

INVITATION FOR QUOTATION

TEQIP-II/2015/NITECR/Shopping/966

25/02/2016

To,

Sub: Invitation for Quotations for supply of Goods

Dear Sir,

1. You are invited to submit your most competitive quotation for the following goods with item wise detailed specifications given at Annexure I,

Sr. No	Brief Description	Quantity	Delivery Period(In days)	Place of Delivery	Installation Requirement (if any)
1	Automatic Weather Station	1	60	Civil Engineering Department National Institute of Technology, Raipur, Chhattisgarh	Yes

2. Government of India has received a credit from the International Development Association (IDA) towards the cost of the **Technical Education Quality Improvement Programme[TEQIP]-Phase II** Project and intends to apply part of the proceeds of this credit to eligible payments under the contract for which this invitation for quotations is issued.
3. Quotation,
 - 3.1 The contract shall be for the full quantity as described above.
 - 3.2 Corrections, if any, shall be made by crossing out, initialing, dating and re writing.
 - 3.3 All duties and other levies payable by the supplier under the contract shall be included in the unit price.
 - 3.4 Applicable taxes shall be quoted separately for all items.

3.5 The prices quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.

3.6 The Prices should be quoted in Indian Rupees only.

4. Each bidder shall submit only one quotation.

5. Quotation shall remain valid for a period not less than **55** days after the last date of quotation submission.

6. Evaluation of Quotations,

The Purchaser will evaluate and compare the quotations determined to be substantially responsive i.e. which

6.1 are properly signed ; and

6.2 Confirm to the terms and conditions, and specifications.

6.3 The Tenderer / Bidder need to submit the following certificates along with the quotation to

- * Confirm their eligibility:

- * Proof of establishment of Firms/shop/business/manufacturing unit etc. and Dealership certificate from the principals etc.

- * A valid Sales Tax/Commercial Tax/Service Tax certificate should be enclosed

7. The Quotations would be evaluated for all items together.

8. Award of contract:

The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest evaluated quotation price.

8.1 Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of contract.

8.2 The bidder whose bid is accepted will be notified of the award of contract by the Purchaser prior to expiration of the quotation validity period. The terms of the accepted offer shall be incorporated in the purchase order.

9. Payment shall be made in Indian Rupees as follows:

Delivery and Installation - 0% of total cost

Satisfactory Acceptance - 100% of total cost

10. All supplied items are under warranty of **12** months from the date of successful acceptance of items.
11. You are requested to provide your offer latest by **15:00** hours on **17-March-2016**.
12. Detailed specifications of the items are at Annexure I.
13. Training Clause (if any) **YES**
14. Testing/Installation Clause (if any) **YES**
15. Information brochures/ Product catalogue, if any must be accompanied with the quotation clearly indicating the model quoted for.
16. Sealed quotation to be submitted/ delivered at the address mentioned below,
National Institute of Technology (Formerly Engineering College, Raipur) Raipur – 492 010
(Chhattishgarh)
17. We look forward to receiving your quotation and thank you for your interest in this project.

REGISTRAR

NIT RAIPUR

Annexure I

Sr. No	Item Name	Specifications
1	Automatic Weather Station	• Supply of AWS equipment consisting of sensors, data logger (with built in display) and transmission system for display of meteorological parameters. • The AWS equipment should incorporate the state-of-the-art technology and provide capability for unattended operation using a 12V single sealed maintenance-free battery, rechargeable through direct AC regular power supply. All equipment should be qualified for WMO Specifications and suitable for outdoor applications under hot and humid conditions. The AWS must be housed in weather-proof enclosure and shall meet all specified environmental specifications. • The chassis of mast/tower should withstand hostile environment and its moulding should be completely sealed by suitable gasketing to avoid penetration of moisture, salinity etc. • AWS system should have in-built memory of storing data for at least 12 months period. • Commercially available latest technology memory device for data retrieval and transfer of set up of the system. All set up and configuration files should be transferable through the solid state memory device to the data logger and vice versa. • The system should have inbuilt test facility to monitor and display the configuration and functions of various subsystems including present and past data. • Test points to be provided on the system for monitoring the clock and data bit stream and facility to view the above on the front panel display. • RS-232 and USB port are to be provided. The ports are to be used for programming and data retrieval, thus making the system fully compatible with a Personal Computer (PC) / Laptop, as and when required. • Automatic weather station must have sensors for measurement and reporting: air temperature, wind speed, wind direction, relative humidity, atmospheric pressure, rainfall/precipitation, and solar radiation, complete with the Data-logger dedicated for meteorological parameters.

