

**GOVERNMENT OF INDIA
DEPARTMENT OF SPACE
VIKRAM SARABHAI SPACE CENTRE (VSSC)
THIRUVANANTHAPURAM**

Tender for Automatic weather station

Bids to be submitted online

Tender No.: VSSC/PURCHASE UNIT II (AVN)/VS202300434401 dated 10-04-2024

A. Tender Details

Tender No :	VSSC/PURCHASE UNIT II (AVN)/VS202300434401
Tender Date :	10-04-2024
Tender Classification:	GOODS
Purchase Entity :	PURCHASE UNIT II (AVN)
Centre :	VIKRAM SARABHAI SPACE CENTRE (VSSC)

Automatic weather station

Automatic weather station

A.1 Tender Schedule

Bid Submission Start Date :	10-04-2024 11:00
Bid Clarification Due Date :	22-04-2024 11:00
Bid Submission Due Date :	10-05-2024 14:00
Bid Opening Date :	10-05-2024 15:00
Price Bid Opening Date :	24-05-2024 15:00

B. Tender Attachments

NA

Instructions To Vendors

1. Conditions for BIDDER FROM A COUNTRY WHICH SHARES LAND BORDER WITH INDIA - Restrictions under Rule 144 (XI) in GFR, 2017.

1. Any bidder from a country which shares a land border with India will be eligible to bid in this tender, only if the bidder is registered with the Competent Authority. Competent Authority for the purpose of registration shall be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT).
2. Any false declaration and non-compliance of the above would be a ground for immediate rejection of offer or termination of the contract and further legal action in accordance with the laws.
3. Validity of Registration: Registration should be valid at the time of submission of bids and should be valid at the time of placement of order.

2. PPP Make in India(Divisible Items-Class I & II Local Suppliers)

1. A committee (with an external expert from a practicing cost accountant or practicing chartered accountant, if required) constituted for independent verification shall verify the self-declarations & auditor's / accountant's certificates on random basis, as per the requirements.
2. a) The subject item falls under divisible category. b) The offers are sought from Class I & II Local Suppliers.
3. Definitions: A supplier or service provider, whose goods, services or works offered for procurement, has local content: i. Equal to or more than 50%: Class-I local supplier. ii. More than 20% but less than 50%: Class-II local supplier. iii. Less than or equal to 20%: Non-local supplier.
4. False declarations will be in breach of code of the integrity for which a bidder or its successor's will not be eligible/debarred for purchase preference from further tenders / pending tenders for two years along with other actions as may be applicable.
5. In case of a complaint received from any local supplier indicating a need for review / verification of

Local content of successful vendor / awarded vendor, for accepting a complaint from such complainant (w.r.t the false declaration given by the successful vendor on the local content), a complaint fee of Rs.2Lakhs or 1% of the locally manufactured items being procured (subject to a maximum Rs. 5Lakhs), whichever was higher, to be paid by demand draft by the complainant. In case, the complaint is found to be incorrect, the complaint fee shall be forfeited. In case, the complaint is upheld and found to be substantially correct, deposited fee of the complainant would be refunded without any interest.

6. In cases the quoted price is in excess of Rs.1000 Lakhs (including duties, taxes and freight & Insurance) the 'Class-I & II local supplier shall provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in case of suppliers other than companies) giving the percentage of local content.

7. In line with Public Procurement (Preference to Make in India), Order 2017 & its amendments issued by Govt. of India from time to time with a view to support the Indian industries, ISRO has implemented "Purchase Preference Policy". The "Purchase Preference" is applicable for the "Class-I Local Supplier" for the goods/ services/ works covered in this tender, subject to the following terms & conditions:-

8. 'L1' means the lowest technically accepted tender / bid / quotation (i.e. lowest landed cost including duties, taxes and freight & Insurance).

9. 'Local content' means the amount of value added in India (i.e. indigenous items/services added in the offered products/ services/ works) be the total value of the item offered (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties/IGST) as a proportion of the total value (excluding net domestic indirect taxes), in percent.

