

Bid Corrigendum

GEM/2026/B/7505384-C3

Following terms and conditions supersede all existing “Buyer added Bid Specific Terms and conditions” given in the bid document or any previous corrigendum. Prospective bidders are advised to bid as per following Terms and Conditions:

Buyer Added Bid Specific Additional Terms and Conditions

1. **OPTION CLAUSE:** The Purchaser reserves the right to increase or decrease the quantity to be ordered up to 25 percent of bid quantity at the time of placement of contract. The purchaser also reserves the right to increase the ordered quantity up to 25% of the contracted quantity during the currency of the contract at the contracted rates. The delivery period of quantity shall commence from the last date of original delivery order and in cases where option clause is exercised during the extended delivery period the additional time shall commence from the last date of extended delivery period. The additional delivery time shall be $(\text{Increased quantity} \div \text{Original quantity}) \times \text{Original delivery period (in days)}$, subject to minimum of 30 days. If the original delivery period is less than 30 days, the additional time equals the original delivery period. The Purchaser may extend this calculated delivery duration up to the original delivery period while exercising the option clause. Bidders must comply with these terms.
2. Actual delivery (and Installation & Commissioning (if covered in scope of supply)) is to be done at following address
 1. IITM-ART, Bhopal Silkheda, Madhya Pradesh-466665
 2. Ajmer, Rajasthan, Rajasthan – 305817
 3. Central University of Jammu- 181143 (4) Rourkela, Odisha – 769008
 5. Tezpur University, Assam-784028 (6) Indian Institute of Geomagnetism (IIG), Prayagraj, Uttar Pradesh-211019
 7. Hyderabad, Telangana - 500046
3. **Experience Criteria:** The Bidder or its OEM {themselves or through reseller(s)} should have regularly, manufactured and supplied same or similar Category Products to any Central / State Govt Organization / PSU for 3 years before the bid opening date. Copies of relevant contracts to be submitted along with bid in support of having supplied some quantity during each of the year. In case of bunch bids, the primary product having highest value should meet this criterion.
4. Installation, Commissioning, Testing, Configuration, Training (if any - which ever is applicable as per scope of supply) is to be carried out by OEM / OEM Certified resource or OEM authorised Reseller.
5. **Manufacturer Authorization:** Wherever Authorised Distributors/service providers are submitting the bid, Authorisation Form /Certificate with OEM/Original Service Provider details such as name, designation, address, e-mail Id and Phone No. required to be furnished along with the bid
6. Scope of supply includes Training: Number of employees to be trained
5
, Place for Training
at installation site
and Duration of training
7
days.
7. While generating invoice in GeM portal, the seller must upload scanned copy of GST invoice and the screenshot of GST portal confirming payment of GST.
8. **Bidder Turn Over Criteria:** The minimum average annual financial turnover of the bidder during the last three years, ending on 31st March of the previous financial year, should be as indicated in the bid document. Documentary evidence in the form of certified Audited Balance Sheets of relevant periods or a certificate from the Chartered Accountant / Cost Accountant indicating the turnover details for the relevant period shall be uploaded with the bid. In case the date of constitution / incorporation of the

bidder is less than 3 year old, the average turnover in respect of the completed financial years after the date of constitution shall be taken into account for this criteria.

