

Tender No.: IISER/PUR/1772/PV/AN/SE/22-23

तारीख/ Date:04 Jan 2023

Index for Invitation for Tender (IFT) (E-Procurement mode only)

1. The Institute invites Two Cover Tenders from Class I and II local suppliers, as per DPIIT order No. P-45021/2/2017-PP (BE-II) dated 04 Jun 2020, for the following items through the eProcurement System of National Informatics Centre that enables the Tenderers to submit the bids online through Central Public Procurement Portal of Government of India (<https://eprocure.gov.in/eprocure/app>.)

क्रम सं./ Sl. No	विवरण/ Description	Qty
1.	Supply, Installation and commissioning of Eddy Covariance Flux Tower (refer Annexure 7 Technical Specifications)	One

2. Annexures enclosed: Bidders should follow the annexures before submission of bid:-

1.	Annexure 1	Instructions To Bidder for Online Bid Submission
2.	Annexure 2	General Terms and conditions of Contract
3.	Annexure 3	Tender Acceptance Letter
4.	Annexure 4	Model bank guarantee format for EMD
5.	Annexure 5	Model bank guarantee format for performance security
6.	Annexure 6	Special conditions of tender
7.	Annexure 7	Technical specifications
8.	Annexure 8	Format for self-certification of local content
9.	Annexure 9	Declaration for not sharing land border with India
10.	Annexure 10	Certificate of not blacklisted
11.	Annexure 11	Checklist

3) All the correspondence in this regard should be done in favor of Deputy Registrar (Purchase & Stores), IISER Thiruvananthapuram referring the tender reference number. Email id – purchasestores@iisertvm.ac.in



Handwritten signature

A. 4) **ईएमडी/EMD: Rs. 2,00,000/- (Rupees Two lakhs only)** स्टेट बैंक संग्रह द्वारा भुगतान करना चाहिए - निविदा संख्या और कंपनी का नाम उल्लेख किया जाना चाहिए। उद्धरण के साथ लेनदेन पर्ची / प्रिंट आउट या ईएमडी मूल्य के बराबर 90 दिनों की वैधता में बैंक गारंटी या बोलीदाता के उपक्रम जमा करना चाहिए।/ should be paid through State Bank Collect- Tender No & Company Name must be mentioned in the Remarks column. (<https://www.onlinesbi.com/sbicollect/collecthome.htm> (State Bank Collect- Accept-Term and Conditions- Proceed-Select State **Kerala**-Select Type of Institution-**Educational Institution**- Select - **IISER Thiruvananthapuram**- Select Payment Category- **Stores and Purchase**) Quotes should accompany a copy of Transaction slip /Print out **OR** Bank guarantee equivalent **OR** Insurance Surety Bond to the EMD value with validity 90 days (should reach before tender due dates). EMD EXEMPTION: The bidder seeking EMD exemption, must submit the valid supporting document with the bid. Under MSE category, only manufacturers for goods and Service Providers for Services are eligible for exemption from EMD. Traders are excluded from the purview of this Policy.

5) Online Bid Submission: The documents to be uploaded in the e-procurement module, should be in two envelopes / covers.

6) Failure to upload the documents as per checklist will lead to rejection of bids.

7) Please quote only in Indian Rupees as per GFR 2017 amended Rule 161 (iv) and Public Procurement (Preference to make in India) order 2017, with your lowest rate and shortest delivery period as per the following terms. As per Govt of India, Ministry of Commerce and Industry, DPIIT order No. P-45021/2/2017-PP (BE-II) dated 04 Jun 2020 only Class I local Supplier (having local content equal to or more than 50%) and Class II local supplier (having local content more than 20% but less than 50%) are invited for this tender. Non-local supplier (having local content less than or equal to 20%) are not eligible to apply. Local Content means the amount of value added in India which shall, unless otherwise prescribed by the Nodal Ministry, be the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties). Class I local supplier / Class-II local supplier are required to indicate percentage of local content and provide self-certification that the item offered meets the local content requirement for 'Class-I local supplier' / 'Class-II local supplier', as the case may be. They shall also give details of the locations(s) at which the local value addition is made. Format for self-certification is given in **Annexure 8** of the tender document. Any non-compliance in this regard, the bid will not be considered in the category.

8. As per Ministry of Finance, Department of Expenditure order No. F.No./6/18/2019-PPD dated 23 Jul 2020 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 Department of Promotion of Industry and Internal Trade (DPIIT). Format for certificate for the same is given in **Annexure 9** of the tender document. 'Bidder' for the purpose of this order (including the term 'tenderer', 'consultant' 'vendor' or 'service provider' in certain contexts)



means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency, branch or office controlled by such person, participating in a procurement process. Bidder from a country which shares a land boarded with India 'for the purpose of this order means:-

- i. An entity incorporated, established or registered in such a country; or
- ii. A subsidiary of an entity incorporated, established or registered in such a country; or
- iii. An entity substantially controlled through entities incorporated, established or registered in such a country; or
- iv. An entity whose beneficial owner is situated in such a country; or
- v. An Indian (or other) agent of such an entity; or
- vi. A natural person who is a citizen of such a country; or
- vii. A consortium or joint venture where any member of the consortium of joint venture falls under any of the above.

9.