10. 'Margin of purchase preference' means the maximum extent to which the price quoted by the "Class-I local supplier" above the L1 (landed cost).

11. Purchase Preference Policy:- Goods/Works which are divisible in nature (required quantity is greater than 1 or not a package basis):

i.If L1 is 'Class-1 local supplier', the order/contract for full quantity shall be awarded to L1 bidder.

ii.If L1 bid is not from a 'Class-I local supplier', 50% of the order quantity shall be awarded to L1.

Thereafter, the lowest bidder among the 'Class-I local supplier' will be invited to match the L1 price for the remaining 50% quantity subject to the Class-I local supplier's quoted price falling within the margin of purchase preference (i.e. 20%) and contract for that quantity shall be awarded to such Class-I local supplier subject to matching the L1 price (inclusive of duties, taxes and freight & insurance).

iii.In case such lowest eligible 'Class-I local supplier' fails to match the L1 price or accepts less than the offered quantity, the next higher 'Class-I local supplier' within the margin of purchase 'preference shall be invited to match the L1 price for remaining quantity and so on, and contract shall be awarded accordingly. In cases where none of the 'Class-I local supplier' within the margin of purchase agree to

match L1 price, in such cases 100% quantity shall be ordered on original L1 bidder.

iv. In case no offers are received from 'Class-I local supplier' or none of the 'Class-I local supplier' falls within the margin of purchase preference of 20%, the order shall be processed on L1 vendor.

v. In case L1 bidder (not a 'Class-I local supplier') is not accepting splitting of order on 50:50 basis, in that case the order/contract shall be awarded to such 'Class-I local supplier' for full quantity subject to matching the L1 price.

vi. Regarding MSEs (Indian vendors):

a) The following additional aspect as indicated below would be applicable for procurement which are falls under divisible category (i.e., not applicable for indivisible category), in case of participation of MSEs in the tendering who are also complying to the Minimum Local Content (MLC) stipulated in the tender.

b) If any Indian vendor satisfies the requirement of MSEs stipulation and also falls within the purchase preference margin as called for in MSME policy (in case of matching L1 price) will be considered for ordering 25% of tendered quantity, the balance quantity / works will be considered for distribution amongst all bidders (including MSEs) as per the purchase preference policy.

c) In case no MSEs qualifies for purchase preference or do not match with L1 price then the total tendered quantity will be distributed amongst all bidders as per the purchase preference policy.

12. The 'Class-I & II local supplier' should provide a "Self Certification" along with technical offer indicating that the item offered meets the minimum local content [as per Sl. No.(3)] as called for in the tender and provide the percentage of local content along with details of the location(s) at which the local value addition is made. In case of two bid tenders, it is mandatory to indicate compliance to MLC(minimum Local Content) in technical bid zone.

13. The ink-signed certificate shall be provided on vendors letter head along with the offer (in case of online tender, copy of ink-signed certificate shall be uploaded along with your offer under concerned tab. Original in Hard copy shall be produced on request). In case of non-submission of certificate, the purchase preference shall not apply.

14. The margin of Purchase Preference shall be up to 20%.

15. The Public Procurement (Preference to Make in India), Order 2017 issued by Govt. of India indicates that if there are any general or specific restrictive clauses to restrict participation of Indian companies in those countries procurement tenders, reciprocity clause need to be invoked as per the order. Hence, if ISRO or Govt. of India come across that Indian suppliers of an item are not allowed to participate and / or compete in procurement by your government, the bid submitted by you will be not be considered and excluded from eligibility for procurement. Please note this point.

16. Works means all works as per Rule 130 of GFR- 2017, and will also include 'turnkey works'. Works includes Engineering, Procurement and Construction (EPC) contracts and services include System Integrator (SI) contracts.