9. Bidder's offer is liable to be rejected if they don't upload any of the certificates / documents sought in the Bid document, ATC and Corrigendum if any.
10. **Proof for Past Experience and Project Experience clause:** For fulfilling the experience criteria any one of the following documents may be considered as valid proof for meeting the experience criteria:
a. Contract copy along with Invoice(s) with self-certification by the bidder that service/supplies against the invoices have been executed.
b. Execution certificate by client with contract value.
c. Any other document in support of contract execution like Third Party Inspection release note, etc.
Proof for Past Experience and Project Experience clause: For fulfilling the experience criteria any one of the following documents may be considered as valid proof for meeting the experience criteria:
a. Contract copy along with Invoice(s) with self-certification by the bidder that service/supplies against the invoices have been executed.
b. Execution certificate by client with contract value.
c. Any other document in support of contract execution like Third Party Inspection release note, etc.
11. The Bidder / OEM {themselves or through reseller(s)}, should have executed project for supply and installation / commissioning of same or similar Category Products during preceding 3 financial years (i.e. current year and three previous financial years) as on opening of bid, as per following criteria:
 - (i) Single order of at least 35% of estimated bid value; or
 - (ii) Two orders of at least 20% each of estimated bid value; or
 - (iii) Three orders of at least 15% each of estimated bid value.Satisfactory Performance certificate issued by respective Buyer Organization for the above Orders should be uploaded with bid. In case of bunch bids, the Category related to primary product having highest bid value should meet this criterion
12. Bidders can also submit the EMD with Account Payee Demand Draft in favour of
The Director IITM
payable at
Pune
.
Bidder has to upload scanned copy / proof of the DD along with bid and has to ensure delivery of hardcopy to the Buyer within 5 days of Bid End date / Bid Opening date.
13. Bidders can also submit the EMD with Fixed Deposit Receipt made out or pledged in the name of A/C
The Director IITM, Pune
.
The bank should certify on it that the deposit can be withdrawn only on the demand or with the sanction of the pledgee. For release of EMD, the FDR will be released in the favour of the bidder by the Buyer after making endorsement on the back of the FDR duly signed and stamped along with covering letter. Bidder has to upload scanned copy/ proof of the FDR along with bid and has to ensure delivery of hardcopy to the Buyer within 5 days of Bid End date/ Bid Opening date
14. Bidders can also submit the EMD with Banker's Cheque in favour of
The Director IITM
payable at
Pune
.
Bidder has to upload scanned copy / proof of the BC along with bid and has to ensure delivery of hardcopy to the Buyer within 5 days of Bid End date / Bid Opening date.
15. Bidders can also submit the EMD with Payment online through RTGS / internet banking in Beneficiary name
The Director IITM
Account No.
11099449733
IFSC Code
SBIN0000454
Bank Name
State Bank of India
Branch address
P B No. 6, Collector Office Compound, Pune- 411 001
.
Bidder to indicate bid number and name of bidding entity in the transaction details field at the time of on-line transfer. Bidder has to upload scanned copy / proof of the Online Payment Transfer along with bid.
16. Successful Bidder can submit the Performance Security in the form of Account Payee Demand Draft also (besides PBG which is allowed as per GeM GTC). DD should be made in favour of
The Director IITM

payable at
Pune

. After award of contract, Successful Bidder can upload scanned copy of the DD in place of PBG and has to ensure delivery of hard copy to the original DD to the Buyer within 15 days of award of contract.

17. Successful Bidder can submit the Performance Security in the form of Fixed Deposit Receipt also (besides PBG which is allowed as per GeM GTC). FDR should be made out or pledged in the name of The Director IITM, Pune
A/C (Name of the Seller). The bank should certify on it that the deposit can be withdrawn only on the demand or with the sanction of the pledgee. For release of Security Deposit, the FDR will be released in favour of bidder by the Buyer after making endorsement on the back of the FDR duly signed and stamped along with covering letter. Successful Bidder has to upload scanned copy of the FDR document in place of PBG and has to ensure delivery of hard copy of Original FDR to the Buyer within 15 days of award of contract.
18. Successful Bidder can submit the Performance Security in the form of Payment online through RTGS / internet banking also (besides PBG which is allowed as per GeM GTC). On-line payment shall be in Beneficiary name
The Director IITM
Account No.
11099449733
IFSC Code
SBIN0000454
Bank Name
State Bank of India
Branch address
P B No. 6, Collector Office Compound, Pune- 411 001
. Successful Bidder to indicate Contract number and name of Seller entity in the transaction details field at the time of on-line transfer. Bidder has to upload scanned copy / proof of the Online Payment Transfer in place of PBG within 15 days of award of contract.
19. Buyer uploaded ATC document [Click here to view the file](#).

Disclaimer

The Additional Terms and Conditions (ATC) have been incorporated by the Buyer after approval of their Competent Authority. The Buyer, is solely responsible for the impact of these clauses on the bidding process, its outcome, and consequences thereof including any restriction arising in the bidding process due to these ATCs and including the modification of technical specifications and / or terms and conditions governing the bid. All representations / grievances pertaining to the ATC clauses shall be raised with the buyer organization directly and not with GeM. If any of the clause(s) is/are incorporated by the Buyer regarding the following, the bid & resultant contract shall be treated as null & void. Further, GeM reserves the right, at its sole discretion, to cancel the bid forthwith, without issuance of any prior notice or intimation :-

