 600 036,INDIA**

Ref: OED/2016/008/Project/V8UN

Date: 23rd January 2017

FIELD INSTRUMENT FOR SURVEYING

Due date:

* Submission of technical and commercial proposal: **3 pm 15th February 2017**

* Bid opening: **3.30 pm 15th February 2017**

1. Quotations are invited in duplicate for the item shown in enclosed list as Annexure 1.
2. The quotations must be submitted under two bid system indicating clearly technical bid and financial bid on the envelope. Both the bids should be enclosed in the single envelop in a sealed cover.
3. The Quotations duly sealed and super scribed on the envelope with the reference No. and due date, should be addressed to the undersigned so as to reach him on or before the due date stipulated above.
4. The Quotations shall be valid for 180 days from the due date and the period of delivery, warranty terms etc. should also be clearly indicated. A minimum of one year warranty is required.
5. Brochure detailing technical specifications and performance, list of industrial and educational establishments where the items enquired have been supplied must be provided.
6. Compliancy certificate is to be provided indicating conformity to the technical specifications.
7. If the item is under DGS&D Rate contract No. and the price must be mentioned. It may also please be indicated whether the supply can be made direct to us at the Rate contract price (Please note that we are not Direct Demanding Officers). If so please send copy of the RC.
8. Relevant literature pertaining to the items quoted with full specifications (and drawing, if any) should be sent along with the Quotations, wherever applicable. Samples / machine/ equipment if called for should be submitted / demonstrated at free of charges, and collected back at the supplier's expenses.
9. Packing and delivery charges must be clearly indicated.
10. The rate of sales / General Taxes and the percentage of such other taxes legally leviable and intended to be claimed should be distinctly shown along with the price quoted. Where this is not done, no claim for Sales / General Taxes will be admitted at any stage and on any ground whatsoever. The taxes leviable should take into consideration that we are entitled to have concessional Sales Tax applicable to non Government Educational Institutions run with no profit motive for which a concessional Sales Tax Certificate will be issued at the time of final settlement of the bill.
11. IIT Madras is exempt from payment of Excise Duty and is eligible for concessional rate of custom duty. Necessary certificate will be issued on demand. IIT Madras will make necessary arrangements for the clearance of imported goods at the Airport/Seaport. Hence the price should not include the above charges.
12. Goods should be supplied carriage paid and insured.
13. Goods shall not be supplied without an official supply order.
14. Payment: Every attempt will be made to make payment within 30 days from the date of receipt of bill / acceptance of goods, whichever is later.
15. Acceptance and Rejection:- I.I.T. Madras has the right to accept the whole or any part of the Tender or portion of the quantity offered or reject it in full without assigning any reason.

Yours faithfully,



Dr.V.SUNDAR
PROFESSOR
DEPT. OF OCEAN ENGINEERING
INDIAN INSTITUTE OF TECHNOLOGY MADRAS
CHENNAI - 600 036, INDIA.

