

**Tender Notification for the procurement of “Greenhouse Gas Analyzer” at the Indian Institute of Science, Bangalore**

(Late date of submission of tenders: **12:00 noon, 31 AUG 2020**)

Dear Sir/Madam,

Please submit your bid valid for 90 days for supply of the following equipment along with the terms and conditions and other vital information as required by us. Your response may please be addressed to The Chair, Centre for Ecological Sciences, 3rd Floor, Biological Sciences Building, Indian Institute of Science, Bangalore 560012, Karnataka, India, so as to reach us on or before 12:00 noon, 31<sup>st</sup> August 2020.

<b>Technical Specifications</b>	<b>Condition</b>
Automated multi-gas analyzer for estimating flux of select greenhouse gases from soil.	Required
Target gases: CO <sub>2</sub> , CH <sub>4</sub> , NH <sub>3</sub> , NO, N <sub>2</sub> O, and NO <sub>2</sub>	Required
Background (default) gas: water vapour, H <sub>2</sub> O	Required
Simultaneous measurement of all six target gases	Required
Single or multiple-point calibration	Required
Recommended composition for calibration gases, so that instrument can be re-calibrated locally as and when needed. Instrument should not require very frequent re-calibration (e.g., interval of 2-3 months, or longer, between calibration)	Required
Detection limit <1 ppm resolution for all six target gases	Required
Upper range of detection should be at least 10-20 times the average atmospheric concentration for each of the six target gases (e.g., up to 4000-8000 ppm for CO <sub>2</sub> or higher)	Required
Accuracy and reproducibility within 2-5% error, or better, for each target gas	Required
Measurement time <5 minutes per sample	Required
Gas flow rate between 100 and 1000 ml per minute	Required
Automatic compensation for Humidity, Air temperature and Air pressure. Provide documentary evidence for control of drift in readings when pressure/temperature varies.	Required
Dust and water-resistance	Required
Portable rugged design for operation in field conditions (e.g., in a forest). Life of instrument 10 years or longer, without degradation of sensors.	Required
Compatible with closed-loop circulation with a gas volume of 20-50 ml that can run for up to 30 minutes	Required
Wide range of operational conditions for temperature, air-pressure, and humidity	Required
Indian Standard electrical connectivity (e.g., 220V, 50 Hz supply and sockets).	Required
Compatibility with battery-operated inverters (AC/DC power conversion). Estimate of power consumption (e.g. kWh) should be included in technical bid	Required
Internal data storage up to 7 days of continuous measurement at a frequency of six records every hour	Required
In-built data display	Required
Data transfer in ASCII or equivalent format via USB or equivalent interface	Required
Remote assistance and technical support	Required

Complete operating manual, hard copy and soft copy	Required
Two years complete warranty for all manufacturing defects.	Required
List of at least 10 clients, with at least one client in India	Required
Pointwise compliance statement along with detailed documentary evidence of technical specifications from the manufacturer	Required
Detailed demonstration of instrument functionality during installation, either in-person or through webinars	Required
Three years extended warranty for maintenance	Optional
Spare parts and consumable items (e.g., dust filters, gas valves, tubes and fixtures, calibration gases, etc.)	Optional

### TERMS AND CONDITIONS FOR SUBMISSION OF BIDS

The quotations should be submitted in **two** bids, i.e., TECHNICAL bid and COMMERCIAL bid. The technical bid must include all the details of the technical specifications of the instrument along with terms and conditions masking only the price component. Bill of materials, brochures, technical datasheets, and any other document may be enclosure to help the evaluation of the technical bid. Technical bids will be evaluated based on their compliance with ‘Required’ features only, and not on any “Optional” features. The commercial bid must include the price of the instrument in Indian/Foreign currency, indicating break-up as follows:

- A) For goods manufactured in India:
  - a. Price of the goods quoted Ex-works inclusive of all taxes.
  - b. Charges for inland transportation, insurance, and other services may be indicated separately.
  - c. Installation, Commissioning and Training charges etc., if any.
- B) For goods manufactured abroad:
  - a. Price (CIF, Bangalore). Applicable Customs Duty will be borne by the Institute.
  - b. Charges for insurance and transportation of the goods by freight up to Bangalore
  - c. Installation, Commissioning and Training charges, etc., if any.

Both the Technical and Commercial bid should be put in separate sealed envelopes, and put together in another cover stating “Quotation for GHG Analyzer” and should reach us on or before **12:00 noon, 31-Aug-2020**.

Warranty should be for a period of **2 years** from the date of installation. Annual maintenance contract for **3 years** after warranty period may be quoted separately.

For foreign purchases, we prefer to make payment by letter of Credit- 90% against presentation of documents and 10% after installation. All foreign bank charges, if any, should be borne by the beneficiary. For supplies within India, 100% payment will be made after supply and satisfactory installation. The supplier should notify us when the instrument is ready for transport, with copies of shipment documents. In addition to this, LC Amendments, Extension, Confirmation Charges, if required, are to be borne by the beneficiary.

If the goods are found to be defective, they have to be replaced/rectified at the cost of the suppliers within 15 days from the date of receipt of written communication from us. If there is any delay in replacement/ rectification, the warranty period should be extended accordingly.

Conditional tenders will not be accepted.

The purchaser reserves the right to accept or reject any bid, and to annul bidding process and reject all bids any time prior to award of contract, without thereby incurring any liability to the affected bidder or bidders.

Any further queries can be made to [chair.ces@iisc.ac.in](mailto:chair.ces@iisc.ac.in) with copy marked to [office.ces@iisc.ac.in](mailto:office.ces@iisc.ac.in)

Yours Sincerely,

Chair, Centre for Ecological Sciences.

Indian Institute of Science, Bangalore-560012, Karnataka, INDIA