<i>1st Envelope / Cover (Technical Bid)</i>		
SI No	Contents	Format
1.	Compliance sheet as per specifications	PDF
2.	Detailed brochures, data sheets, catalogues etc. supporting the compliance of specifications	PDF
3.	Clientele list and details of TWO major installations in India	PDF
4.	Any other document as mentioned in the specifications or essential as per bidder	PDF
5.	All commercial terms and conditions of the bid (except price)	PDF
6.	Tender Acceptance Letter, & EMD, Declaration as per Annexure 8,9,10 and Checklist	PDF
<i>2nd Envelope / Cover (Price Bid)</i>		
1.	Price bid: item-wise prices for the items mentioned in the Technical Bid (clearly mentioning the break Tax/ Duty / other charges etc.)	Excel (.xls)

10. Note: Please note being an Institute under Ministry of Education, Govt of India, the Institute will not entertain any type of advance payment for the equipment, AMC or any other services.

11. Detailed Specifications : Please refer Annexure 7.



Deputy Registrar (Purchase & Stores)

Invitation for Tender (E-Procurement mode only)

1	Work / Item Description	Supply, Installation and commissioning of Eddy Covariance Flux Tower (refer Annexure 7 Technical Specifications)
2	Quantity Required	As per the Annexure 7
3	Tender Type	Open
4	Tender Reference No	IISER/PUR/1772/PV/AN/SE/22-23
5	Number of covers (1/2/3/4)	2 (Technical and Financial)
6	Date of Issue/Publishing	04 Jan 2023
7	Document Download/Sale Start Date	04 Jan 2023 (1500 Hrs)
8	Document Download/Sale End Date	25 Jan 2023 (1500 Hrs)
9	Clarification End Date	11 Jan 2023 (1500 Hrs)
10	Last Date and Time for Uploading of Bids	25 Jan 2023 (1500 Hrs)
11	Date and Time of Opening of Technical Bids	27 Jan 2023 (1530 Hrs)
12	Date of Opening of Price Bid	will be intimated later
13	Tender Fee (INR)	Nil
14	EMD Amount (INR)	Rs.2,00000/- (Rupees Two lakhs only)
15	Detailed Specifications	As per annexure 7

Please note being an Institute under Ministry of Education, Govt of India, the Institute will not entertain any type of advance payment for the equipment, AMC or any other services.

As
04/01/2023

Deputy Registrar (Purchase & Stores)



ANNEXUE: 1
Instructions for Online Bid Submission

- 1) The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.
- 2) More information useful for submitting online bids on the CPP Portal may be obtained at: <https://eprocure.gov.in/eprocure/app>.

REGISTRATION

- 1) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: <https://eprocure.gov.in/eprocure/app>) by clicking on the link "Online bidder Enrollment" on the CPP Portal which is free of charge.
- 2) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- 3) Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- 4) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.), with their profile.
- 5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
- 6) Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token

SEARCHING FOR TENDER DOCUMENTS

- 1) There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords etc. to search for a tender published on the CPP Portal.
- 2) Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the CPP Portal to intimate the bidders through SMS / email in case there is any corrigendum issued to the tender document.
- 3) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

PREPARATION OF BIDS

- 1) Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- 2) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- 3) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
- 4) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Space" or "Other Important Documents" area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.
Notc: My Documents space is only a repository given to the Bidders to ease the uploading process. If Bidder has uploaded his Documents in My Documents space, this does not automatically ensure these Documents being part of Technical Bid.

SUBMISSION OF BIDS

- 1) Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- 2) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- 3) Bidder has to select the payment option as "offline" to pay the tender fee / EMD as applicable and enter details of the instrument.
- 4) Bidder should prepare the EMD as per the instructions specified in the tender document. The original should be posted/couriered/given in person to the concerned official, latest by the last date of bid submission or as specified in the tender documents. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid will be rejected.
- 5) Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BoQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BoQ file, open it and complete the



white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.

- 6) The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
- 7) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid opener's public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 8) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 9) Upon the successful and timely submission of bids (i.e. after Clicking "Freeze Bid Submission" in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
- 10) The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

ASSISTANCE TO BIDDERS

- 1) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
- 2) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk.

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The document 'Instructions To Bidder for Online Bid Submission' is downloadable from :
<https://eprocure.gov.in/eprocure/app?page=StandardBiddingDocuments&service=page>



Annexure: 2

GENERAL TERMS & CONDITIONS OF THE CONTRACT

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2.37	Right to use Defective Goods
2.38	Protection against Damage
2.39	Site preparation and installation

2.1 DEFINITIONS

2.1.1 The following words and expressions shall have the meanings hereby assigned to them:

- a) "Contract" means the Contract Agreement entered into between the Purchaser and the Supplier, together with the Contract Documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein.
- b) "Contract Documents" means the documents listed in the Contract Agreement, including any amendments thereto.
- c) "Contract Price" means the price payable to the Supplier as specified in the Contract Agreement, subject to such additions and adjustments thereto or deductions there from, as may be made pursuant to the Contract.
- d) "Day" means calendar day.
- e) "Completion" means the fulfilment of the Related Services by the Supplier in accordance with the terms and conditions set forth in the Contract.
- f) "GCC" means the General Conditions of Contract.
- g) "Goods" means all of the commodities, raw material, machinery and equipment, and/or other materials that the Supplier is required to supply to the Purchaser under the Contract.
- h) "Related Services" means the services incidental to the supply of the goods, such as transportation, insurance, installation, training and initial maintenance and other such obligations of the Supplier under the Contract.
- i) "SCC" means the Special Conditions of Contract.
- j) "Subcontractor" means any natural person, private or government entity, or a combination of the above, to whom any part of the Goods to be supplied or execution of any part of the Related Services is subcontracted by the Supplier.
- k) "Supplier" means the natural person, private or government entity, or a combination of the above, whose bid to perform the Contract has been accepted by the Purchaser and is named as such in the Contract Agreement.
- l) Indian Institute of Science Education and Research, Thiruvananthapuram (IISER-TVM) means a society registered under the Travancore Cochin Literary Scientific and Charitable Societies' Registration Act, 1995 (12 of 1955) on 20.02.2008 at Kerala at no. T.342/08.
- m) "The final destination," where applicable, means the place named in the SCC.