C. Bid Templates

C.1 Technical Bid - Automatic weather station

1. GENERAL METEOROLOGY INSTRUMENTS

Item specifications for GENERAL METEOROLOGY INSTRUMENTS

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Each set of the high precision research grade system should provide the following	(i) 4-component radiative fluxes (upwelling and downwelling shortwave and longwave) (ii) atmospheric pressure, (iii) air temperature and relative humidity, (iv) wind speed and wind direction, (v) rainfall, (vi) soil heat flux, (vii) soil temperature and moisture sensors	Yes / No / Explain		
2	Data logger	Appropriate data logger for recording the above data and portable tripod with mounting hardware/sensors.	Yes / No / Explain		
3	Research grade sensors	These sensors should provide research grade data traceable to WMO standards	Yes / No / Explain		
4	Proven track record	The sensors should have proven track record based on published results in peer-reviewed impact factor journals	Yes / No / Explain		
5	Radiation sensors	4-component radiometer for measuring near-surface upwelling and downwelling solar and longwave flux	Yes / No / Explain		

6	Radiation sensors data cable and mounting kit	Four component radiometer with 10 m cable along with mounting kit. Should provide the all 4-component upwelling and downwelling shortwave and longwave fluxes.	Yes / No / Explain		
7	Ventilation	Should include ventilating unit.	Yes / No / Explain		
8	Shortwave (SW) Spectral response	300-2500 nm or better	Yes / No / Explain		
9	Range of Shortwave Radiative flux	10 to 1400 W/m2 or better	Yes / No / Explain		
10	Accuracy of Shortwave Radiative flux	5 W/m2 or better	Yes / No / Explain		
11	Resolution of Shortwave Radiative flux	0.5 W/m2 or better	Yes / No / Explain		
12	Longwave (LW) Spectral response	4500 to 40,000 nm or better	Yes / No / Explain		
13	Range of Longwave Radiative flux	100 to 700 W/m2 or better	Yes / No / Explain		
14	Accuracy of Longwave Radiative flux	10 W/m2 or better	Yes / No / Explain		
15	Resolution of Longwave Radiative flux	0.5 W/m2 or better	Yes / No / Explain		
16	Calibration records	Spectral response calibration records to be provided.	Yes / No / Explain		
17	Self-Calibrating Soil Heat Flux sensors range	-1000 to +1000 W/m2 or better	Yes / No / Explain		
18	Self-Calibrating Soil Heat Flux sensors accuracy	15% or better	Yes / No / Explain		
19	Soil moisture & soil temperature sensors	Measurement of volumetric water content (VWC), soil temperature	Yes / No / Explain		
20	Operating Temperature	0 degrees C to +70 degrees C	Yes / No / Explain		
21	Volumetric water content measurement range	0 to 100%	Yes / No / Explain		
22	Volumetric water content measurement accuracy	±3% or better	Yes / No / Explain		

23	Volumetric water content measurement resolution	0.5% or better	Yes / No / Explain		
24	Soil temperature measurement range	0° to +70°C	Yes / No / Explain		
25	Soil temperature measurement resolution	0.01 °C or better	Yes / No / Explain		
26	Soil temperature measurement accuracy	±0.5 °C or better	Yes / No / Explain		
27	Cable length	Soil moisture and soil temperature sensors (6 levels -50 cm depth) should have cable length of 10 m	Yes / No / Explain		
28	Atmospheric Pressure sensor	Measuring the atmospheric pressure near surface	Yes / No / Explain		
29	Range	700 – 1050 hPa or better	Yes / No / Explain		
30	Accuracy	+/- 1 hPa or better	Yes / No / Explain		
31	Temperature and relative humidity sensors	Measurement of near surface air temperature and relative humidity	Yes / No / Explain		
32	Relative Humidity (RH) range	0 to 100%	Yes / No / Explain		
33	RH accuracy at 25 °C	+/- 5 % or better	Yes / No / Explain		
34	Temperature range	-10° to +60°C or better	Yes / No / Explain		
35	Temperature accuracy at 25 °C	+/- 0.5 °C or better	Yes / No / Explain		
36	Shield	With Solar radiation shield	Yes / No / Explain		
37	Wind speed and wind direction sensor	Measurement of near surface wind speed and wind direction	Yes / No / Explain		
38	Wind speed measurement range	0 to 50 m/s or wider	Yes / No / Explain		
39	Wind speed sensor accuracy	0.5 m/s or better	Yes / No / Explain		

