



NATIONAL CENTRE FOR EARTH SCIENCE STUDIES
(An Institution under the Ministry of Earth Sciences, Govt. of India)
P.B. No. 7250, Akkulam, Thiruvananthapuram-695 011, Kerala.
PURCHASE & STORES DIVISION

Our Ref : PUR-PROC/60/2024-PUR-NCESS
 (To be quoted in all correspondence)

Dt. 28/03/2024

Phone :(0471) 2511531

FAX: (0471) 2442280

E-mail: purchase@ncess.gov.in

ncesspurchase@gmail.com

website : ncess.gov.in

Sub: e-Procurement Tender

Dear Sirs,

Please send your offer along with descriptive catalogue/ pamphlet for the following items not later than **24.04.2024 at 06.00 PM (Tender Opening at 11.00 AM on 26.04.2024)**. The terms and conditions governing the tender are given at the bottom.

<i>Sl. No</i>	<i>DESCRIPTION</i>	<i>QUANTITY REQUIRED</i>
1	Automatic weather station	3 Nos

(Detailed specification and conditions are given separately)

INSTRUCTIONS TO THE TENDERERS AND TERMS AND CONDITIONS

- 1. The quotation should be submitted by e-procurement in PDF format by ‘logging on’ in the website eprocure.gov.in/eprocure/app. The total file size of the documents submitted should not exceed 20 MB.**
- 2. In place of a Bid security, the bidders must sign a Bid securing declaration along with the bid saying that “We accept that if we withdraw or modify our Bids during the period of validity, or if we are awarded the contract and we fail to sign the contract, or to submit a performance security before the deadline defined in the request for bids document, we will be suspended for the period of time decided by NCESS from being eligible to submit bids for contracts with NCESS”. The bids without this declaration or Udyog Aadhar Memorandum /NSIC will be rejected.**
- 3. Bidders from a country which shares a land border with India will not be eligible to participate in this tender, unless the bidder is registered with Department for Promotion of Industry and Internal Trade (DPIIT) under Order (Public procurement No. 1) issued by Ministry of Finance, Department of Expenditure in line with OM No. F.No.6/18/2019-PPD dt 23rd July, 2020 and F.18/37/2020- PPD, dt. 08.02.2021inserting Rule 144 (xi) in GFR 2017.**
- 4. Preference to Make In India: Preference will be given to the eligible Make in India offered products, in accordance with the CVC letter No. 018/VGL/022-377353 dated 20.04.2018, pertaining to Department of Industrial Policy and Promotion (DIPP) in connection with Preference to Make in India, Order**

2017/(PPP- MIIOrder) dated 15.07.2017 pursuant to rule 153(iii) of General Financial Rules 2017. (Declaration may be submitted).

5. Startups: To promote make in India and startups, the prior turnover and prior experience for all startups shall be relaxed subject to their meeting of quality, technical specifications and tender conditions as per tender. The bidder who intends to participate as "startup" company should enclose the certificate towards startup enterprise registration/recognition issued by Department of Industrial Policy and Promotion, Ministry of Commerce and the certificate should be certified by the Chartered Accountant or should be registered with GeM as startup. Applicable certificate should be enclosed.
6. Fall Clause : An undertaking has to be provided by the bidder that it has not supplied / is not supplying similar product / systems or subsystems at a price lower than that offered in the present bid in respect of any other Ministry / Department of the Government of India or PSU and if it is found at any stage that similar product / systems or sub systems was supplied by the bidder to any other Ministry/Department of the Government of India, or a PSU at a lower price, then that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in the cost would be refunded by the bidder to NCESS, if the contract has already been concluded.
7. MAF: The authorisation from the manufacturer should be tender specific, i.e., tender reference number and date should be mentioned in the certificate. A bidder shall not have conflict of interest with other bidders. In cases, where the manufacturer has submitted the bid, the bids of its authorised dealer will not be considered and in case of violations, both infringing bids will be rejected.
8. Bids are liable to be rejected as nonresponsive if a Bidder fails to provide and/ or comply with the required information, instructions etc., incorporated in the Tender Document or gives evasive information/ reply against any such stipulations. furnishes wrong and/ or misleading data, statement(s) etc. In such a situation, besides rejection of the bid as nonresponsive, it is liable to attract other punitive actions under relevant provisions of the Tender Document for violation of the Code of Integrity.
9. During the evaluation of Techno-Commercial or Financial Bids, NCESS may at its discretion, but without any obligation to do so, seek any shortfall information/ documents only in case of historical documents which preexisted at the time of the tender opening and ask the Bidder to clarify its bid by a specified date. Bidder should answer the clarification within that specified date (or, if not specified, 7 days from the date of receipt of such request). The request for clarification shall be submitted in writing or electronically. If discrepancies exist between the uploaded scanned copies and the Originals submitted by the bidder, the original copy's text, etc., shall prevail. Any substantive discrepancy shall be construed as a violation of the Code of Integrity, and the bid shall be liable to be rejected as nonresponsive in addition to other punitive actions under the Tender Document for violation of the Code of Conduct.
10. From the time of bid submission to awarding the contract, no Bidder shall contact NCESS on any matter relating to the submitted bid. If a Bidder needs to contact NCESS for any reason relating to this tender and/ or its bid, it should do so only in writing or electronically. Any effort by a Bidder to influence the Procuring Entity during the processing of bids, evaluation, bid comparison or award decisions shall be construed as a violation of the Code of Integrity, and bid shall be liable to be rejected as nonresponsive in addition to other punitive actions for violation of Code of Integrity as per the Tender Document.
11. After the award of contract, the supplier encounters conditions hindering timely delivery of the Goods, he/she shall promptly inform NCESS in writing about the same and its likely duration. NCESS shall examine the situation and, at its discretion, may agree to extend the delivery schedule, with or without Liquidated Damages (LD). When the period of delivery is extended due to unexcused delay, the amendment extending the delivery period shall, inter alia, be subject LD to a maximum deduction of the 10% of the delayed Goods contract price(all inclusive) and with and without denial clause. Nevertheless, NCESS shall be entitled to the benefit of any decrease in price on account of reduction in or remission of GST, customs duty or on account of any other Tax or duty or any other