2.2 CONTRACT DOCUMENTS

2.2.1 Subject to the order of precedence set forth in the Contract Agreement, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary, and mutually explanatory. The Contract Agreement shall be read as a whole.

2.3 FRAUD AND CORRUPTION

2.3.1 The purchaser requires that bidders, suppliers, contractors and consultants, if any, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy,

- a) The terms set forth below are defined as follows:
 - i) "Corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution;



- ii) "Fraudulent practice" means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract;
- iii) "Collusive practice" means a scheme or arrangement between two or more bidders, with or without the knowledge of the Borrower, designed to establish bid prices at artificial, noncompetitive levels; and
- iv) "Coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract;
- b) the purchaser will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question;
- 2.4 JOINT VENTURE, CONSORTIUM OR ASSOCIATION**
- 2.4.1 If the Supplier is a joint venture, consortium, or association, all of the parties shall be jointly and severally liable to the Purchaser for the fulfillment of the provisions of the Contract and shall designate one party to act as a leader with authority to bind the joint venture, consortium, or association. The composition or the constitution of the joint venture, consortium, or association shall not be altered without the prior consent of the Purchaser.
- 2.5 SCOPE OF SUPPLY**
- 2.5.1 The Goods and Related Services to be supplied shall be as specified in the Schedule of Requirements.
- 2.6 SUPPLIERS' RESPONSIBILITIES**
- 2.6.1 The Supplier shall supply all the Goods and Related Services included in the Scope of Supply in accordance with Scope of Supply Clause of the GCC, and the Delivery and Completion Schedule, as per GCC Clause relating to delivery and document.
- 2.7 CONTRACT PRICE**
- 2.7.1 Prices charged by the Supplier for the Goods supplied and the Related Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid.
- 2.8 COPYRIGHT**
- 2.8.1 The copyright in all drawings, documents, and other materials containing data and information furnished to the Purchaser by the Supplier herein shall remain vested in the Supplier, or, if they are furnished to the Purchaser directly or through the Supplier by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party.
- 2.9 APPLICATION**
- 2.9.1 These General Conditions shall apply to the extent that they are not superseded by provisions in other parts of the Contract.
- 2.10 STANDARDS**
- 2.10.1 The Goods supplied and services rendered under this Contract shall conform to the standards mentioned in the Technical Specifications and Schedule of Requirements, and, when no applicable standard is mentioned, to the authoritative standard appropriate to the Goods' country of origin and such standards shall be the latest issued by the concerned institution.
- 2.11 USE OF CONTRACT DOCUMENTS AND INFORMATION**
- 2.11.1 The Supplier shall not, without the Purchaser's prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample or information, furnished by or on behalf of the Purchaser in connection therewith, to any person other than a person employed by the Supplier in performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far, as may be necessary for purposes of such performance.
- 2.11.2 The Supplier shall not, without the Purchaser's prior written consent, make use of any document or information enumerated above except for purposes of performing the Contract.
- 2.11.3 Any document, other than the Contract itself, enumerated above shall remain the property of the Purchaser and shall be returned (in all copies) to the Purchaser on completion of the Supplier's performance under the Contract if so required by the Purchaser.
- 2.12 PATENT INDEMNITY**
- 2.12.1 The Supplier shall, subject to the Purchaser's compliance with GCC Sub-Clause 12.2, indemnify and hold harmless the Purchaser and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Purchaser may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract by reason of:
- (a) the installation of the Goods by the Supplier or the use of the Goods in India; and
- (b) the sale in any country of the products produced by the Goods.
- 2.12.2 If any proceedings are brought or any claim is made against the Purchaser, the Purchaser shall promptly give the Supplier a notice thereof, and the Supplier may at its own expense and in the Purchaser's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claims.
- 2.13 PERFORMANCE SECURITY**
- 2.13.1 Within 21 days of receipt of the notification of award/PO, the Supplier shall furnish performance security in the amount specified in SCC, valid till 60 days after the warranty period. Alternatively, the PS may also be submitted at the time of release of final payment in cases where part payment is made against delivery & part on installation. The PS, where applicable, shall be submitted in advance for orders where full payment is to be made on Letter of Credit (LC) or on delivery. In this case, submission of PS at the time of negotiation of documents through Bank would be stipulated as a condition in the LC and the PS should be kept valid till such time the PS is submitted.
- 2.13.2 The proceeds of the performance security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.
- 2.13.3 The Performance Security shall be denominated in Indian Rupees for the offers received for supplies within India and denominated in the currency of the contract in the case of offers received for supply from foreign countries.
- 2.13.4 In the case of imports, the PS may be submitted either by the principal or by the Indian agent and, in the case of purchases from indigenous sources, the PS may be submitted by either the manufacturer or their authorized dealer/bidder.
- 2.13.5 The Performance security shall be in one of the following forms:
- (a) A Bank guarantee or stand-by Letter of Credit issued by a Nationalized/Scheduled bank located in India or a bank located abroad in the form provided in the bidding documents. Or,



