

**KERALA AGRICULTURAL UNIVERSITY
ACADEMY OF CLIMATE CHANGE EDUCATION AND RESEARCH**

Vellanikkara-680656
Thrissur

ACCER/GI(1)/477/2019 dated 27 August 2020

OPEN TENDER NOTICE

Sealed and competitive tenders are invited for the purchase and installation of the “*Automatic Weather Station*” at Nedumpana Grama panchayat at Kollam District as detailed below.

- Supply of AWS equipment consisting of sensors, data logger (with built in display) and transmission system incorporating GPS facility and optional slave display unit for display of meteorological parameters.
- Procurement and installation of AWS data receiving earth station hardware and software compatible for TDMA type of data format.
- The AWS equipment should incorporate the state-of-the-art technology (e.g. micro controller, ASIC, FPGA etc) and provide capability for unattended operation for at least one year at remote places using a 12V single sealed maintenance-free battery, rechargeable through a solar panel.
- All equipment should be qualified for MIL STD – 5 454K Specifications and suitable for outdoor applications. The AWS must be housed in weather-proof enclosure and shall meet all specified environmental specifications.
- Transmitter and data logger must have certification from IMD for functional operation through INSAT / Kalpana satellites.
- The chassis/enclosure should withstand hostile environment and its moulding should be completely sealed by suitable gasketing to avoid penetration of moisture, salinity etc.
- The system should have inbuilt test facility to monitor and display the configuration and functions of various subsystems including present and past data.
- Antenna should be portable with LHCP and RHCP modes of polarization (switchable in the field) compatible with INSAT-3A/KALPANA-1/INSAT-3D DRTs.
- 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.
- Two RS-232, one RS-485 and one 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.
- Provision of extra five channels for manual data entry of conventional observations like cloud, visibility etc.

- Source code of the AWS software utilized in the data logger and transmission unit is to be provided along with compilers required for the same. Suitable training in these aspects may also be provided.

Individual Sensor Specifications

Sl.No	Sensor	Specification
1	Air Temperature	Range : -40°C to +60°C Accuracy : 0.2 °C or better (with radiation shield) Resolution : 0.1°C Sensor Type : Resistance type Response Time : 10 sec or better
2	Wind Speed	Range (Operation) : 0 to 60m/s or better Sustainability : Up to 75 m/sec Accuracy : 0.5 m/s or better Resolution : 0.1 m/s Sensor Type : Ultrasonic Threshold : 0.5 m/s or less Response time : 10 sec. or better
3	Wind Direction	Range : 0 to 359 Degrees Accuracy : 5 degrees or better Resolution: 1 deg. Sensor Type : Ultrasonic Threshold : 0.5 m/s or better Response time : 10 sec. or better
4	Pressure Sensor	Range (with single sensor) : 600 to 1100 hPa Accuracy : 0.2 hPa or better Resolution : 0.1 hPa Sensor Type : Solid state Response Time : 10 sec. or better
5	Relative Humidity Sensor	Range : 0 to 100% RH Accuracy : 3% or better Resolution : 1% Sensor Type : Capacitive / Solid-state Response Time : 10 sec. or better
6	Rainfall Sensor	Range : 0 to 1023 mm/hr Accuracy : 5% or better Resolution : 0.5 mm Sensor Type: Tipping bucket rain gauge or any other suitable sensor.
7	Global Radiation Sensor	Range : 0 to 1500 W/m ² Accuracy : 5% or better Resolution : 5 W/m ²

Last date and time for receipt of tender	: 09/09/2020, 2.30PM
Date and time of opening of tender	: 09/09/2020, 3.30PM
EMD	: 1% of cost of quoted items subject to minimum of Rs.1500/- by way of DD drawn in favour of Special Officer, ACCER payable at SBI, KAU campus Code 70670.
Tender Cost	: 0.02% of the cost of tender rounded to the nearest multiple of Rs. 100/- subject to a minimum of Rs. 400 and maximum of Rs. 1500 plus GST 12% and flood cess 1% as applicable.

Terms and Conditions

1. The sealed cover containing the tender should be super scribed Tender for “***Automatic Weather Station***” and should be addressed to the **Special Officer, ACCER, K.A.U. P.O, Thrissur, Kerala-680656.**
2. Each tender should be accompanied by an Earnest Money Deposit (EMD) of 1% of the total cost of the quoted items (subject to minimum of Rs.1500/-) and tender cost as mentioned above by way of Demand Drafts separately drawn in favour of the Special Officer, ACCER, Vellanikkara payable at the State Bank of India, KAU Campus (Branch Code 70670), along with the Tender Agreement. Late and incomplete tenders and tenders without EMD and Agreement will not be accepted.
3. The successful tenderer should execute an agreement in Kerala Stamp Paper worth Rs. 200 (Rupees Two hundred only) at the time of supply of items and furnish a security deposit of 5% of the cost of the equipment quoted in the form of term deposit/bank guarantee /demand draft drawn in favour of Special Officer, ACCER, Vellanikkara payable at the State Bank of India, KAU campus (Branch Code 70670). The format for the agreement can be downloaded from the KAU website www.kau.in/tenders. Firms who are exempted from payment of EMD should furnish copy of the currently valid certificate from the Store Purchase Department, Govt. of Kerala.
4. The cost of the item rate should be inclusive of all taxes for the supply and installation at the site
5. The exact specifications, details of make, model, name of manufacturer, warranty details etc. of the item must be clearly specified. Copies of detailed technical literature and illustrated brochures of the units quoted are to be included along with the offer. Details of maintenance service contract offered after expiry of normal warranty, spare parts availability and after-sales-service facilities available should be indicated. 31/3/2021 Offers without these are liable to be rejected.
6. Offers shall be made CIF Cochin by airfreight for imported instruments and F.O.R. destination for indigenous items. For imported items, charges for insuring up to final inland

destination against all risks including total loss for CIF value plus 10% should be included in the insurance charge. Prices inclusive of ST and other taxes and installation charges may be indicated separately where applicable.

7. Prices quoted should be valid up to 31/3/2021.
8. The decision of the undersigned in finalizing the tenders shall be final and binding.
9. If any Bandh/strike/any unexpected holidays occurs on the date of opening of tender, the tender will be opened at the same time on the next working day.
10. On acceptance the supply order will be placed and supply and installation should be completed within 30 days from the date of receipt of supply order. The invoice in duplicate should be addressed to **The Special Officer, ACCER, Vellanikkara**. The payment will be effected only after satisfactory supply, installation of the items/works at the site, in working condition and necessary demonstration by authorized service personnel. The Special Officer, ACCER, Vellanikkara reserves the right to remove the defaulted name from the list of suppliers permanently or for a specific period.
11. Tenders insisting payment in advance either full or part for releasing the documents through bank are liable for rejection.
12. List of users giving the exact address of the contract persons and the model number of the units available at these locations, have to be provided. Evidence of exclusive/authorized distributorship from foreign principals should be provided along with the offers for overseas products.
13. **The Special Officer, ACCER, Vellanikkara** has the right to accept or reject any or all of the offers without assigning any reason.
14. All the rules and regulation applicable to Government Tenders will be applicable to this tender also.

Copy to:

1. Notice Boards
2. For local circulation
3. Website

Sd/-
Special Officer, ACCER