1. Publishing Custom / BOQ bids for items for which regular GeM categories are available (unless such Custom / BOQ item is bunched with the major regular product Category Item).
2. Mandating procurement of / from specific Brand / Make / Model / Manufacturer / Dealer except in case of Single Bid / Proprietary Article Certificate (PAC) Buying.
3. Inclusion of disqualification criteria related to suspension of seller / service provider, where such suspension period has already expired.
4. Mandating submission of documents in physical form as a pre-requisite to qualify bidders.
5. Publishing bids on GeM for procurement of works.
6. Procurement of Goods by creating a Service bid on GeM & vice-versa.
7. Seeking sample with bid or approval of samples during bid evaluation process. However, trial / sample, as the case may be, shall be permitted in cases where trial / sample are allowed as per approved and published procurement policy of the Buyers' controlling Ministry / Department / State / Public Sector Enterprises Headquarters. If there is any violation of trial / sample clause with regard to approved policy of the Buyers' Ministry / Department / State / Public Sector Enterprises Headquarters, then this is to be determined and redressed by the concerned Buyer Organisation only.
8. Seeking experience from specific organization / department / institute only or from foreign / export experience.
9. Creating bid for items from incorrect categories.

10. Reference of conditions published on any external site or reference to external documents/clauses.
11. Asking for any Tender fee / Bid Participation fee, as the case may be.
12. Buyer added ATC Clauses which are in contravention of clauses defined in bid detail section, including specifications, EMD Detail, ePBG Detail and MII and MSE Purchase Preference sections of the bid, unless otherwise allowed by the applicable GeM GTC.
13. Any ATC clause in contravention with GeM GTC Clause 4 (xiii) (h) will be invalid. In case of multiple L1 bidders against a service bid, the buyer shall place the Contract by selection of a bidder amongst the L-1 bidders through a Random Algorithm executed by GeM system.
14. In a category based bid, adding additional items, through buyer added, additional scope of work/ additional terms and conditions/or any other document. If buyer needs more items along with the main item, the same must be added through bunching category based items or by bunching custom catalogues or bunching a BoQ with the main category based item, the same must not be done through ATC or Scope of Work.

Further, if any seller has any objection/grievance against these additional clauses or otherwise on any aspect of this bid, they can raise their representation against the same by using the Representation window provided in the bid details field in Seller dashboard after logging in as a seller. Buyer is duty bound to reply to all such representations and would not be allowed to open bids if he fails to reply to such representations.

*This document shall overwrite all previous versions of Bid Specific Additional Terms and Conditions.

[This Bid is also governed by the General Terms and Conditions](#)

भारतीय उष्णदेशीय मौसम विज्ञान संस्थान, पुणे
INDIAN INSTITUTE OF TROPICAL METEOROLOGY, PUNE

July 17, 2026

Subject: Minutes of the pre-bid meeting for the “Supply, Installation and Commissioning of Field Scale Soil Moisture Measurement System based on Cosmic Ray Neutron Sensing (CRNS) technique” held on 13/07/2026 .

A pre-bid meeting relating to the “Supply, Installation and Commissioning of Field Scale Soil Moisture Measurement System based on Cosmic Ray Neutron Sensing (CRNS) technique” was held on June 29, 2026 at 11:00 hrs. at IITM, Pune through hybrid mode

The committee noted that the bid was published for “Supply, Installation and Commissioning of Field Scale Soil Moisture Measurement System based on Cosmic Ray Neutron Sensing (CRNS) technique” vide Tender Notice No. GEM/2026/B/7505384 on 23 June-2026.

During the pre-bid meeting, representatives from the following bidders were present:

M/s Phame Enterprises
M/s Das Systems
M/s Das Enviro Systems
M/s. SGS Weather & Environmental Systems Pvt. Limited

The pre-bid queries received from the participating bidders were discussed in detail and the responses were finalized during the meeting of the Technical Committee held on 13 July 2026 and is placed in Annexure-I.

A few minor changes proposed by the Indenting Officer to preserve the essential scientific requirements while maintaining the accuracy necessary for the research were also discussed during the Technical Committee meeting and subsequently finalized (placed at Annexure-II).