40	Wind speed resolution	0.5 m/s or better	Yes / No / Explain		
41	Wind direction measurement range	0-360 degrees	Yes / No / Explain		
42	Wind direction accuracy	5 degrees or better	Yes / No / Explain		
43	Wind direction resolution	1 degrees or better	Yes / No / Explain		
44	Rainfall Sensor	Surface accumulated rainfall in mm	Yes / No / Explain		
45	Sensor type	Tipping bucket	Yes / No / Explain		
46	Accuracy of rainfall accumulation	2% up to 50 mm/hour rain rate or better.	Yes / No / Explain		
47	Rainfall per tip	0.254 mm or better	Yes / No / Explain		
48	Data logger for data acquisition	appropriate Data logger for acquiring data from the sensors	Yes / No / Explain		
49	Data logger operating temperature range	-10°C to +60°C or better	Yes / No / Explain		
50	operating Relative Humidity range	0 to 100%.	Yes / No / Explain		
51	Each data logger should support following sensors:	Data logger should support all the above sensors (4-component radiometer, air pressure, air temperature and relative humidity, wind speed and wind direction, and rain gauge).	Yes / No / Explain		
52	Data logger storage	The system should have sufficient memory to store at least 3 months of data during continuous operation (interval of 1 minute).	Yes / No / Explain		
53	Data logger communication	Data logger should support communication with PC/laptop.	Yes / No / Explain		
54	Data logger display	Display of data logger status..	Yes / No / Explain		

55	Data logger outputs	Data values stored in tables with time-stamp and record number.	Yes / No / Explain		
56	Enclosure	A weather resistant enclosure for housing and protecting data logger to be provided.	Yes / No / Explain		
57	Warranty	Minimum one-year warranty.	Yes / No / Explain		
58	Installation	Provide training after installation and test the quality of outputs from all the sensors for at least three fair weather days.	Yes / No / Explain		
59	Installation charges if any	Installation charges (if any) are to be explicitly mentioned.	Yes / No / Explain		
60	Necessary hardware and accessories	All mounting hardware/sensor cables/accessories should be provided for continuous operation of all sensors.	Yes / No / Explain		
61	Installation at site	Should provide installation	Yes / No / Explain		
62	Manuals	User manuals of all sensors should be given.	Yes / No / Explain		
63	Calibration of sensors and certificates	Sensors should be calibrated and calibration certificate (including details of calibration) should be provided	Yes / No / Explain		
64	Software charges	Software charges (if any) are to be mentioned explicitly.	Yes / No / Explain		

65	Mounting hardware	i) A portable 3 m tripod with fixtures suitable for mounting the sensors and cables. ii) All necessary mounting fixtures should be provided. iii) The tripod should withstand severe weather conditions with wind speed up to 50 m/s or more. iv) Lightning protection should be provided with tripod.v) An enclosure with weather resistance for protecting data logger.vi) Mounting hardware (if any) for solar panel must be included in the quote.	Yes / No / Explain		
66	Solar power supply unit	i) AC power supply with a provision of solar power. ii) Solar panel, regulator should be compatible with data logger and all sensors	Yes / No / Explain		
67	Battery	100 AH SMF battery or alternate options. Sensors should be able to operate without solar power up to 72 hours or more. To meet this suitable battery should be included.	Yes / No / Explain		

Common Specifications (Applicable for all items)

Sl No	Specification	Value	Compliance	Offered Specification	Remark
1	Installation charges if any	Installation charges (if any) are to be explicitly mentioned.	Yes / No / Explain		
2	Necessary hardware and accessories	All mounting hardware/sensor cables/accessories should be provided for continuous operation of all sensors.	Yes / No / Explain		
3	Installation at site	Should provide installation	Yes / No / Explain		