- (b) A Banker's cheque or Account Payee demand draft in favour of the purchaser. Or,
(c) A Fixed Deposit Receipt pledged in favour of the Purchaser.
- 2.13.6 The performance security will be discharged by the Purchaser and returned to the Supplier not later than 60 days following the date of completion of the Supplier's performance obligations, including any warranty obligations, unless specified otherwise in SCC, without levy of any interest.
- 2.13.7 In the event of any contract amendment, the supplier shall, within 21 days of receipt of such amendment, furnish the amendment to the performance security, rendering the same valid for the duration of the contract, as amended for further period of 60 days thereafter.
- 2.13.8 The order confirmation should be received within 15 days from the date of notification of award. However, the Purchaser has the powers to extend the time frame for submission of order confirmation and submission of Performance Security (PS). Even after extension of time, if the order confirmation /PS are not received, the contract shall be cancelled and limited tenders irrespective of the value would be invited from the responding firms after forfeiting the bid security of the defaulting firm, where applicable provided there is no change in specifications. In such cases the defaulting firm would not be considered again for re-tendering in the particular case.
- 2.14. INSPECTIONS AND TESTS**
- 2.14.1 The Supplier shall at its own expense and at no cost to the Purchaser carry out all such tests and/or inspections of the Goods and Related Services as are specified in the SCC or as discussed and agreed to during the course of finalization of contract.
- 2.14.2 The Purchaser or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the Purchaser. The Technical Specifications and SCC shall specify what inspections and tests the Purchaser requires and where they are to be conducted. The Purchaser shall notify the Supplier in writing in a timely manner of the identity of any representatives retained for these purposes
- 2.14.3 The inspections and tests may be conducted on the premises of the Supplier or its subcontractor(s), at the point of delivery and/or at the Goods final destination. If conducted on the premises of the Supplier or its subcontractor(s), all reasonable facilities and assistance, including access to drawings and production data - shall be furnished to the inspectors at no charge to the Purchaser.
- 2.14.4 Whenever the Supplier is ready to carry out any such test and inspection, it shall give a reasonable advance notice, including the place and time, to the Purchaser. The Supplier shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Purchaser or its designated representative to attend the test and/or inspection
- 2.14.5 Should any inspected or tested Goods fail to conform to the specifications, the Purchaser may reject the goods and the Supplier shall either replace the rejected Goods or make alterations necessary to meet specification requirements free of cost to the Purchaser.
- 2.14.6 The Purchaser's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival at final destination shall in no way be limited or waived by reason of the Goods having previously been inspected, tested and passed by the Purchaser or its representative prior to the Goods shipment.
- 2.14.7 The Supplier shall provide the Purchaser with a report of the results of any such test and/or inspection.
- 2.14.8 With a view to ensure that claims on insurance companies, if any, are lodged in time, the bidders and /or the Indian agent shall be responsible for follow up with their principals for ascertaining the dispatch details and informing the same to the Purchaser and he shall also liaise with the Purchaser to ascertain the arrival of the consignment after clearance so that immediately thereafter in his presence the consignment could be opened and the insurance claim be lodged, if required, without any loss of time. Any delay on the part of the bidder/Indian Agent would be viewed seriously and he shall be directly responsible for any loss sustained by the purchaser on the event of the delay.
- 2.15. PACKING**
- 2.15.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.
- 2.15.2 The packing, marking and documentation within and outside the packages shall comply strictly with such special requirements as shall be provided for in the Contract including additional requirements, if any, specified in SCC and in any subsequent instructions ordered by the Purchaser
- 2.16. DELIVERY AND DOCUMENTS**
- 2.16.1 Delivery of the Goods and completion and related services shall be made by the Supplier in accordance with the terms specified by the Purchaser in the contract. The details of shipping and/or other documents to be furnished by the supplier are specified in SCC.
- 2.16.2 The terms FOB, FCA, CIF, CIP etc shall be governed by the rules prescribed in the current edition of the Incoterms published by the International Chambers of Commerce, Paris.
- 2.16.3 The mode of transportation shall be as specified in SCC
- 2.17. INSURANCE**
- 2.17.1 Should the purchaser elect to buy on CIF/CIP basis, the Goods supplied under the Contract shall be fully insured in Indian Rupees against any loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in SCC.
- 2.17.2 Where delivery of the goods is required by the purchaser on CIF or CIP basis the supplier shall arrange and pay for Cargo Insurance, naming the purchaser as beneficiary and initiate & pursue claims till settlement, on the event of any loss or damage.
- 2.17.3 Where delivery is on FOB or FCA basis, insurance would be the responsibility of the purchaser.
- 2.17.4 With a view to ensure that claims on insurance companies, if any, are lodged in time, the bidders and /or the Indian agent shall be responsible for follow up with their principals for ascertaining the dispatch details and informing the same to the Purchaser and he shall also liaise with the Purchaser to ascertain the arrival of the consignment after clearance so that immediately thereafter in his presence the consignment could be opened and the insurance claim be lodged, if required, without any loss of time. Any delay on the part of the bidder/Indian Agent would be viewed seriously and he shall be directly responsible for any loss sustained by the purchaser on the event of the delay.
- 2.18. TRANSPORTATION**
- 2.18.1 Where the Supplier is required under the Contract to deliver the Goods FOB, transport of the Goods, up to and including the point of putting the Goods on board the vessel at the specified port of loading, shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract price. Where the Supplier is required under the Contract to deliver the Goods FCA, transport of the Goods and delivery into the custody of the carrier at the place named by the Purchaser or other agreed point shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract price.
- 2.18.2 Where the Supplier is required under the Contract to deliver the Goods CIF or CIP, transport of the Goods to the port of destination or such other named place of destination in the Purchaser's country, as shall be specified in the Contract, shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract Price.
- 2.18.3 In the case of supplies from within India, where the Supplier is required under the Contract to transport the Goods to a specified destination in India, defined as the Final Destination, transport to such destination, including insurance and storage, as specified in the Contract, shall be arranged by the Supplier, and the related costs shall be included in the Contract Price.
- 2.19. INCIDENTAL SERVICES**
- 2.19.1 The supplier may be required to provide any or all of the services, if any, specified in SCC
- 2.20. SPARE PARTS**
- 2.20.1 The Supplier shall be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:
- (a) Such spare parts as the Purchaser may elect to purchase from the Supplier, providing that this election shall not relieve the Supplier of any warranty obligations under the Contract; and
- (b) In the event of termination of production of the spare parts:
- (i) Advance notification to the Purchaser of the pending termination, in sufficient time to permit the Purchaser to procure needed requirements; and
- (ii) Following such termination, furnishing at no cost to the Purchaser, the blueprints, drawings and specifications of the spare parts, if requested.
- 2.21