Annexure-I: Technical queries referred to the Technical Committee

M/s Phame Enterprises			
Sr. No.	Bidder Queries	Specifications previously approved by the TC and published in the bid	Response
1	Lined type used ONLY for short term inspections of shipping containers and such things. They inherently produce a very poor pulse height spectrum, making it hard to tell "good pulses" from "spurious pulses" where as Gas filled tubes used for long term measurement i.e. they never expire. Request: Please remove the lined type which is not used for long term research work.	Neutron detector: (He-3 or boron-lined proportional counter)	To streamline with scientific requirements, the detector type has been revised to He-3, BF3 and Scintillator
2	Please clarify the quantity and type of Soil Sensor i.e. Point Soil Sensor OR Profile Soil Sensor. If it is Profile Sensor then depth should be 90 cm /120 cm which is standard available in the market. If Point Soil Sensor at 5 depths then maximum depth should be available as this needs Soil pit for installation.	Meteorological Sensors for measuring temperature, humidity, and barometric pressure, Rainfall, Soil Temperature and Moisture Profile sensor (5 Nos. Per system) (sensing at minimum 9 depths), tipping Bucket Rain gauge, Net-Radiometer, Soil Heat flux plate.	Sensor Type: Integrated Soil Profile Probe (Moisture & Temperature). Dimensions: Approx. 1 m length. Capacity: ≥ 9 integrated sensing points per probe. Depth Distribution: Approx. 5-10 cm vertical spacing between sensing points. Site Deployment: 5 probes required per site.
3	We request to consider only cellular communication and removed Iridium as this is not authorised in India. Now a day's good coverage of 4G/5G network coverage is available at sites. So better to mentioned LTE Cat-M1 Modem (4G) /NR (5G) Modem, latest in Cellular Communication technology. Further, please clarify SIM and all related expenses for the whole period of Warranty and OMC will be in Bidder scope OrR IITM will take care for it.	Communication modules (cellular, satellite like Iridium, or radio telemetry)	Read as a Cellular modem (3G/4G/5G) / radio / satellite as mentioned in the tender specification.
4	It is observed that TBRG Type Rain Gauge is already included in system integration, therefore we request to consider Multi component Weather Sensor without Precipitation Sensor, no need of double Rain sensor.	Meteorological Sensors (Two per Tower) Multi component Weather Sensor (all in one sensor). Precipitation Sensor	A separate Rain Gauge is required as mentioned in the tender specifications.
5	The measuring range has not been specified in the technical specification document. Kindly clarify the required measurement range for the Net Radiometer. We request to	Instrument should be capable of long-term continuous observations of surface radiation components, Output parameters:	All the specifications are already available in tender documents (No change)

	consider, Pyranometer Spectral range: 385 nm to 2105 nm (upward); 370 to 2240 nm (downward) Measurement range: 0 to 2000 W m ⁻² (Net shortwave irradiance) Pyrgeometer Spectral range: 5 to 30 µm (50% Point) Measurement range: -200 to 200 W m ⁻² (Net long wave irradiance) These spectral ranges are covering Agricultural application measurements. Please confirm if albedo is required, a dedicated additional sensor must be required.	downward long wave radiation, global solar radiation, net radiation, reflected solar radiation, upward long wave radiation, albedo	
6	We request to consider digital IC temperature sensors for Temperature sensor type along with PT sensor	Platinum resistance thermometers (e.g., PT100, PT1000), or thermistors	For better accuracy and performance, sensor type is revised as Platinum resistance thermometer only.
7	We request to consider the Data logger which supports all required Sensors as per Bid requirement (which are mostly having Digital output i.e. SDI- 12/Modbus) to interface with logger, if required then suitable IO Analog module can be used for low analogue voltage sensor viz Heat flux sensor to provide RS485 output. Further since we are receiving field data almost in real time Data over FTP server so logger having memory to have over 3 lakh record in the memory may be consider. To conclude please consider the Data Logger capable to interface all field sensors as per requirement and able to send field data in almost real time over FTP Server as .csv file	Data Logging System	Required specification for the data logger is already mentioned in the tender specification with analog and digital port and the storage.
8	Does the each site require these cabins??	Portal Cabin/ Sea container:	Yes, cabin is required at each site.
	As AC and others Instrument are mentioned in the specification so who will take care for AC power availability at site??		AC power will be taken care of by the IITM or allied institute.
	This will required the proper electrical power cable from Electricity board and meters etc. i.e. recurring charges for electricity		
	4G router is mentioned so Internet connection also required at the site, so who will provide it?? Also recurring charges for internet service who will care?		Router and internet recurring charges will be borne by the vendor.
	Request: The Cabin/Sea Container can be supplied, installed by specialized Supplier and can remove from Research Equipment's Tender and separate Bid may called for this work, it will good to get desired item by dedicated suppliers		As per the tender (No Change).