Annexure-1

DEPARTMENT OF OCEAN ENGINEERING

Ref.: OED/2016/008/Project/VSON

CALL FOR PROPOSALS FOR THE FIELD INSTRUMENT FOR WEATHER STATION

8. Weather Station- 3 Nos

1.Specification

Technical Specifications : Description	Specifications
Data Logger	
Analog Channel	Analog data input -16 with auto Ranging /compatible to adjust all given sensors
Digital Channel	Frequency Type: 04 Channel, Counter Type: 02 Channel and the facility to convert counter channels to frequency channels & vice versa should be provided.
Data Storage	in built facility to store minimum 15 lakh data records & facility with download the stored data on a flash /USB card
Battery & Charging System	Solar panel is required for continuous recharge the batteries. A suitable in-built charge controller having over and under voltage protection should be provided in the DCP. The capacity of the Solar panel should be such that the battery can be charged with 30% to 50% sunshine
Environmental Compatibility	Operating & Storing temp. -20°C to 50°C;humidity- 10-100%; wind speed - up to 50m/s
Data transmission Compatibility	Compatible with V-Sat for transmission the data from remote location to NCAOR, Goa
Air Temperature	
Measurement Range	-40° to 50°C (Storage Temperature(-50oC to 50oC)
Accuracy	±0.1°C with standard configuration settings
Relative Humidity	
Measurement Range	0 to 100% RH, non-condensing
Accuracy	±1.0% RH with standard configuration settings
Wind Speed	
Measurement Range	0 to 100 m/s
Accuracy	±0.3 m/s or not more than 1% of reading
Operating Temperature	-40° to 50°C
Wind Direction	
Measurement Range	0 to 360°
Accuracy	±4°
Operating Temperature	-40° to 50°C
Net Radiometer (four component)	
Pyranometer Spectral Response	310 to 2800 nm
Pyrgometer Spectral Response	4.5 to 42 µm
Operating temperature	-40° to 50°C
Uncertainty in Daily total	Pyranometer: < 5% & Pyrgometer: < 10%
Tilt error	not more than 1.5%
Precipitation Sensor	

Measurement Type	liquid, solid and mixed(snow, rain & mixed)
Measurement Range	0-1000 mm
Operating temperature	-40° to 50°C
Accuracy	± 0.1 mm or ±1% of measured value
Infrared Radiometer	
Response time	< 1 s to changes in target temperature
Operating temperature	-40° to 50°C
Operating RH	0 to 100%
Accuracy	±0.2°C (-10oC to +50oC)
Power Supply	Vendor will provide power budget calculations and A suitable in-built charge controller having over and under voltage protection should be provided in Data Logger. The AWS sites will be charged with the Solar Panel
Software	Compatible and updated (latest) software to work on, activating all the sensors to generate the data including update, download and process the collected data
Tower/Mast	Galvanized stainless steel material withstand in extreme harsh climate at Himalaya (altitude >5000m) 1. Tower - 10m height 2. Tripod – 3/5m compatible to install all sensors Good quality cable with required length for all sensors& it should withstand in given operating temperature of(-40°C to +50°C)
Enclosure Box	Weather proof enclosure suitable for data logger with a power supply and one or more, non-Corrosive, white with UV stabilized including cable entry options
OGC Compliance	Certification required
Any auxillary components and spare parts should be given as optional item	
Annual Maintaneance Requirements, if any to be mentioned for 5 years (optional)	
NB:1.You should indicate the authorized service centre in India if the item is 'imported'.	

Note: Mounting frame / arrangements should be specified or supplied as an optional item.

2.Prerequisite

The vendor has to submit proof of documents for similar studies. In addition, the proof of documents for successful completion of at least two projects of similar nature should be submitted.

3.Payment terms

Please specify the payment terms. IIT Madras reserve the right to negotiate the terms of payment as acceptable to the purchase procedures prevalent from time to time.

4.Terms and conditions

Please quote the rate with the following details.

1. Quotation validity minimum 180 days.
2. Submission of Methodology, Delivery and commissioning periods.
Tax details.
3. Please note IIT Madras is exempted from Excise Duty.

5. Force Majeure

Neither the Agency nor the owner shall be considered in default in performance of its obligations hereunder if such performance is prevented or delayed for any causes beyond the reasonable control of the party affected; such as war, hostilities, revolution, riots, civil commotion, epidemic, major fires, explosions, floods, earthquakes or because of any law, order, proclamatory regulations or ordinance of Government, provided notice in writing of such cause with necessary evidence that the obligation under the Contract is thereby affected or prevented or delayed, is given within 14 days from the happening of the event and in any case it is not possible to serve the notice within the said 14 days period, then within the shortest possible period without delay.

As soon as the cause of Force Majeure has been removed, the party whose ability to perform its obligation has been affected shall notify the other party the actual delay occurred on account of such activities.

Although the time for completion of work shall be suitably extended (not exceeding the period during which the work was stopped on account of Force Majeure clause), such extension shall not result in any financial claim by the Agency against the Owner on any account of such a delay for any other reason whatsoever.

- **Pre-bid meeting will be held on 3rd February 2017 at 4.00 pm – Venue 2nd Floor Seminar Hall, Department of Ocean Engineering, IIT Madras.**