



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 DIVISION

Our Ref : PUR-PROC/255/2018-PUR-NCESS
 (To be quoted in all correspondence)

Dt. 24.09.2018

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 **29.10.2018 on 06.00 PM (Tender Opening at 11.00 A.M on 31.10.2018)**. The terms and conditions governing the tender are given at the bottom.

<i>Sl. No</i>	<i>DESCRIPTION</i>	<i>QUANTITY REQUIRED</i>
1.	GPS Radiosonde system	1 Set

Note: Conditions and the detailed specifications are provided separately.

INSTRUCTIONS TO THE TENDERERS AND TERMS AND CONDITIONS

- 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.
- The technical and financial bids should be submitted separately.**
- An EMD of Rs. 120000/- may be submitted by way of bank remittance remitting the amount to our bank account. (Account no: 57059896404; Account Name: National Centre for Earth Science Studies (NCESS); IFSC Code: SBIN0070581; MICR Code: 695009036; Bank: State Bank of India, Akkulam, Trivandrum). The remittance should reflect in our accounts on or before the date of submission. The late remittance will not be valid. Exemption from EMD will be allowed for organizations registered with Central Purchase Organization, National Small Industries Corporation (NSIC) or MoES, Govt. Of India, if the claim is supported by relevant documents. The firms claiming EMD exemption on account of being small scale should attach NSIC certificate (not acknowledgment/memorandum). **The bank details for the refund of EMD should be furnished along the bid.**
- 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.
- It should be clear whether the quoted amount is inclusive of tax or not. If the tax is extra, the current tax rates should be specifically mentioned. We are eligible for Excise Duty Exemption through DSIR registration and its certificates will be provided in our formats.
- 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.**
- The technical bid should contain the Details of EMD remitted (or NSIC), Bank Details for refund of EMD, 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.**
- The offer should be valid for 120 days from the due date of opening of tender.**
- 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.

10. Catalogue/Brochure/Manual should be submitted along with the offer wherever necessary.
11. Warranty / Guarantee Clause needs to be mentioned necessarily wherever applicable.
12. All foreign bank charges will be to the account of beneficiary.
13. **The purchase will be made on credit basis and the payment will be made after supply and acceptance, by bank transfer.**
14. In the case of imports, both FCA and CIF/CIP Trivandrum airport prices may be quoted. 90% payment will be made against proof of dispatch documents by LC or wire transfer and balance 10% will be released against acceptance of goods and the receipt of bank guarantee.
15. In the event of placement of order, supplier / Indian agent shall provide a Performance Bank guarantee for 10% of the order value valid for warranty period + 60 days.
16. 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)

Specifications:

Complete GPS-radiosonde system to measure the vertical profile of temperature, humidity and wind in atmosphere from mean sea level to 35 km altitude above mean sea level. Sensor should provide research grade atmospheric data.

Items required

- (i) GPS-radiosonde ground receiving system including receiver, antenna and data acquisition system :1 set.
- (ii) GPS Radiosondes: 370 nos.

Optional items

- (i) Cloud particle sensor: 6 nos.

[This sensor should be compatible with GPS radiosonde and ground receiving system].

- (ii) Balloon filling accessories: 1 set
- (iii)Unwinder: 370 nos.

1.Data Acquisition system

- (i) Ground receiver and accessories for receiving the radiosonde signals (operating at 220-230 V AC/50 Hz).
- (ii) GPS receiver: 12 channels or better. a. Position technology: Differential GPS.
- (iii)Laptop for data processing and storage
- (iv) Portable antenna having horizontal/radial transmission range > 200 km.

2. GPS radiosonde

- (i) Transmission frequency range: 400-406 MHz.
- (ii) Transmitter type: FM
- (iii) Meteorological sensors: Humidity and temperature; Pressure sensor (optional)
- (iv) GPS : Position accuracy ~10 m; altitude accuracy ~15m
- (v) Radiosonde should be lightweight: less than 300g (including battery).
- (vi) Adequate batteries for operating > 200 minutes
- (vii) Interface for additional sensors: should be compatible with other sensors (such as Ozonesondes, cloud particle sensors, hygrometers) with serial data output.

3. Sensor Specifications of GPS-Radiosonde

(i) Relative Humidity (RH)

- (i) Relative Humidity (RH) range: 0 to 100%
- (ii) RH accuracy (up to 10km height): 7 % or better
- (iii)RH resolution : 0.1 %
- (iv) Response time: 2 s or better

(ii)Temperature

- (i) Temperature range: -90° to +50°C or better
- (ii) Temperature accuracy: +/- 0.5 °C for troposphere and < 0.8 °C for stratosphere.
- (iii)Temperature resolution 0.01 °C
- (iv) Response time: 2 s or better.