ground as stipulated in the price variation clause or foreign exchange rate variation or any other variation clause which takes place after the expiry of the original delivery date.

12. Force Majeure: On the occurrence of any unforeseen event, beyond the control of either Party, directly interfering with the delivery of Goods arising during the currency of the contract, such as war, hostilities, acts of the public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restrictions, strikes, lockouts, or acts of God, the affected Party shall, within a week from the commencement thereof, notify the same in writing to the other Party with reasonable evidence thereof. Unless otherwise directed by the NCESS in writing, the supplier shall continue to perform its obligations under the contract as far as reasonably practicable and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event. If the force majeure condition(s) mentioned above be in force for 90 days or more at any time, either party shall have the option to terminate the contract on expiry of 90 days by giving 14 days' notice to the other party in writing. In case of such termination, no damages shall be claimed by either party against the other. None of the Party shall seek any such remedies or damages for the delay and/ or failure of the other Party in fulfilling its obligations under the contract if it is the result of an event of Force Majeure
13. **The bidder should enclose all relevant documents in a sequential manner as per the tender format.**
14. **The bid should contain the Bid securing declaration, Authorization from manufacturer, Details of Service Centre, Technical details with make, model and specification of each component, Technical Compliance statement, List of Customers, Brochures etc., wherever applicable.**
15. Catalogue/Brochure/Manual should be submitted along with the offer wherever necessary.
16. Warranty / Guarantee Clause needs to be mentioned necessarily wherever applicable.
17. The material should be delivered at NCESS or installed at the specified location and so the quotation should include all the charges for the delivery at NCESS/installation.
18. **In INR orders, the Customs Duty Exemption Certificate will be given to the supplier upon request. But the entire responsibility of customs clearance and delivery at NCESS will rest with the supplier. High sea sale is not accepted and should not be quoted.**
19. **The offer should be valid for 180 days from the due date of opening of tender.**
20. The Purchaser reserves right to accept any tender in part or full without assigning any reasons. The enquiry is not a commitment and the purchaser reserves the right to reject or cancel any or all offers.
21. **Payment Terms:**
 - If Indian Purchase Order**
 - a. 90% upon delivery and acceptance of entire system by NCESS and submission of Invoice, applicable Test Certificate, Installation Certificate, Warranty Certificate.
 - b. 10% will be paid against submission of advance bank guarantee from a nationalized bank for the like amount valid for the warranty period plus 60 days or after successful completion of warranty period.
 - If Foreign Purchase Order**
 - a. LC will be established for 100% of order value against which 90% will be released on submission of Order Acceptance, Proforma Invoice, LC details and other shipping documents etc.,
 - b. Balance 10% will be after submission of advance bank guarantee from a nationalized bank for the like amount valid for the warranty period plus 60 days or successful completion of warranty

period or against

Net payment will be released after statutory deductions. No advance payment will be allowed and no other payment terms will be considered.