4	Manuals	User manuals of all sensors should be given.	Yes / No / Explain		
5	Calibration records	Sensors should be calibrated before installations and calibration certificate (including details of calibration) should be provided.	Yes / No / Explain		
6	Software charges	Software charges (if any) are to be mentioned explicitly.	Yes / No / Explain		

Supporting Documents required from Vendor

1. Sensors should be calibrated and calibration certificate (including details of calibration) should be provided

2. User manuals of all sensors should be given

3. Local Content Self declaration along with split up and location of value addition details, if applicable as per MII condition

5 additional documents can be uploaded by the vendor

C.2 Commercial Terms / Bid

Sl. No.	Description	Compliance	Vendor Terms
1	Sensors should be calibrated and calibration certificate (including details of calibration) should be provided	Yes / No / Explain	
2	1 year Warranty	Yes / No / Explain	
3	All mounting hardware/sensor cables/accessories should be provided for continuous operation of all sensors.	Yes / No / Explain	
4	The sensors should have proven track record based on published results in peer-reviewed impact factor journals.	Yes / No / Explain	
5	Sensors should provide research grade data traceable to WMO standards.	Yes / No / Explain	
6	This tender is restricted only to Class-I and Class-II Local Suppliers as defined under DPIIT Order dtd 04/06/2020- Preference to Make in India Order-2017 Revision. Non-Local Suppliers need not quote. Foreign OEMs/Agents quoting on behalf of Foreign OEMs are not permitted to quote. High Sea Sales Quotes not permitted.	Yes / No / Explain	
7	This is a TWO-PART tender i.e. Techno-Commercial Bid (C1 & C2 of tender document) and Price Bid (C3 of tender document) shall be submitted separately. All technical and commercial terms and conditions shall be furnished in the Techno-Commercial Bid while price shall be indicated only in the Price Bid. Uploading price details anywhere else other than the price-bid shall lead to unconditional rejection of the tender. Please make note of the same. Tenderers are advised NOT TO UPLOAD any documents revealing the price in technical & Commercial bid other than area marked as price related documents	Yes / No / Explain	

8	The vendor has to compulsorily submit the compliance statement online otherwise their offer will not be considered for further evaluation. Before entering the compliance statement, vendors are advised to refer the detailed specification provided.	Yes / No / Explain	
9	The Technical Specification/ Drawing/ Product Catalogues/ Works Carried by vendor/ Make offered etc. as a PDF file without any financial details has to be uploaded online mode by the vendor.	Yes / No / Explain	
10	Technical Bids will be opened at the scheduled due date & time. No further intimation will be sent in this regard. The schedule for price bid opening shown is only indicative. Price bids will only be opened in the case of parties who have been techno-commercially accepted, the details of which will be communicated at a later stage.	Yes / No / Explain	
11	Foreign vendors are not permitted to quote 1. Only Class -I and Class-II Local suppliers as per make in India policy are eligible to participate in the bid. 2. The percentage of local content should be specifically mentioned in the offer, without which will be summarily rejected 3. Preference will be given to Class-I Local Supplier and in their absence, class-II Local supplier will be considered.	Yes / No / Explain	
12	Definitions: A supplier or service provider, whose goods, services or works offered for procurement, has local content: (a) Equal to or more than 50% - Class I Local Supplier (b) More than 20% but less than 50% - Class II Local Supplier (c) Less than or equal to 20% - Non-Local Supplier Mention your category	Yes / No / Explain	