- 2.21.1 The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.
- 2.21.2 The Supplier further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in India.
- 2.21.3 Unless otherwise specified in the SCC, the warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the SCC, or for eighteen (18) months after the date of shipment from the port or place of loading in the country of origin, whichever period concludes earlier.
- 2.21.4 The Purchaser shall give notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof.
- 2.21.5 The Purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects.
- 2.21.6 Upon receipt of such notice, the Supplier shall, within a reasonable period of time, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser.
- 2.21.7 If having been notified, the Supplier fails to remedy the defect within the reasonable period of time; the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.
- 2.21.8 Goods requiring warranty replacements must be replaced on free of cost basis to the purchaser.
- 2.22 TERMS OF PAYMENT**
- 2.22.1 The method and conditions of payment to be made to the Supplier under this Contract shall be as specified in the SCC.
- 2.22.2 The Supplier's request(s) for payment shall be made to the Purchaser in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and the Services performed, and by documents, submitted pursuant to Delivery and document Clause of the GCC and upon fulfillment of other obligations stipulated in the contract.
- 2.22.3 Payments shall be made promptly by the Purchaser but in no case later than thirty (30) days after submission of the invoice or claim by the Supplier.
- 2.22.4 Payment shall be made in currency as indicated in the contract.
- 2.23 CHANGE ORDERS AND CONTRACT AMENDMENTS.**
- 2.23.1 The Purchaser may at any time, by written order given to the Supplier pursuant to Clause on Notices of the GCC make changes within the general scope of the Contract in any one or more of the following:
- Drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;
 - The method of shipping or packing;
 - The place of delivery; and/or
 - The Services to be provided by the Supplier.
 - The delivery schedule.
- 2.23.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or delivery schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this clause must be asserted within fifteen (15) days from the date of the Supplier's receipt of the Purchaser's change order.
- 2.23.3 No variation or modification in the terms of the contract shall be made except by written amendment signed by the parties.
- 2.24 ASSIGNMENT**
- 2.24.1 The Supplier shall not assign, in whole or in part, its obligations to perform under the Contract, except with the Purchaser's prior written consent.
- 2.25 SUBCONTRACTS**
- 2.25.1 The Supplier shall notify the Purchaser in writing of all subcontracts awarded under this Contract if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the Supplier from any liability or duties or obligation under the Contract.
- 2.26 EXTENSION OF TIME.**
- 2.26.1 Delivery of the Goods and performance of the Services shall be made by the Supplier in accordance with the time schedule specified by the Purchaser.
- 2.26.2 If at any time during performance of the Contract, the Supplier or its sub-contractor(s) should encounter conditions impeding timely delivery of the Goods and performance of Services, the Supplier shall promptly notify the Purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice, the Purchaser shall evaluate the situation and may, at its discretion, extend the Supplier's time for performance with or without penalty, in which case the extension shall be ratified by the parties by amendment of the Contract.
- 2.26.3 Except as provided under the Force Majeure clause of the GCC, a delay by the Supplier in performance of its delivery obligations shall render the Supplier liable to the imposition of penalty pursuant to Penalty Clause of the GCC unless an extension of time is agreed upon pursuant to above clause without the application of penalty clause.
- 2.27 PENALTY CLAUSE**
- 2.27.1 Subject to GCC Clause on Force Majeure, if the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as penalty, a sum equivalent to the percentage specified in SCC of the delivered price of the delayed Goods or unperformed Services or contract value for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the Percentage specified in SCC. Once the maximum is reached, the Purchaser may consider termination of the Contract pursuant to GCC. Clause on Termination for Default. The SCC shall also indicate the basis for ascertaining the value on which the penalty shall be applicable
- 2.28. TERMINATION FOR DEFAULT**
- 2.28.1 The Purchaser may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Supplier, terminate the Contract in whole or part
- If the Supplier fails to deliver any or all of the Goods within the period(s) specified in the contract, or within any extension thereof granted by the Purchaser pursuant to GCC Clause on Extension of Time; or
 - If the Supplier fails to perform any other obligation(s) under the Contract.
 - If the Supplier, in the judgment of the Purchaser has engaged in corrupt or fraudulent or collusive or coercive practices as defined in GCC Clause on Fraud or Corruption in competing for or in executing the Contract.
- 2.28.2 In the event the purchaser terminates the contract in whole or in part, he may take recourse to any one or more of the following action:
- The Performance Security is to be forfeited;
 - The purchaser may procure, upon such terms and in such manner as it deems appropriate, stores similar to those undelivered, and the supplier shall be liable for all available actions against it in terms of the contract.
 - However, the supplier shall continue to perform the contract to the extent not terminated.
- 2.29 FORCE MAJEURE**
- 2.29.1 Notwithstanding the provisions of GCC Clauses relating to extension of time, penalty and Termination for Default the Supplier shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that, its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.
- 2.29.2 For purposes of this Clause, "Force Majeure" means an event or situation beyond the control of the Supplier that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Supplier. Such events may include, but not be limited to, acts of the Purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.
- 2.29.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such conditions and the cause thereof within 21 days of its occurrence. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.
- 2.29.4 If the performance in whole or in part or any obligations under the contract is prevented or delayed by any reason of force majeure for a period exceeding 60 days, either party may at its option terminate the contract without any financial repercussions on either side.
- 2.30 TERMINATION FOR INSOLVENCY**
- 2.30.1 The Purchaser may at any time terminate the Contract by giving written notice to the Supplier, if the Supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy, which has accrued or will accrue thereafter to the Purchaser.
- 2.31 TERMINATION FOR CONVENIENCE**
- 2.31.1 The Purchaser, by written notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.
- 2.31.2 The Goods those are complete and ready for shipment within 30 days after the Supplier's receipt of notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect:
- To have any portion completed and delivered at the Contract terms and prices; and/or
 - To cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and for materials and parts previously procured by the Supplier.