22. **In the event of placement of order, the successful bidder shall provide a Performance Bank Guarantee from a Nationalised Bank for 3 – 5 % of the value of the contract (DoE OM No. F.1/2/2023/PPD dated 01.01.2024). The PBG shall stand valid for the warranty period + 60 days.**
23. Any further changes in the details, like the date of opening or specification, will be posted on our web site only.

Yours faithfully,

Sd/-

Deputy Manager (Purchase & Stores)

SL.No.	<u>Automatic weather station</u> Automatic weather station to measure atmospheric temperature, humidity, wind, pressure and rainfall.
	Air Temperature & Relative Humidity sensor
1	Air Temperature Sensor: IEC Class B, PT100 RTD or CMOS.
2	Air Temperature Range: -50°C to 60°C.
3	Air Temperature Accuracy: $\pm 0.3^\circ\text{C}$ or better.
4	Relative Humidity Sensor: Capacitive or CMOS type with PTFE protection.
5	Relative Humidity Range: 0 to 100% RH.
6	Relative Humidity Accuracy: $\pm 2\%$ or better
7	Sensor Input Voltage: +12V or less
8	Sensor I/O interface: Analog serial interface compatible with data logger or SDI-12.
9	Sensor cable length: 10m
10	Radiation shield: Multiplate shield for sensor protection. UV stabilised thermoplastic material with proper mounting bracket.
11	Mounting material should be aluminium or stainless steel.
	<u>Wind Speed & Direction Sensor</u>
12	Wind Speed Type: Helicoid propeller.
13	Wind Speed Range: 0 to 60 m/s.
14	Wind Speed Accuracy: ± 0.5 m/s or better.
15	Wind Speed Threshold: 1 m/s.
16	Wind Speed Output: AC sine wave compatible with pulse count channel of data logger.
17	Wind Direction Type: Potentiometer Balanced vane with 0.5% linearity or better.
18	Wind Direction Mechanical Range: 360° .
19	Wind Direction Electrical: 352° (8° open) or better.
20	Wind Direction Accuracy: $\pm 3^\circ$ or better.
21	Wind Direction Output: DC signal with regulated excitation voltage from data logger.
22	Excitation voltage: 12V – 15V
23	Sensor Output voltage: 0 to 5VDC on full scale.
24	Sensor cable length: 10m.
25	Sensor mounting assembly should have a reference indication or orientation arrangement to set 0° reference.
26	Mounting post and pipe should be aluminium or stainless steel.
	<u>Rainfall Sensor</u>

27	Sensor type: Tipping bucket.
28	Bucket Material: Powder coated or anodized aluminum.
29	Tipping Material: UV resistant ABS plastic with steel bearings and pivot.
30	Operating Temperature: +5° to +50°C.
31	Rainfall per tip: 0.254 mm.
32	Volume per Tip: 4.73 ml/tip.
33	Accuracy: 1.0% up to 2 in/hour.
34	Output: Compatible with pulse count input of datalogger.
35	Output Cable: Shielded wire with 10m length.
36	Mounting system: Anodized aluminium or stainless-steel side bracket with level indicator and adjustable pipe clamps for pole or mast mounting.
	<u>Atmospheric Pressure Sensor</u>
37	Meteorological Grade Barometric pressure sensor.
38	Sensor type: Silicone based capacitive sensor element.
39	Measuring Range: 500hPa to 1100hPa.
40	Operating Temperature: -40°C to 60°C.
41	Accuracy: ±0.5 hPa or better.
42	Resolution: 0.1 hPa or better.
43	Enclosure: Stainless steel or Polycarbonate.
44	Pressure fitting: 1/8-inch barbed fitting.
45	Cable length: 1m or better length for connection to datalogger.
46	Input voltage: 12Vdc.
47	Sensor output: SDI-12 data interface.
48	Sensor Mounting: Provision to fix the sensor by screwing it inside a suitable enclosure.
	<u>Datalogger</u>
49	Maximum sampling rate: 100ms.
50	Analog Inputs: minimum 4 single ended or differential channels.
51	Digital Input: Minimum 8 I/O terminals with pulse counter and SDI channel.
52	Excitation Voltage Channels: Minimum 2 independently configurable terminals (used as a switched and regulated power source up to +5V).
53	Excitation Voltage range: 0.2V to 5V with 12-bit DAC resolution.
54	Switched voltage terminal: 12V terminal (minimum 2).
55	Analog input voltage: -100 mV to +2500 mV.