13	Local content means the amount of value added in India, (i.e. indigenous items / services added in the offered products / services / works) be the total value of the item offered (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties / IGST) as a proportion of the total value (excluding net domestic indirect taxes), in percent. Indicate the extent of Minimum local content in offered products / services and location and breakup / details of such value additions.	Yes / No / Explain	
14	Self-declaration on local content percentage and location of value addition: The Class I and II Local Supplier shall provide a Self-Declaration along with your bid in PDF format indicating the item offered meets the minimum local content as called for in the tender as mentioned above and provide the Percentage (%) of the local content along with the details of the location(s) at which the local value addition is made. In case of Two-part tenders, it is mandatory to indicate compliance to Minimum Local Content (MLC) in the technical bid itself. Confirm attachment of Self declaration as stated above along with the offer.	Yes / No / Explain	
15	Purchase preference to eligible vendors are applicable as per extant notifications issued by the Government of India. The Class-I/Class-II Local suppliers, at the time of submitting their offer, shall also indicate percentage of local content and provide self certification that the item (s) offered meets the local content requirement for Class-I/Class-II Local Suppliers as the case may be. They shall also give details of location (s) at which the local value addition is made.	Yes / No / Explain	

16	In cases if the item(s) offered exceed Rs. 10 Crores, the Class-I/Class-II Local Suppliers shall provide a Certificate from the statutory auditor or cost auditor of the company (in case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content. False Declarations will be in breach of the Code of Integrity under Rule 175 (1) (i) (h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.	Yes / No / Explain	
17	GST extra as applicable. Please quote applicable G.S.T rates with HSN code. Your GST Reg.No. and details shall be furnished in your quotation	Yes / No / Explain	
18	Delivery Terms [Normal delivery terms - FOR VSSC]	Yes / No / Explain	
19	Delivery Period [Please Specify the period, LD shall be applicable in case of delayed delivery]. Mention the time required for supply and installation wherever applicable.	Yes / No / Explain	
20	Time required for installation from the date of supply	Yes / No / Explain	
21	Payment [Within 30 days after receipt and acceptance of Item at our Stores].	Yes / No / Explain	
22	Liquidated Damages @ 0.5% per week subject to maximum of 10% of order value is applicable beyond the promised delivery schedule.	Yes / No / Explain	
23	Warranty [Minimum one year required.]	Yes / No / Explain	
24	Performance Bank Guarantee for 3% of order value valid 2 months beyond the Warranty Period to be provided.	Yes / No / Explain	

25	<p>Security Deposit: Successful Tenderer shall submit Security Deposit equivalent to 3% of the order value valid for a period of 60 days beyond the date for completion of the Purchase Order. This security deposit is collected towards the performance of the Contract. The said Security Deposit shall be submitted either in the form of Bank Guarantee or Fixed Deposit receipts from Nationalised/Scheduled Banks. No exemption is applicable for MSE vendors from submission of Security Deposit. In case PSU/Autonomous bodies/Central Government organizations, Indemnity Bond shall be accepted. Wherever SD and PBG are involved, the same can be submitted in consolidated SD cum PBG, valid till completion of warranty obligations under the contract. Necessary formats will be issued to the successful tenderer along with Purchase order.</p>	Yes / No / Explain	
26	Country of Origin	Yes / No / Explain	
27	GeM Seller Unique ID	Yes / No / Explain	
28	Quote Validity: Minimum 180 days [for Two part Tender] from the date of Tender opening.	Yes / No / Explain	
29	PO ordering address in full with Contact Persons Name, E-mail id, Phone No. [also attach your Quotation in PDF format].	Yes / No / Explain	
30	<p>As per the provisions of Office Memorandum No. F. No. 6/18/2019-PPD dtd. 23.07.2020 (i.e., Rule No. 144 (xi) of GFR) and its Amendments, issued by Department of Expenditure, Ministry of Finance. I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered.</p>	Yes / No / Explain	
31	If any of the bidders submit any forged or false documents along with the Tender, such tenders will be summarily rejected and such bidders will be blacklisted for all future tenders.	Yes / No / Explain	

32	Any other terms.	Yes / No / Explain	
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C.3 Price Bid

Sl. No.	Item	Quantity	Unit Price	Currency	Total Price	Remark
1	GENERAL METEOROL OGY INSTRUMEN TS	1.00 Nos.		-		

Common charges (Applicable for all items)

Freight charge	
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