(iii) Calculated or measured Pressure

- (i) Range: 1050 hPa to 5 hPa.

(iv) Wind direction

- (i) Range:0 to 360 degrees
- (ii) Resolution: 0.5 degree or better

(v) Wind speed

- (i) Horizontal wind range: 0 to 150 m/s or beyond
- (ii) Resolution: 0.5 m/s or better

General requirements

- (i) The radiosonde system should have a proven track record in providing quality data and proof of publications in peer reviewed international journals.
- (ii) Quote should contain model number of GPS radiosonde and additional sensors.
- (iii) Require software and hardware for operation, calibration, testing and maintenance.
- (iv) All accessories/hardware/sensor cables/utilities, etc., should be provided for operation, testing and maintenance.
- (v) All software/algorithms and laptop/PC should be provided for real time viewing, analyzing (real time and offline) and saving the atmospheric profiles.
- (vi) Need on-site installation and demonstration.
- (vii) User manuals in English should be given.
- (viii) Essential tools, utilities, materials should be provided for entire setup for regular operations and maintenance.
- (ix) Output data stored in ASCII/similar formats with height and time stamp.

Warranty & terms and conditions

- (i) Minimum one year warranty for ground receiving systems.
- (ii) Items need to be replaced by the party in case of malfunction during test flight.
- (iii) GPS-radiosonde/other sensors to be replaced in case of malfunction within one year of purchase.

Optional requirements

- (i) Additional sensor/sonde for measuring the distribution of cloud particles. the parameters to be measured/estimated are Cloud particle number density, Particle size and Phase details. This sensor should be compatible with GPS-radiosonde and ground receiving system.
- (ii) Specification details, make number and brochure of all additional sensors should be provided.
- (iii) Extended warranty/AMC for ground receiving system for next two years.



NATIONAL CENTRE FOR EARTH SCIENCE STUDIES

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

Tel: 91-471-2511531

Fax: 91-471-2442280

e-mail: purchase@ncess.gov.in

TENDER FORM

Tender No. & Date : **PUR-PROC/216/2018-PUR-NCESS Dt. 24.09.2018.**
Due Date : **29.10.2018 (06.00 PM).**
Date of Opening : **31.10.2018 (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 : **GPS Radiosonde system**
Quantity : **1 Set**

Sirs,

The Chief 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/-
Chief Manager

ANNEXURE A

**The Chief 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 for GPS Radiosonde system

Sl. No.	Required Specification	Specification Offered	Whether complied
1	<p>GPS Radiosonde system 1 Set</p> <p>Specifications:</p> <p>Complete GPS-radiosonde system to measure the vertical profile of temperature, humidity and wind in atmosphere from mean sea level to 35 km altitude above mean sea level. Sensor should provide research grade atmospheric data.</p> <p>Items required</p> <p>(i) GPS-radiosonde ground receiving system including receiver, antenna and data acquisition system :1 set. (ii) GPS Radiosondes: 370 nos.</p> <p>Optional items</p> <p>(i) Cloud particle sensor: 6 nos.</p> <p>[This sensor should be compatible with GPS radiosonde and ground receiving system].</p> <p>(ii) Balloon filling accessories: 1 set (iii)Unwinder: 370 nos.</p> <p>1.Data Acquisition system</p> <p>(i) Ground receiver and accessories for receiving the radiosonde signals (operating at 220-230 V AC/50 Hz). (ii) GPS receiver: 12 channels or better. a. Position technology: Differential GPS.</p> <p>(iii)Laptop for data processing and storage (iv) Portable antenna having horizontal/radial transmission range > 200 km.</p> <p>2. GPS radiosonde</p> <p>(i) Transmission frequency range: 400-406 MHz. (ii) Transmitter type: FM (iii)Meteorological sensors: Humidity and temperature; Pressure sensor (optional) (iv) GPS : Position accuracy ~10 m; altitude accuracy ~15m (v) Radiosonde should be lightweight: less than 300g (including battery). (vi) Adequate batteries for operating > 200 minutes (vii) Interface for additional sensors: should be compatible with other sensors (such as Ozonesondes, cloud particle sensors, hygrometers) with serial data output.</p> <p>3. Sensor Specifications of GPS-Radiosonde</p> <p>(i) Relative Humidity (RH)</p> <p>(i) Relative Humidity (RH) range: 0 to 100% (ii) RH accuracy (up to 10km height): 7 % or better (iii)RH resolution : 0.1 %</p>		

(iv) Response time: 2 s or better

(ii) Temperature

- (i) Temperature range: -90° to +50°C or better
- (ii) Temperature accuracy: +/- 0.5 °C for troposphere and < 0.8 °C for stratosphere.
- (iii) Temperature resolution 0.01 °C
- (iv) Response time: 2 s or better.