56	ADC resolution: 24 Bit or more.
57	Pulse measurement: Configurable for high frequency and low AC input (up to 20kHz).
58	Digital I/O voltage: -10V minimum and +15V maximum.
59	SDI-12: Independent channels (at least 2 terminals) with SDI-12 Standard v1.3 or above.
60	Data Storage: Integrated serial flash storage or Memory card for data storage.
61	Appropriate Data storage capacity for one year with 1 inute duration.
62	Data logger should be user programmable and have the facility to customize the data storing interval to minute, hourly and daily basis.
63	Provision for the user to program the data logger through a set of instructions and a dedicated editor and compiler or through a GUI interface for setting up the sensors, measurements and data storge interval.
64	Provision for setting up different sensors to different scan rates and data storing intervals.
65	Communication Ports: RS232 (dedicated 9 pin interface), RS485, USB Type C/Micro B, Integrated I/O or serial port support for connecting cellular modem.
66	Communication Protocols: PakBus Encryption, Modbus RTU/TCP, SDI-12 and internet protocols like IPv4, IPv6, UDP, TCP, DNS, DHCP, Telnet, HTTP(S), FTP(S), SMTP/TLS for connecting 3G/4G modem.
67	Real-Time Clock: Internal battery powered with an accuracy of ± 5 min. per year.
68	Operating temperature: -40°C to 70°C .
69	Power Supply: External 12V battery.
70	Inbuilt charger/regulator for charging the battery from solar panel.
71	Charger power should be between 18 – 24Vdc.
72	Integral surge and over voltage protection at power input terminals.
73	Casing material: Powered coated aluminium or high-impact-resistant polycarbonate
	<u>Software</u>
74	Dedicated software and device drivers which are compatible with Windows 10 or above need to be provided for data visualization in desktop PC or laptop.
75	Software has the facility to customize the real-time data viewing interval. Minimum updating interval should be 10sec.
76	Software has provision to indicate the fill time of data memory based on user programmable storage intervals, provision to collect the data on demand and data collection in ASCII/CSV/similar common format, provision for the user to select the data storage location in host PC.
77	Software has the facility to view offline data in a numeric format or in graphical layouts and to analyses the data.
78	Windows based programming software (editor & compiler or GUI based) for programming the data logger and to control and configure the sensors should be provided.
	<u>Power Requirement and Mounting</u>

79	Weather station should be solar powered and should work independently without AC power.
80	All sensors should be powered from the data logger.
81	Data logger power supply: 12VDC from SMF battery.
82	Solar panel of at least 40W with a dedicated charging circuit or integrated datalogger charger to charge the battery.
83	Battery with sufficient Ah rating needs to be provided that have capacity to operate the sensors and datalogger up to two weeks without sunshine.
84	Three-meter tripod for fixing all the above sensors in an outdoor environment.
85	Tripod material should be aluminium or stainless steel. All clamps, nuts & bolts used to fix sensors, data logger and solar panel should be stainless steel.
86	Data logger, battery, charger etc. should be fixed in weather-resistant enclosure made of fiberglass or waterproof plastic enclosure. Enclosure needs to be UV protected and have reduced temperature gradients inside it.
	<u>General conditions</u>
87	The vendor should provide onsite installation support in the selected study areas in Kerala.
88	If required, bidder must carry out a technical demonstration at NCESS, Trivandrum.
89	USB (1m cable) and RS485(50m cable) should be supplied for connecting the AWS with PC for data collection and programming the data logger.
90	Essential cables/tools/hardware materials like screws, nuts & bolts etc. for fixing the tripod and those required for completing the installation should be provided by the supplier.
91	Supplier should install and fix the tripod properly on a concrete base and the necessary materials for the construction of concrete base should be provided by the supplier.
92	Proper manuals for datalogger, software and datasheet for each of the sensors from OEM should be provided. Also, calibration certificate for each sensor should be provided.
93	Weather station sensors need a proven track record of research usage.
94	The bidder or should provide a list of automatic weather stations installed at Govt./public undertaking laboratories or research institutes under MoES/CSIR/DST/ISRO/IMD/other reputed R&D institutions in India during the last five years.
95	Should quote for 3-year standard warranty.



NATIONALCENTRE FOR EARTH SCIENCE STUDIES

P.B. No. 7250, MEDICAL COLLEGE P.O., AKKULAM, THIRUVANANTHAPURAM-695 011, INDIA

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Fax: 91-471-2442280

e-mail: purchase@ncess.gov.in

TENDER FORM

Tender No. & Date : **PUR-PROC/60/2024-PUR-NCESS Dt.28/03/2024.**
Due Date : **24.04.2024 (06.00 PM).**
Date of Opening : **26.04.2024 (11.00 AM).**
Venue of Opening : National Centre for Earth Science Studies, P.B.No.7250,
Medical College P.O., Thiruvananthapuram – 695 011.
Description of stores : **Automatic weather station**

Quantity : **3 Nos**

Sirs,

The Senior Manager on behalf of the Director, National Centre for Earth Science Studies (NCESS), invites bids for the supply of stores mentioned above. The tender documents are classified as Annexure-A and Annexure-B. Annexure-A is a specimen tender form meant for suppliers and the bid should contain all the details specified therein. The instructions to the tenderers and the general terms and conditions applicable to the Purchase Orders placed by NCESS are given under Annexure-B. Those who are able to quote for the stores in accordance with the above requirements, may please furnish their offer through eprocurement, on or before the last date and time specified in the tender.