	in the interest of the project		
9	Manpower deployment and responsibilities of Man Power: We are already taking care for upkeep of installed System through our team all India and all installed system does not require any day to day local attention ie all field data automatically transmit to FTP server at defined interval, so we feel no need of local technical person at site. We hereby request to allow all preventive maintenance work with our Team not dedicated staff at site ie CMC instead of OMC.	The Vendor shall provide suitably qualified and trained manpower (1 Person per site) for operation, routine and preventive maintenance, Contract (CAMC), Operations Maintenance Contract (OMC) etc. troubleshooting, calibration support, and basic repairs of the instruments listed in the tender.	As per the tender (No Change).
10	Specific conditions: The OEM authorisation should be for key items i.e. Cosmic rays sensor, all in one weather sensor, soil profile sensor not for all others items of the bid.		OEM authorization is required for scientific instruments only.
M/s Das systems			
11	All in one Sensor: We request a revision of the temperature accuracy requirement to "2–3%."	$\pm 0.2\text{ }^{\circ}\text{C}$	To preserve the essential scientific requirements and broadening participation without compromising the accuracy required for the research, the temperature accuracy is revised as $\leq 0.3\text{ }^{\circ}\text{C}$
	The tender specifies SDI-12 version 1.3. We request relaxing this specification to simply "SDI-12" without restricting it to a specific version (V1.3).	SDI-12 v1.3,	Read as all versions of SDI-12
12	Heat Flux Plate Cable Length: The specification mentions a 20-meter cable for the heat flux plate, but standard manufacturing lengths are typically 5, 10, or 25 meters. Can we offer the standard 25-meter cable instead of the non-standard 20-meter cable?		Revised, please refer to Annexure II

	Self-Calibrating Soil Heat Flux Sensor: For accurate estimation of ground heat flux and long-term reliable measurement through soil layers, self-calibrating sensors are highly recommended. We request the authority to amend the specification to mandate a "Self-Calibrating Soil Heat Flux Plate Sensor" for better performance.	Sensor should be capable of long-term measurement of heat flow through soil layers for accurate estimation of ground heat flux.	Self-calibrating soil heat flux plate sensor should be provided.
13	Net Radiometer: There are a few clarifications and requested amendments regarding the Net Radiometer: Please confirm if a ventilation/heating unit is mandatory. We highly recommend including it to reduce measurement uncertainty and maintain data quality in humid or monsoon climates.		A ventilation unit will be mandatory if it is required for your system in all weather conditions.
	We request revising the Solar Range specification to "310 to 2700 nm or better."	285 to 3000 × 10 ⁻⁹ m (285 to 3000 nm)	No change
	We request revising the Operating Temperature to "0 to 50 °C or better."		To preserve the essential scientific requirements and broadening participation without compromising the accuracy required for the research, operating temperature for net radiometer should be read as "-20 to 50 °C or better."
14	Soil Moisture Sensors & Spacing: Please confirm the specific spacing requirements between the 9 soil sensor levels up to a 1-meter depth.	Sensor should be capable of long-term continuous observations of soil temperature and moisture conditions at multiple depths (at least 9 levels) for accurate profiling of subsurface dynamics. Both sensors should be integrated in one sensor (all in one, no spate sensors for soil moisture and soil temperature)	Sensor Type: Integrated Soil Profile Probe (Moisture & Temperature). Dimensions: approx. 1 m length. Capacity: ≥ 9 integrated sensing points per probe. Spatial Distribution: Approx. 5-10 cm vertical spacing between sensing points. Site Deployment: 5 probes required per site.
	We request revising the operating temperature range for the soil moisture sensors to "-40 to 60 °C."	Range: -40° to +70°C	To preserve the essential scientific requirements and broadening participation without compromising the accuracy required for the research,