		Data Logger The data logger should be able to perform the following main functions: A multipurpose meteorological data measurement logger to receive data from various sensors and store the values within itself in solid-state smart media flash card/drive type memory. Data should be measured as frequently as 10 seconds or less and stored in 10-minute intervals or better with time tags. The stored data should be retrieved by USB card/drive and also by direct delivery to direct interface with local computer system. The unit should be able to handle various types of sensors with digital, analog, and pulse type outputs. • Operating system: Stored program dedicated to meteorological parameters collection, logging, archiving, and transmitting. • Calculation: Capacity to process most of the meteorological data for the users (avg, min, max...). • Data storage: save all the data on its own memory and on USB memory card. • Power supply: manage the power supply of the Automatic Weather Station such as power supply from battery and/or direct AC power supply. • Communication: manage the communication protocols with the remote server. The different communication protocols are usually GSM, GPRS, RTC, WIFI, USB, and RS232. • If installed with the AWS mast, the datalogger should be housed in a rugged, water and dust proof sealed stainless steel enclosure with padlocks that can withstand direct exposure to harsh environment. The casing should be mountable on the triangular steel tower/mast. In order to protect from excessive heat, the enclosure should be provided with the radiation shield. SOFTWARE FOR DATA ANALYSIS: Software should be compatible to Windows 7 and Windows 8. For analysis like averaging for different timings including daily and monthly averages, maximum and minimum values, maximum average and minimum average, plotting diurnal variation and daily variation, monthly, and seasonal variations, making wind rose. PC based configuration software to configure and install each sensors, set up program to set how measurements are to be done by sensor and how data is to be stored, to retrieve data from the MMC or equivalent unit of the datalogger and display different parameters in readable form and export data to PC/laptop, to display instantaneous
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		and stored data in suitable tabular and graphic format, should have ability to transmit data automatically to the computer. Mast or Tower A rugged, sturdy, mast of minimum 3 m height of weather proof material shall be provided. 1. Power supply: Round the clock power supply must be ensured through direct power connection from the regular AC supply and through a rechargeable battery during failure of regular power supply. 2. All support arms holding sensors should be manufactured from anodized aluminum or galvanized steel and fitted to the tower-scaffold by means of stainless steel and/or galvanized clamps. Cables Sufficient length cables connecting sensors to data logger and to the computer system located approximately 30 m below the AWS shall be provided. All sensors should be supplied with cables that are UV proof to ensure good performance for > 10 years. General Minimum Technical Requirements • Fully comply with WMO standards or better. • Minimum required working life of all sensors is 5 years after installation / commissioning. The awarded supplier will be required to conduct an initial calibration of each sensor after installation and during commissioning phase. • The awarded supplier will be required to conduct on-site training of staff members during the installation and commissioning. • The awarded supplier shall provide manuals for the installation, maintenance and calibration in English language in a print and multimedia format. • All sensors must be coated to protect against dust, moisture and chemicals. • Air temperature and humidity sensors must be protected by a naturally ventilated radiation shield. • All sensors need to be easily interchangeable and shall be independently
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		operated by the electronics and data processing unit so that a possible failure of any of the sensors shall not affect the performance of the remaining sensors. • The response time for all the sensors shall be 10 seconds or better. • The operating temperature for all the sensors and the datalogger shall be - 10 to 60 °C. • Spare parts should be available for a period of 5 years. In the event that a part is no longer available, a substitute identical in function should be identified in time. • The supplier should provide Certificates of Calibration for all sensors. • The supplier shall carry out yearly calibration of all the sensors till next five years from the date of installation and commissioning. Rain gauges • The rain gauge shall be fabricated of corrosion resistant, rugged material or made of anodized aluminum or better material. • Any bucket-type sensor should have a leveling arrangement for horizontal mounting • Any reed switches and electrical components should be fully encapsulated in water proof materials • Protective filter in funnel, also arrangements to prevent entry of debris and insects etc. Wind speed • Gust survival: 80m/s (minimum duration 30 minutes) • Cups must be easily replaceable in the field Wind direction • Gust survival: 80m/s (minimum duration 30 minutes) • Wind vane must be easily replaceable. Solar Radiation • Solar radiation must be measured using ISO-9060 certified standards.
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		Detailed Specification		
		Sensors		
		No.	Parameter Measured	Minimum sensor specifications
		1	Wind Speed (Anemometer)	• Range: 0 to 60 m/s or more • Accuracy: $\pm 2\%$ or better • Threshold: 0.5 m/s or better • Resolution: 0.3 m/s or better • Sensor type: 3 cup rotor coupled to a chopper and IR emitter/detector circuit or better technology
		2	Wind Direction (Wind Vane)	• Range: 0 to 359 degrees from North • Accuracy: $\pm 3^\circ$ or better • Starting threshold: 1 m/s or better • Sensor type: Wind vane coupled to a linear endless potentiometer or better technology
		3	Air Temperature	• Range : - 40 ° to 60 ° C • Accuracy: $\pm 0.1^\circ \text{C}$ • Resolution: 0.1°C • Sensor Type: Platinum RTD element (PT1000)
		4	Relative Humidity	• Range: 0 to 100 % • Accuracy: $\pm 3\%$ or better • Resolution: 0.1% • Sensor type: Capacitive (Solid state)
		5	Solar Radiation	• ISO-9060 First Class Solar Radiation instrument with ISO 9060 Certification
		6	Rain / Precipitation	• Range: 0 to 200 mm/hour or more