Any deviations from the terms and conditions of the Annexure-B must be clearly indicated in the offer.

Yours sincerely,
Sd/-

Senior Manager

ANNEXURE A

The Senior Manager,

**National Centre for Earth Science Studies,
P.B.No.7250, Akkulam, Medical College PO,
Thiruvananthapuram – 695 011.
Kerala, India**

Sir,

Sub: Your Tender NoDated.....

I/We hereby offer you to supply the stores detailed below at the price hereunder quoted and agree to hold this offer open tillI/We shall bind to supply the stores hereby offered, upon the issue of the purchase order communicating the acceptance thereof on or before the expiry of the delivery date therein. You are at the liberty to accept any one or more of the items of such stores. I/We, notwithstanding that the offer in this tender has not been accepted in whole shall be bound to supply to you such items and such portion or portions of one or more of the items as may be specified in the purchase order communicating the acceptance.

1. Technical Compliance Statement.

		Spec offered (with make and model)	Relevant Brochure Nos.	Whether complied
SL.No.	<u>Automatic weather station</u> Automatic weather station to measure atmospheric temperature, humidity, wind, pressure and rainfall.			
	<u>Air Temperature & Relative Humidity sensor</u>			
1	Air Temperature Sensor: IEC Class B, PT100 RTD or CMOS.			
2	Air Temperature Range: -50°C to 60°C.			
3	Air Temperature Accuracy: $\pm 0.3^\circ\text{C}$ or better.			
4	Relative Humidity Sensor: Capacitive or CMOS type with PTFE protection.			
5	Relative Humidity Range: 0 to 100% RH.			
6	Relative Humidity Accuracy: $\pm 2\%$ or better			
7	Sensor Input Voltage: +12V or less			
8	Sensor I/O interface: Analog serial interface compatible with data logger or SDI-12.			
9	Sensor cable length: 10m			
10	Radiation shield: Multiplate shield for sensor protection. UV stabilised thermoplastic material with proper mounting bracket.			
11	Mounting material should be aluminium or stainless steel.			
	<u>Wind Speed & Direction Sensor</u>			
12	Wind Speed Type: Helicoid propeller.			
13	Wind Speed Range: 0 to 60 m/s.			
14	Wind Speed Accuracy: ± 0.5 m/s or better.			
15	Wind Speed Threshold: 1 m/s.			
16	Wind Speed Output: AC sine wave compatible with pulse count channel of data logger.			
17	Wind Direction Type: Potentiometer Balanced vane with 0.5% linearity or better.			
18	Wind Direction Mechanical Range: 360°.			
19	Wind Direction Electrical: 352° (8° open) or better.			
20	Wind Direction Accuracy: $\pm 3^\circ$ or better.			
21	Wind Direction Output: DC signal with regulated excitation voltage from data logger.			

22	Excitation voltage: 12V – 15V			
23	Sensor Output voltage: 0 to 5VDC on full scale.			
24	Sensor cable length: 10m.			
25	Sensor mounting assembly should have a reference indication or orientation arrangement to set 0° reference.			
26	Mounting post and pipe should be aluminium or stainless steel.			
	<u>Rainfall Sensor</u>			
27	Sensor type: Tipping bucket.			
28	Bucket Material: Powder coated or anodized aluminum.			
29	Tipping Material: UV resistant ABS plastic with steel bearings and pivot.			
30	Operating Temperature: +5° to +50°C.			
31	Rainfall per tip: 0.254 mm.			
32	Volume per Tip: 4.73 ml/tip.			
33	Accuracy: 1.0% up to 2 in/hour.			
34	Output: Compatible with pulse count input of datalogger.			
35	Output Cable: Shielded wire with 10m length.			
36	Mounting system: Anodized aluminium or stainless-steel side bracket with level indicator and adjustable pipe clamps for pole or mast mounting.			
	<u>Atmospheric Pressure Sensor</u>			
37	Meteorological Grade Barometric pressure sensor.			
38	Sensor type: Silicone based capacitive sensor element.			
39	Measuring Range: 500hPa to 1100hPa.			
40	Operating Temperature: -40°C to 60°C.			
41	Accuracy: ±0.5 hPa or better.			
42	Resolution: 0.1 hPa or better.			
43	Enclosure: Stainless steel or Polycarbonate.			
44	Pressure fitting: 1/8-inch barbed fitting.			
45	Cable length: 1m or better length for connection to datalogger.			
46	Input voltage: 12Vdc.			
47	Sensor output: SDI-12 data interface.			
48	Sensor Mounting: Provision to fix the sensor by screwing it inside a suitable enclosure.			
	<u>Datalogger</u>			