			the operating temperature range for soil moisture sensor is revised as “-20 to 60 °C or better”
	• Tor he tender mentions a 2–3% accuracy for mineral soil. Since sensors are designed under ideal conditions, accuracy depends heavily on soil type. Could you please clarify if this applies universally to all soils at the sites, or alternatively, provide the specific soil characteristics for all installation sites?	±2 to ±3% VWC in mineral soils	For better accuracy in different climatic conditions/soil, soil moisture sensor accuracy should be read as $\leq 2\%$
15	Cosmic-Ray Neutron Sensor (CRNS): • We request the inclusion of the BF3 sensor detector in the CRNS technical specifications.	Thermal/fast neutron detectors (He-3 or Boron-lined proportional counters)	To streamline with scientific requirements, the detector type has been revised to He-3, BF3 and Scintillator
16	Telemetry & Network Coverage: • Can the authority confirm that all proposed installation sites have adequate 3G/4G/5G mobile network coverage for data transmission?	Support for 3G/4G/5G telemetry modules for data transmission.	Adequate 3G/4G/5G network coverage is available at sites
17	SIM Card & Internet Charges: • Please clarify whether the procurement of SIM cards and the recurring internet data charges fall under the vendor's scope or the client's scope.		SIM cards and recurring internet charges will be borne by the vender.
18	AC Power Supply: • Please confirm if raw AC power will be available at all sites and whether the provision of this primary AC power is within the user's/client's scope.		Provision of the primary AC Power is within the IITM Scope.
19	Power Backup / UPS: • In the event of an AC mains failure, cameras and other critical peripherals need to shift to solar power/UPS. Please clarify the exact requirements and expected backup duration for the UPS/solar power system to cover these peripherals.		Please refer to Annexure-II
20	Earthing & Lightning Protection: The tender mentions the vendor must provide lightning flux data and an earthing test report at the time of commissioning.	Vendor to provide lightning flux data and earthing test report at the time of commissioning	Earthing and lightning specifications are revised (Annexure-II). The vendor should provide the Earthing test report prior to the installation.
21	Please confirm if the actual physical earthing work (pits, strips, etc.) is entirely under the bidder's scope. If it is in the bidder's scope, kindly provide the soil resistivity details for		Earthing work is under the vendor's scope, including soil resistivity checks prior to installation.

	the respective installation sites so we can accurately calculate the required number and dimensions of the earth pits.		
22	Please provide the specific wind load data and maximum wind speed requirements for the installation sites so that we can perform the necessary structural design analysis for the towers.	Designed for wind speed up to 45–50 m/s (162–180 km/h) measured at 10 meters above ground level (per WMO & IS 875 guidelines)	Detailed specifications are already given in the tender specifications.
23	OEM Authorization: • Please clarify if a specific Manufacturer's Authorization Form (MAF) / OEM Authorization letter is strictly required for every single sensor being offered, or only for major components (such as scientific instruments).		OEM authorization is required for scientific instruments only.
M/s Das Enviro System			
24	Cosmic-Ray Neutron Sensor (CRNS) Specifications • Query: Would the authority consider amending the technical specifications for the Cosmic-Ray Neutron Sensor (CRNS) to explicitly allow the inclusion of a scintillation detector?	Thermal/fast neutron detectors (He-3 or Boron-lined proportional counters)	To streamline with scientific requirements, the detector type has been revised to He-3, BF3 and Scintillator
25	Compact Multi-Component Weather Sensor (Precipitation Accuracy) • Query: The current specification for precipitation intensity requires a measurement range of 0–150 mm/h with an accuracy of <5%. This is highly restrictive and technically qualifies only 1 or 2 specific OEMs (such as Vaisala or Gill). To promote fair competition and align with broader industry standards for compact all-in-one weather sensors, would the authority kindly consider accepting a precipitation accuracy of up to ±20% (under laboratory conditions) for rainfall intensity up to 200 mm/h? • Note for Authority: Sensors meeting this revised specification (e.g., the Lufft WS600) offer superior overall performance and have already been successfully validated and installed	Precipitation range: Range- 0 to 200 mm/h (Intensity) Accuracy-Better than 5% Resolution: 0.01 mm (rain), 0.1 mm/h (intensity)	Given the project's scientific objective, the specifications should be read as: Range: 0 to 200 mm/h Accuracy: Better than 7% Resolution: 0.2 mm (rain), 1 min resolution temporal.
26	Compact Multi-Component Weather Sensor (Operating Temperature) • Query: The RFP currently specifies an operating	Operating temperature range -30 to +60 °C	No change