- 2.32 SETTLEMENT OF DISPUTES**
- 2.32.1 The Purchaser and the supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.
- 2.32.2 If, after twenty-one (21) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Purchaser or the Supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given. Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under the Contract.
- 2.32.3 The dispute settlement mechanism/arbitration proceedings shall be concluded as under:
- (a) In case of Dispute or difference arising between the Purchaser and a domestic supplier relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Indian Arbitration & Conciliation Act, 1996, the rules there under and any statutory modifications or re-enactments thereof shall apply to the arbitration proceedings. The dispute shall be referred to the Chairman, Board of Governors of IISER TVM and if he is unable or unwilling to act, to the sole arbitration of some other person appointed by him willing to act as such Arbitrator. The award of the arbitrator so appointed shall be final, conclusive and binding on all parties to this order.
- (b) In the case of a dispute between the purchaser and a Foreign Supplier, the dispute shall be settled by arbitration In accordance with provision of sub-clause (a) above. But if this is not acceptable to the supplier then the dispute shall be settled in accordance with provisions of UNCITRAL (United Nations Commission on International Trade Law) Arbitration Rules.
- 2.32.4 The venue of the arbitration shall be the place from where the purchase order or contract is issued.
- 2.32.5 Notwithstanding any reference to arbitration herein,
- (a) the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and
- (b) the Purchaser shall pay the Supplier any monies due the Supplier.
- 2.33 GOVERNING LANGUAGE**
- 2.33.1 The contract shall be written in English language which shall govern its interpretation. All correspondence and other documents pertaining to the Contract, which are exchanged by the parties, shall be written in the English language only.
- 2.34 APPLICABLE LAW**
- 2.34.1 The Contract shall be interpreted in accordance with the laws of the Union of India and all disputes shall be subject to place of jurisdiction as specified in SCC.
- 2.35 NOTICES**
- 2.35.1 Any notice given by one party to the other pursuant to this contract/order shall be sent to the other party in writing or by cable, telex, FAX, e-mail or and confirmed in writing to the other party's address specified in the SCC.
- 2.35.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later.
- 2.36 TAXES AND DUTIES**
- 2.36.1 For goods manufactured outside India, the Supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside India.
- 2.36.2 For goods Manufactured within India, the Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred till its final manufacture / production.
- 2.36.3 If any tax exemptions, reductions, allowances or privileges may be available to the Supplier in India, the Purchaser shall make its best efforts to enable the Supplier to benefit from any such tax savings to the maximum allowable extent.
- 2.37 RIGHT TO USE DEFECTIVE GOODS**
- 2.37.1 If after delivery, acceptance and installation and within the guarantee and warranty period, the operation or use of the goods proves to be unsatisfactory, the Purchaser shall have the right to continue to operate or use such goods until rectifications of defects, errors or omissions by repair or by partial or complete replacement is made without interfering with the Purchaser's operation.
- 2.38 PROTECTION AGAINST DAMAGE**
- 2.38.1 The system shall not be prone to damage during power failures and trip outs.
The normal voltage and frequency conditions available at site as under:
- (a) Voltage 230 volts - Single phase/ 415 V 3 phase (+_ 10%)
- (b) Frequency 50 Hz.
- 2.39. SITE PREPARATION AND INSTALLATION**
- The Purchaser is solely responsible for the construction of the equipment sites in compliance with the technical and environmental specifications defined by the Supplier. The Purchaser will designate the installation sites before the scheduled installation date to allow the Supplier to perform a site inspection to verify the appropriateness of the sites before the installation of the Equipment, if required. The supplier shall inform the purchaser about the site preparation, if any, needed for installation, of the goods at the purchasers' site immediately after notification of award/contract.