49	Maximum sampling rate: 100ms.			
50	Analog Inputs: minimum 4 single ended or differential channels.			
51	Digital Input: Minimum 8 I/O terminals with pulse counter and SDI channel.			
52	Excitation Voltage Channels: Minimum 2 independently configurable terminals (used as a switched and regulated power source up to +5V).			
53	Excitation Voltage range: 0.2V to 5V with 12-bit DAC resolution.			
54	Switched voltage terminal: 12V terminal (minimum 2).			
55	Analog input voltage: -100 mV to +2500 mV.			
56	ADC resolution: 24 Bit or more.			
57	Pulse measurement: Configurable for high frequency and low AC input (up to 20kHz).			
58	Digital I/O voltage: -10V minimum and +15V maximum.			
59	SDI-12: Independent channels (at least 2 terminals) with SDI-12 Standard v1.3 or above.			
60	Data Storage: Integrated serial flash storage or Memory card for data storage.			
61	Appropriate Data storage capacity for one year with 1 inute duration.			
62	Data logger should be user programmable and have the facility to customize the data storing interval to minute, hourly and daily basis.			
63	Provision for the user to program the data logger through a set of instructions and a dedicated editor and compiler or through a GUI interface for setting up the sensors, measurements and data storge interval.			
64	Provision for setting up different sensors to different scan rates and data storing intervals.			
65	Communication Ports: RS232 (dedicated 9 pin interface), RS485, USB Type C/Micro B, Integrated I/O or serial port support for connecting cellular modem.			
66	Communication Protocols: PakBus Encryption, Modbus RTU/TCP, SDI-12 and internet protocols like IPv4, IPv6, UDP, TCP, DNS, DHCP, Telnet, HTTP(S), FTP(S), SMTP/TLS for connecting 3G/4G modem.			
67	Real-Time Clock: Internal battery powered with an accuracy of ± 5 min. per year.			
68	Operating temperature: -40°C to 70°C.			
69	Power Supply: External 12V battery.			
70	Inbuilt charger/regulator for charging the battery from solar panel.			
71	Charger power should be between 18 – 24Vdc.			

72	Integral surge and over voltage protection at power input terminals.			
73	Casing material: Powered coated aluminium or high-impact-resistant polycarbonate			
	<u>Software</u>			
74	Dedicated software and device drivers which are compatible with Windows 10 or above need to be provided for data visualization in desktop PC or laptop.			
75	Software has the facility to customize the real-time data viewing interval. Minimum updating interval should be 10sec.			
76	Software has provision to indicate the fill time of data memory based on user programmable storage intervals, provision to collect the data on demand and data collection in ASCII/CSV/similar common format, provision for the user to select the data storage location in host PC.			
77	Software has the facility to view offline data in a numeric format or in graphical layouts and to analyses the data.			
78	Windows based programming software (editor & compiler or GUI based) for programming the data logger and to control and configure the sensors should be provided.			
	<u>Power Requirement and Mounting</u>			
79	Weather station should be solar powered and should work independently without AC power.			
80	All sensors should be powered from the data logger.			
81	Data logger power supply: 12VDC from SMF battery.			
82	Solar panel of at least 40W with a dedicated charging circuit or integrated datalogger charger to charge the battery.			
83	Battery with sufficient Ah rating needs to be provided that have capacity to operate the sensors and datalogger up to two weeks without sunshine.			
84	Three-meter tripod for fixing all the above sensors in an outdoor environment.			
85	Tripod material should be aluminium or stainless steel. All clamps, nuts & bolts used to fix sensors, data logger and solar panel should be stainless steel.			
86	Data logger, battery, charger etc. should be fixed in weather-resistant enclosure made of fiberglass or waterproof plastic enclosure. Enclosure needs to be UV protected and have reduced temperature gradients inside it.			
	<u>General conditions</u>			
87	The vendor should provide onsite installation support in the selected study areas in Kerala.			
88	If required, bidder must carry out a technical demonstration at NCESS, Trivandrum.			
89	USB (1m cable) and RS485(50m cable) should be supplied for connecting the AWS with PC for data collection and programming the data logger.			