				• Accuracy: 2% or better • Sensitivity : 0.2 mm (rainfall per pulse or tip) or better • Measuring Principle: Tipping bucket		
		Other important points: 1. The sensors along with the accessories and facilities, shall be fully compatible with the data logger and transmission system. 2. All the sensors shall be provided with the mounting hardware. 3. In the case of sensors with certain optional features which are required to be ordered separately and are not included as a part of the main offer, the same shall be clearly specified in the bid along with the functions of such features. The bidder shall provide all necessary information to enable taking decision regarding ordering for any such features or not. 4. All the accessories, tools and fixtures required for the installation and dismounting / remounting of the equipment shall be treated as a part of the supply for each type of sensors. Such kits should be supplied with the main AWS systems. Details of each item should be mentioned and quoted in the bid. 5. The supplier has to ensure proper installation, commissioning and operation of the equipment including the safety and security arrangement provisions for the system and sensors installed. 6. All the sensors, datalogger and other equipment shall be compatible with Indian standard power supply conditions. 7. Expected working life time should clearly be stated for all the sensors, battery and other major components. A minimum of 5 years is expected for RH, battery and temperature sensor. All other major components expected lifetime more than 10 years. 8. The bid must also contain a list of Indian Customers of national repute who have bought the same/similar instrument within the last two years, with contact details. 9. The supplier must submit the “satisfactory performance and service” certificate from such customers.				

FORMAT FOR QUOTATION SUBMISSION

(In letterhead of the supplier with seal)

Date: _____

To:

Sl. No.	Description of goods (with full Specifications)	Qty.	Unit	Quoted Unit rate in Rs. (Including Ex Factory price, excise duty, packing and forwarding, transportation, insurance, other local costs incidental to delivery and warranty/ guaranty commitments)	Total Price (A)	Sales tax and other taxes payable	
						In %	In figures (B)
Total Cost							

Gross Total Cost (A+B): Rs. _____

We agree to supply the above goods in accordance with the technical specifications for a total contract price of Rs. ————— (Amount in figures) (Rupees —————amount in words) within the period specified in the Invitation for Quotations.

We confirm that the normal commercial warranty/ guarantee of ————— months shall apply to the offered items and we also confirm to agree with terms and conditions as mentioned in the Invitation Letter.

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

Signature of Supplier

Name: _____

Address: _____

Contact No: _____