	temperature range of -20 °C to +50 °C for the compact multi-component weather sensor. To ensure maximum environmental resilience and longevity of the equipment in the field, can this requirement be revised to a broader range of -52 °C to +60 °C?		
27	Soil Moisture Sensors (Installation Spacing) Query: Could the authority please provide the exact vertical spacing requirements between the 9 distinct soil sensor levels intended for installation up to a 1-meter depth?	Sensor should be capable of long-term continuous observations of soil temperature and moisture conditions at multiple depths (at least 9 levels) for accurate profiling of subsurface environmental dynamics. Both the sensor should be integrated in one sensor (all in one, no spate sensors for Soil moisture and soil Temperature)	Sensor Type: Integrated Soil Profile Probe (Moisture & Temperature). Dimensions: approx. 1 m length. Capacity: ≥ 9 integrated sensing points per probe. Spatial Distribution: Approx. 5-10 cm vertical spacing between sensing points. Site Deployment: 5 probes required per site.
28	Soil Moisture Sensors (Operating Temperature) Query: For enhanced reliability across varying ground temperatures, we request that the operating temperature range for the soil moisture sensors be revised in the specifications to -40 °C to +60 °C. Will the authority accept this amendment?	Range: -40° to +70°C	To preserve the essential scientific requirements and broadening participation without compromising the accuracy required for the research, the operating temperature range for soil moisture sensor is revised as “-20 to 60 °C or better”
	Soil Moisture Sensors (Accuracy & Site Characteristics) Query: The tender mandates a soil moisture accuracy of 2–3% for mineral soil. Because sensors are designed and calibrated under ideal conditions, in-situ accuracy is highly dependent on actual soil composition. Can the authority clarify if this 2–3% requirement is expected uniformly across all field environments? If so, we request the authority to provide the specific soil characteristics for all designated installation sites to ensure accurate calibration and compliance.	± 2 to $\pm 3\%$ VWC in mineral soils	For better accuracy in different climatic conditions, soil moisture sensor accuracy should be read as $\leq 2\%$
29	Earthing and Lightning Protection Scope Query: The tender states that the vendor must provide lightning flux data and an earthing test report at the time of commissioning. As this is a comprehensive turnkey system integration project, could the authority clearly define the exact physical boundaries of this requirement? Specifically,		Earthing and lightning specifications are revised (Annexure-II). The vendor should provide the Earthing test report prior to the installation.

	we seek clarity on whether the civil and electrical execution of the earthing infrastructure (pits, rods, etc.) is entirely under the bidder's scope.		
M/s SGS Weather & Environmental Systems Pvt. Limited.			
30	Page: 4 of RFP Soil Heat flux plate	Request to change for Self-Calibrating Soil Heat flux plate sensor for better performance. The self-test also includes self-calibration which compensates for measurement errors caused by the thermal conductivity of the surrounding soil (which varies with soil moisture content), for sensor non- stability and for temperature dependence.	Self- calibrating soil heat flux plate sensor should be provided.

Annexure-II: Details of proposed revision in technical specifications with justifications

Sensor	Specifications previously approved by the TC and published in the bid	Revised Specifications
CRNS	~1-5 counts/sec (depends on site and shielding)	1000 to 2500 counts/hour (cph) or better
Multicomponent Weather Sensor (All in one)	Protection rating: IP65	IP65, or better
	Precipitation: Range: 0 to 200 mm/h Accuracy: Better than 5% Resolution: 0.01 mm (rain), 0.1 mm/h (intensity)	Range: 0 to 200 mm/h Accuracy: Better than 7% Resolution: 0.2 mm (rain), 1 min resolution temporal. Precipitation 0 to 200 mm/h, Better than 7%
Soil moisture profile sensor	Time Domain Reflectometry (TDR) or Frequency Domain Reflectometry (FDR) or better preferred for accuracy, Range: -40° to +70°C	Time Domain Reflectometry (TDR) soil moisture sensor accuracy : $\leq 2\%$ Temperature range: “-20 to 60 °C or better”
Net Radiometer	Digital Communication: RS-485, optional SDI-12	Communication: Analog, Digital, optional SDI-12
Soil heat flux plate	Sensitivity :Typically 5 to 15 $\mu\text{V W}^{-1} \text{m}^{-2}$	Sensitivity :50 $\mu\text{V W}^{-1} \text{m}^{-2}$ or higher
Rain Gauge	Type Tipping bucket (mechanical) Measurement Range 0 to ≥ 500 mm/h Resolution (Bucket Volume), 0.1 mm or 0.2 mm per tip (standard) Accuracy $\pm 1\%$ for intensities < 20 mm/h $\pm 3\%$ for intensities between 20–100 mm/h Catchment 200 cm^2 (typical) (radius ≈ 8 cm, diameter ≈ 16 cm) Bucket Material Non-corrosive, UV-resistant plastic or stainless steel Response Time Bucket should tip within 1–2 seconds of reaching full volume Minimum Measurable Rainfall Equivalent to 1 tip (e.g., 0.2 mm) Support assembly Appropriate support assemblies to	In addition to the original specification, following additional specifications have been added: - Alter-type wind shield with ~30 freely moving leaves mounted on a ~45-inch diameter ring to minimize the wind's effect - Outer body/enclosure: Anodized aluminium powder coated or Stainless Steel SS316 or FRP - Pivots mechanisms: Stainless steel axle on sapphire pivots or equivalent 1 m high rigid mounting stand for rain gauge installation, made of SS316 (preferred) or equivalent corrosion-resistant material suitable for continuous outdoor exposure. The mounting stand shall be designed to support the rain gauge along with Alter-type wind shield under high wind conditions and shall be firmly fixed on a reinforced concrete foundation with suitable base plate and SS foundation bolts ensuring long-term vertical alignment, rigidity, and stability. Pole shall have a minimum outer diameter of 100 mm