90	Essential cables/tools/hardware materials like screws, nuts & bolts etc. for fixing the tripod and those required for completing the installation should be provided by the supplier.			
91	Supplier should install and fix the tripod properly on a concrete base and the necessary materials for the construction of concrete base should be provided by the supplier.			
92	Proper manuals for datalogger, software and datasheet for each of the sensors from OEM should be provided. Also, calibration certificate for each sensor should be provided.			
93	Weather station sensors need a proven track record of research usage.			
94	The bidder or should provide a list of automatic weather stations installed at Govt./public undertaking laboratories or research institutes under MoES/CSIR/DST/ISRO/IMD/other reputed R&D institutions in India during the last five years.			
95	Should quote for 3-year standard warranty.			

2. **The list of Indian Customers who have bought the same/similar instrument within the last two years, with contact details:**

3. **Details of Service centre: (In case of dealers, also please state whether Authorised Dealership Certificate is enclosed)**

4. **We accept that if we withdraw or modify our Bids during the period of validity, or if we are awarded the contract and we fail to sign the contract, or to submit a performance security before the deadline defined in the request for bids document, we will be suspended for the period of time decided by NCESS from being eligible to submit bids for contracts with NCESS.**

Place of Delivery: Stores, National Centre for Earth Science Studies, P.B.No.7250, Medical College P.O., Thiruvananthapuram – 695 011, Kerala, India.

I / We understand the instructions to the tenderers and General Terms and Conditions of the Contract governing supplies detailed in Annexure-B. I/We have thoroughly examined the specifications of the stores referred above and my/our offer is to supply stores strictly in accordance with and subject to the terms and conditions stipulated in Annexure-B.

Stamp and Signature of the Tenderer

ANNEXURE B

INSTRUCTIONS TO THE TENDERERS AND GENERAL TERMS AND CONDITIONS OF THE CONTRACT

1. **PRICES:** Tenders shall be made in ENGLISH and submitted with price for delivery at National Centre for Earth Science Studies, Akkulam, Medical College PO, Thiruvananthapuram-11, Kerala. The quoted amount should be inclusive of all charges like packing & forwarding charges, inland freight & other related charges, freight, statutory levies, unloading, installation etc.
2. **RIGHTS OF THE PURCHASER:** The Purchaser shall be under no obligation to accept the lowest or any other tender and shall be entitled to accept or reject any tender in part or full without assigning any reason whatsoever.
3. **VALIDITY OF OFFER:** The prices quoted should be firm and quotation has to be valid for a period of 120 days from the date of opening of tender.
4. **CATALOGUE:** Tenderers shall furnish Leaflet/Technical Literature of the Stores offered by him along with the offer.
5. **TRANSPORTATION:** Stores shall be supplied under supplier's risk.
6. **MODE AND TERMS OF PAYMENT:** Full payment after successful installation/commissioning and acceptance of stores at Purchaser's Site.
7. **WARRANTY:** The supply made by the supplier shall be of best quality and workmanship shall be in accordance with the specifications stipulated in the Purchase Order. Defects/deficiencies shall be made good by the supplier free of cost, notified within the applicable warranty period.
8. **SUBMISSION OF TENDERS:** The quotation should be submitted by e-procurement in PDF format by 'logging on' in the website eprocure.gov.in/eprocure/app
9. **ENGINEER'S SERVICE MANUAL AND INSTRUCTION MANUAL:** The Engineer's Service Manual including Circuit Diagram and Instruction Manual (Original Copies) of the equipment shall be supplied along with the delivery/shipment by the supplier in the event of a purchase order. This aspect should be clearly indicated in the offer.

10.DELIVERY/SHIPMENT:

a. The time for delivery of the stores stipulated in the purchase order shall be deemed to be the essence of the contract and delivery must be completed not later than the period specified therein.

b. Failure and termination: If the contractor fails to deliver the stores or any part thereof within the period prescribed for such delivery, the purchaser shall be entitled at his option either;

i) to recover from the contractor as agreed liquidated damages and not by way of penalty, a sum of 2% of the price of any stores which the supplier has failed to deliver as aforesaid, for each month or part of a month, during which the delivery of such stores may be in arrears or

ii) to purchase elsewhere, without notice to the contractor on the account and at the risk of the contractor, the stores not delivered or there of a similar description (where others exactly complying with the particulars are not in the opinion of the purchaser readily procurable, such opinion being final) without cancelling the contract in respect of the portion of stores not yet due for delivery.

iii) to cancel the contract or a portion thereof and if so desired, to purchase or authorize to purchase of stores not so delivered or others of similar description (where others exactly complying with the particulars are not in the opinion of the purchaser readily procurable, such opinion being final) at the risk and cost of the contractor.