(iii) Calculated or measured Pressure

- (i) Range: 1050 hPa to 5 hPa.

(iv) Wind direction

- (i) Range: 0 to 360 degrees
- (ii) Resolution: 0.5 degree or better

(v) Wind speed

- (i) Horizontal wind range: 0 to 150 m/s or beyond
- (ii) Resolution: 0.5 m/s or better

General requirements

- (i) The radiosonde system should have a proven track record in providing quality data and proof of publications in peer reviewed international journals.
- (ii) Quote should contain model number of GPS radiosonde and additional sensors.
- (iii) Require software and hardware for operation, calibration, testing and maintenance.
- (iv) All accessories/hardware/sensor cables/utilities, etc., should be provided for operation, testing and maintenance.
- (v) All software/algorithms and laptop/PC should be provided for real time viewing, analyzing (real time and offline) and saving the atmospheric profiles.
- (vi) Need on-site installation and demonstration.
- (vii) User manuals in English should be given.
- (viii) Essential tools, utilities, materials should be provided for entire setup for regular operations and maintenance.
- (ix) Output data stored in ASCII/similar formats with height and time stamp.

Warranty & terms and conditions

- (i) Minimum one year warranty for ground receiving systems.
- (ii) Items need to be replaced by the party in case of malfunction during test flight.
- (iii) GPS-radiosonde/other sensors to be replaced in case of malfunction within one year of purchase.

Optional requirements

- (i) Additional sensor/sonde for measuring the distribution of cloud particles. the parameters to be measured/estimated are Cloud particle number density, Particle size and Phase details. This sensor should be compatible with GPS-radiosonde and ground receiving system.
- (ii) Specification details, make number and brochure of all additional sensors should be provided.

	(iii)Extended warranty/AMC for ground receiving system for next two years.		
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- 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. Details of EMD and bank details for refund.**

Delivery Terms:

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 and in the case of Rupee bid and it shall be FCA and CIF Trivandrum airport in the case of foreign currency bid. However, Packing & Forwarding charges, inland freight & other related charges, freight, statutory levies etc. need to be specifically indicated in the Quotation.
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. **THE DOCUMENTS TO BE ATTACHED:**
 - 1) A list of not less than five Indian Customers who have bought the same instrument within the last two years, with contact details, is to be furnished along with the tender.
 - 2) The bidders shall necessarily furnish details of Authorised Service Provider in India. Dealers who are authorised to quote on behalf of the Principals shall provide valid Authorised Dealership Certificate from the Principals.
6. **AGENCY COMMISSION:** In case the tenderer is represented for an overseas supplier in India, he shall furnish the agency agreement / authorization certificate issued by the overseas supplier and the offer should indicate the percentage of agency commission (on ex-works value) included in the quoted price. The purchase order/contract will however, be placed only with the principals concerned directly. The purchaser shall pay the amount of agency commission, which is included in the quoted price, to the Indian Agent directly in equivalent Indian Rupee after customs clearance and acceptance of the goods, based on a bill from the Indian Agent. The commission will be paid at the exchange rate at which the Principals are paid.
7. **INSURANCE:** Transit Insurance if felt necessary, will be arranged by the purchaser directly with his underwriters against import orders placed with the overseas principals. However, no transit insurance is needed for the indigenous orders and stores shall be supplied under carrier's /supplier's risk.
8. **MODE AND TERMS OF PAYMENT:**

IMPORT ORDERS:

NET 30 days / Documents through bank / Sight Draft or Irrevocable Letter Of Credit.
However, the purchaser prefers payment on Net 30 days or Documents through Bank in the

case of imports worth below Rs.1 lakh. All bank charges outside India are to the account of supplier.

INDIGENOUS ORDERS:

Full payment within 45 days of receipt and successful installation of stores at Purchaser's Site.

9. **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. Warranty shall be for a minimum period of 12 months from the date of putting into operation of stores or 18 months from the date of delivery whichever is earlier.
10. **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
11. **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.
12. **DELIVERY/SHIPMENT:**
 - i) 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.
 - ii) 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;
 - a) 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
 - b) 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.
 - c) 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.
13. **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.

14. **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.
15. **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.
16. **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, 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: -

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

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.

16. 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 Chief Manager (i/c) 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.

18. EXEMPTION FROM PAYMENT OF DUTIES AND CONCESSIONAL SALES TAX:
The purchaser is eligible for availing customs duty exemption and excise duty exemption under the relevant rules.

19. 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

20. **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.
21. **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.
22. **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.
23. **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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