	install rain Gauge at 0.3 to 1.5 meter from ground.	with minimum 5 mm wall thickness or equivalent structural strength. Provision shall be made for proper levelling, secure mounting of rain gauge and wind shield assembly, and protection against vibration, tilting, and wind-induced oscillation.
Data logger	Analog to Digital: ≥ 18 -24 bit resolution.	Analog to Digital: ≥ 24 -bit resolution.
Lightning arrester	Includes copper lightning rod, down conductor, and earthing system as per IS 3043 (resistance < 5 ohms)	The 10-meter tower must be equipped with an Early Streamer Emission (ESE) Lightning Protection System and constructed from highly weather-resistant SS316 or copper alloy. The terminal must provide a Level 1 protection radius of 35 to 50 meters with a triggering time (ΔT) of 15 to 30 microseconds, and it shall be mounted on an isolated mast at least 1.5 to 2.0 meters above the highest sensor to ensure an unimpeded protection cone. The system shall utilize a dedicated, high-conductivity down conductor routed separately from signal cables and equipped with an IP67-rated lightning event counter. To safely dissipate catastrophic surges and protect sensitive electronics, the installation requires comprehensive equipotential bonding of the tower and enclosures, terminating in a copper-bonded steel earth rod (minimum 17.2 mm diameter x 3 m length) packed with chemical earthing compound to strictly guarantee an overall earth resistance around 2-3 Ohm. Note that mandatory separate earthing is required for separate body, power, signal/Instrument earthing, and LA.
Cable lengths:	Slandered sizes of 5-10 meter	• Cosmic-Ray Neutron Sensor (CRNS): 5-10 Meters • Net Radiometer: 10 Meters • Soil Heat Flux Plate: 10 Meters • Soil Moisture Profile Sensor: 10, 30, 50, 75, 100 Meters (each) • Rain Gauge: 10 Meters • All-in-One Meteorological Sensor: 20 Meter
UPS		UPS: AC Power: Heavy-duty 5 kVA online double-conversion transformer-based UPS with wide input voltage range (160–300 V), pure sine wave output, high efficiency (>90%), and low THD (<3%). Rugged design for 24×7 operation with intelligent battery management and ≥ 8 Hour backup. Equipped with surge, overload, and short-circuit protection, plus SNMP/USB/RS-232 monitoring. Built for harsh lab/industrial conditions with reliable, low-

		maintenance performance. Rugged 3-meter copper earthing rod to be installed. Separate earthing to be provided for all the sensors. Dedicated SPD, MCB panel to be installed for all sensors. Rugged heavy-duty 5 kVA Stabilizer designed for continuous operation, built with copper windings and high-grade transformers for durability. Input voltage range DC-DC Power: (2 Nos. per site) DC Regulated Power Supply Range: Voltage: 0 to 30 V DC CV Current: 0 to 5 A CC Specifications: Input Power: 230 V $\pm$ 10% AC, 50Hz, Load & Line Regulation: $\pm$ 0.05% Ripple & Noise: 0.05% Protection: Output Short Circuit, Overload by CC mode Meters: Separate 3½ Digit Voltmeter & Ammeter Accuracy: 0.5% $\pm$ 2 digits for voltage 0.5% $\pm$ 2 digits for current Voltage & Current setting: By Potentiometers coarse & fine Power ON/OFF switch
Scope of service	The Vendor shall provide suitably qualified and trained manpower for operation, routine and preventive maintenance, Contract (CAMC), Operations Maintenance Contract (OMC) etc. troubleshooting, calibration support, and basic repairs of the instruments listed in the tender.	The Vendor shall provide suitably qualified and trained manpower (1 Person per site) for operation, routine and preventive maintenance, Contract (CAMC), Operations Maintenance Contract (OMC) etc. troubleshooting, calibration support, and basic repairs of the instruments listed in the tender.