11.LAW GOVERNING THE CONTRACT: The contract shall be governed by the laws of India for the time being in force. The marking of all stores supplied must comply with the requirements of Indian Acts relating to Merchandise Marks and all the rules made under such Acts.

12. JURISDICTION: The courts within the local limits of Thiruvananthapuram, the place from the purchase order is issued, will be the jurisdiction to deal with and decide any matter arising out of the contract subject to the clause 18 hereof.

13.INDEMNITY: The contractor shall at all, times indemnify the purchaser against all claims which may be made in respect of stores for infringement of any right protected by patent, registration of design or trade mark and shall take all risk of accidents or damage which may cause a failure of the supply from whatever cause arising and the entire responsibility for the sufficiency of all the means used by him for the fulfilment of the contract.

14.ARBITRATION: Notwithstanding anything contained in clause 16 above, in the event of any question, dispute or difference arising under these conditions or any condition contained in the purchase order or in connection with this contract (except as to any matters the decision of which is specially provided for by these conditions) the same may be referred to the sole arbitration of the Director, National Centre for Earth Science Studies, Thiruvananthapuram or some other person appointed by him, there will be no objection that the arbitrator is a Govt. servant, who has to deal with matters to which the contract relates or that in the course of his duties as a Government servant he has expressed views on all or any of the matters in the disputes or difference. The award of the arbitrator shall be final and binding on the parties to this contract.

Terms of this contract: -

a) If the arbitrator be the Director, NCESS, (i) in the event of his being transferred or vacating his office by resignation or otherwise, it shall be lawful for his successor in the office either to proceed with the reference himself, or to appoint another person as arbitrator to (ii) in the event of his being unwilling or unable to act for any reason, it shall be lawful for the Director, NCESS to appoint another person as arbitrator;

Or

b) If the arbitrator be a person appointed by the Director, NCESS, in the event of his dying, neglecting or refusing to act, or resigning or being unable to act for any reason, it shall be lawful for the Director, NCESS, to proceed with the reference himself or to appoint another person as arbitrator in place of the outgoing arbitrator.

Subject as aforesaid, the Arbitration Act, 1940 and the rule there under and any statutory modifications thereof for the time being in force shall be deemed to apply to the arbitration proceeding under this clause. The arbitrator shall have the power to extend with the consent of the purchaser and the contractor the time for making and publishing the award. The venue of arbitration shall be the place as the purchaser in the absolute discretion may determine.

15. EXERCISING THE RIGHTS & POWERS OF THE PURCHASER: All the rights, discretions and power of the purchaser under the contract shall be exercisable by and all notices on behalf of the purchaser shall be given by the Director or the Senior Manager of Centre for Earth Science Studies and any reference to 'the opinion of the purchasers' in the terms and conditions contained in this general conditions of the contract shall mean and be construed as reference to the opinion of any of the persons mentioned in this clause.

16. EXEMPTION FROM PAYMENT OF DUTIES: The purchaser is eligible for availing customs duty at concessional rate under the relevant rules.

17. SPARES & ACCESSORIES: Offers for plant/machinery/equipment/instrument shall also state prices or essential accessories, optional accessories and spares necessary for 5 years of satisfactory operation of the machinery/equipment/instrument offered. Prices for accessories and spares shall be itemised, offers where only lump sum prices are indicated are liable to be ignored. Particular care must be taken to list out each item of spare and quantity recommended and also individual price for these items.

18. QUANTITY: The purchaser reserves the right to accept or reject lowest or any offers in whole or in part without assigning any reason. It would therefore be in the interest of the tenderers to clearly understand that the purchaser may accept offers for any quantity of his choice and hence, the percentage of reduction, if any in the price quoted in case of acceptance of tender in whole or part shall be clearly stated.

19. TRAINING: The contractor shall, in special cases, if required by the Purchaser provide facilities for the practical training of the purchaser's engineers and technical personnel in respect of repair, maintenance or operation of the plant/machinery/ equipment/ instrument offered at their manufacturing plant in India or abroad. The cost for such training (including travelling, boarding and other related expenses) and the number of trainees and duration of training and any other terms if any, should be indicated separately in the offer.

20.INSTALLATION & COMMISSIONING: In the event of an order, the supplier shall arrange satisfactory installation and commissioning of the plant/machinery equipment/ instrument at purchaser's site, free of cost.

21.SERVICE SOFTWARE/TOOLS: The service software, tools required if any for the repair/maintenance of the plant/machinery/equipment/instrument shall be quoted separately.

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