 DEPUTY REGISTRAR
 [PURCHASE & STORES]
 IISERTVM



ANNEXURE: 3

TENDER ACCEPTANCE LETTER (To be given on Company Letter Head)

To,

Date:

The Director, Indian Institute of Science Education and Research – Thiruvananthapuram,
Maruthamala P.O, Vithura, Thiruvananthapuram, Kerala -695551, India.

Sub: Acceptance of Terms & Conditions of Tender.

Tender Reference No: _____

Name of Tender / Work: -

Dear Sir,

1. I/ We have downloaded / obtained the tender document(s) for the above mentioned 'Tender/Work' from the web site(s) namely: _____ as per your advertisement, given in the above mentioned website(s).
2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents from Page No. _____ to _____ (including all documents like annexure(s), schedule(s), etc .,), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.
3. The corrigendum(s) issued from time to time by your department/ organization too have also been taken into consideration, while submitting this acceptance letter.
4. I / We hereby unconditionally accept the tender conditions of above mentioned tender document(s) / corrigendum(s) in its totality / entirety.
5. I / We do hereby declare that our Firm has not been blacklisted/ debarred by any Govt. Department/Public sector undertaking.
6. I / We certify that all information furnished by the our Firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then your department/ organization shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.
7. I / We declare the following information provided are correct to the best of my knowledge:

1.	Name and Address of the bidder	
2.	Manufacturer / Dealer / Agent	
3.	Contact Person	
4.	Phone	
5.	Email	
6.	Mobile Number	
7.	GST No	
8.	PAN No	
9.	UTR No / DU No (in case of online transfer of Tender Fee) (if any)	
10.	UTR No / DU No (in case of online transfer of EMD)	
11.	Warranty, if any	
12.	Delivery period	
13.	Payment terms	
14.	PO to be placed in favour of	
15.	Local content category(Class I/II/III)	

Yours Faithfully,

(Signature of the Bidder, with Official Seal)



Annexure 4

MODEL BANK GUARANTEE FORMAT FOR FURNISHING BID SECURITY (BS)

Whereas (hereinafter called the "tenderer")
has submitted their offer dated.....for the supply of.....
..... (hereinafter called the
"tender") against the Purchaser's tender enquiry No.....
.....KNOW ALL MEN by these presents that WE.....
.....of having our registered office at.....
.....are bound unto(hereinafter called the "Purchaser") in
the sum offor which
payment will and truly to be made to the said Purchaser, the Bank binds itself, its
successors and assigns by these presents. Sealed with the Common Seal of the
said Bank this..... day of20.....

THE CONDITIONS OF THIS OBLIGATION ARE:

- 1) If the tenderer withdraws or amends, impairs or derogates from the tender in any respect within the period of validity of this tender.
- 2) If the tenderer having been notified of the acceptance of his tender by the Purchaser during the period of its validity:-
 - a) If the tenderer fails to furnish the performance security for the due performance of the contract.
 - b) Fails or refuses to accept/execute the contract.

We undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the purchaser (IISER-TVM) having to substantiate its demand, provided that in its demand the purchaser will note that the amount claimed by it is due to it owing the occurrence of one or both the two conditions, specifying the occurred condition or conditions. This guarantee will remain in force up to and including 45 days after the period of tender validity and any demand in respect thereof should reach the bank not later than the above date.

Signature of the authorized officer of the bank

Name and designation of the officer

Seal, name and address of the Bank and address of the Branch.



Annexure 5

SPECIMEN

**PERFORMANCE SECURITY FORM
MODEL BANK GUARANTEE FORMAT FOR PERFORMANCE SECURITY**

To,

WHEREAS
(name and address of the supplier) (hereinafter called "the supplier") has undertaken, in pursuance of contract no. dated to supply (.....description of goods and services) (herein after called "the contract").

AND WHEREAS it has been stipulated by you in the said contract that the supplier shall furnish you with a bank guarantee by a scheduled commercial bank recognized by you for the sum specified therein as security for compliance with its obligations in accordance with the contract;

AND WHEREAS we have agreed to give the supplier such a bank guarantee;

NOW THEREFORE we hereby affirm that we are guarantors and responsible to you, on behalf of the supplier, up to a total of (amount of the guarantee in words and figures), and we undertake to pay you, upon your first written demand declaring the supplier to be in default under the contract and without cavil or argument, any sum or sums within the limits of (amount of guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the supplier before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the contract to be performed there under or of any of the contract documents which may be made between you and the supplier shall in any way release us from any liability under this guarantee and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until the day of, 20.....

(Signature of the authorized officer of the Bank)

.....
Name and designation of the officer

.....
Seal, name & address of the Bank and address of the Branch



Annexure 6: SPECIAL CONDITIONS OF CONTRACT

1.1. ELIGIBLE BIDDERS.

- 1.1.1 This Invitation for Bids is open to all suppliers.
- 1.1.2 Bidders should not be associated, or have been associated in the past, directly or indirectly, with a firm or any of its affiliates which have been engaged by the Purchaser to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the goods to be purchased under this Invitation of Bids.

1.2. COST OF BIDDING

- 1.2.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and "the Purchaser", will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

1.3. FRAUD AND CORRUPTION:

- 1.3.1 The purchaser requires that the bidders/suppliers and contractors observe the highest standard of ethics during the procurement and execution of such contracts.
- 1.3.2 The purchaser will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question;
The Bidding Documents

1.4. COST OF BIDDING DOCUMENTS

- 1.4.1 Interested eligible bidders may download the document from our Website.

1.5. CONTENT OF BIDDING DOCUMENTS

- 1.5.1 The goods required, bidding procedures and contract terms are prescribed in the bidding documents which should be read in conjunction.
- 1.5.2 The Bidder is expected to examine all instructions, forms, terms, and specifications in the bidding documents. **Failure to furnish all information required by the bidding documents or submission of a bid not substantially responsive to the bidding documents in every respect will be at the Bidder's risk and may result in rejection of its bid.**

1.6. CLARIFICATION OF BIDDING DOCUMENTS

- 1.6.1 A prospective Bidder requiring any clarification of the Bidding Documents shall contact the Purchaser in writing via fax/email. The Purchaser will respond in writing to any request for clarification, provided that such request is received not later than ten (10) days prior to the deadline for submission of bids. The Purchaser shall forward copies of its response to all those who have acquired the Bidding Documents directly from it, including a description of the inquiry but without identifying its source. Should the Purchaser deem it necessary to amend the Bidding Documents as a result of a clarification, it shall do so following the procedure under clause relating to amendment of Bidding documents and Clause relating to Deadline for Submission of Bids. The clarifications and amendments issued would also be hosted on the website of the purchaser for the benefit of the other prospective bidders.

1.7. AMENDMENT OF BIDDING DOCUMENTS

- 1.7.1 At any time prior to the deadline for submission of bids, the Purchaser may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the bidding documents by amendment.
- 1.7.2 All prospective bidders who have received the bidding documents will be notified of the amendment in writing or by e-mail and will be binding on them. The same would also be hosted on the website of the purchaser and all prospective bidders are expected to surf the website before submitting their bids to take cognizance of the amendments.
- 1.7.3 In order to allow prospective bidders reasonable time to take the amendment into account, while in preparing their bids, the Purchaser, at its discretion, may extend the deadline for the submission of bids and host the changes on the website of the purchaser.
- 1.7.4 In case of any amendment to the bid, it will be done at least 7 days before due date and will be published in website. Bidders are required to keep this in view before submission. Normally extension of due date will not be entertained. However in special cases if due date is extended, it will be notified under the same tender notice before 3 days of due date.

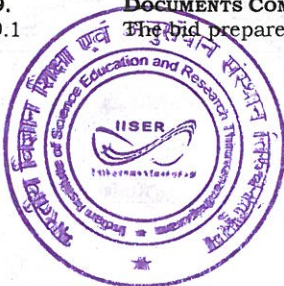
PREPARATION OF BIDS

1.8. LANGUAGE OF BID

- 1.8.1 The bid prepared by the Bidder, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Purchaser, shall be written in English language only especially when the details are technical.
However of GOI makes it mandatory under Rajbhasha Abhniyam in that case views of Rajbhasha unit of IISER-TVM may be sought.
- 1.8.2 The Supplier shall bear all costs of translation, if any, to the English language and all risks of the accuracy of such translation, for documents provided by the Supplier.

1.9. DOCUMENTS COMPRISING THE BID

- 1.9.1 The bid prepared by the Bidder shall include:



- a) Bidder Information
- b) Bid security declaration as specified in the Invitation to Bids.
- c) Service support details
- d) Deviation Statement if any.
- e) Performance Statement.
- f) Manufacturer's Authorization.
- g) Documentary evidence establishing that the bidder is eligible to bid and is qualified to perform the contract if its bid is accepted.
- h) Bid form.
- i) Documents establishing goods eligibility and conformity to bidding documents.
- j) Applicable Price Schedule Form.
- k) DGS&D Registration certificate in case the items under procurement falls under the restricted category of the current export-import policy of the Govt. of India.

1.10. BID FORM AND PRICE SCHEDULE

1.10.1 The bidder shall complete the Bid with the appropriate price schedule.

1.11. BID PRICES

1.11.1 The Bidder shall indicate on the appropriate price schedule, the unit prices and total bid prices of the goods it proposes to supply under the contract.

1.11.2 Prices indicated on the price-schedule form shall be entered separately in the following manner:

(A) FOR GOODS MANUFACTURED WITHIN INDIA

(i) The price of the goods quoted Ex-works including taxes already paid.

(ii) VAT and other taxes like excise duty etc [shall be shown extra] which will be payable on the goods if the contract is awarded.

a. The charges for inland transportation, insurance and other local services required for delivering the goods at the desired destination as specified in the price schedule.

b. The installation, commissioning and training charges including any incidental services, if any.

(B) FOR GOODS MANUFACTURED ABROAD

Bidders are required to show break-up of Ex-works [which should include packing and handling charges], FOB/FCA and CIF/CIP price in the quotation. IISERTVM has a mechanism for consolidation and customs clearance. The consolidators will be nominated for this purpose at the time of awarding the contract if desires so.

(i) The price of the goods, quoted on FCA (named place of delivery abroad) or FOB (named port of shipment), as specified in the price schedule.

(ii) The charges for insurance and transportation of the goods to the port/place of destination.

(iii) The agency commission charges should be shown, if any.

(iv) The installation, commissioning and training charges including any incidental services, if any

1.11.3 **The terms FOB, FCA, CIF, CIP etc shall be governed by the rules prescribed in the current edition of the Incoterms published by the International Chambers of Commerce, Paris.**

1.11.4 Where there is no mention of packing, forwarding, freight, insurance charges, taxes etc. such offer shall be rejected as incomplete.

1.11.5 The price quoted shall remain fixed during the contract period and shall not vary on any account

1.11.6 All lots and items must be listed and priced separately in the Price Schedules. If a Price Schedule shows items listed but not priced their prices shall be assumed to be included in the prices of other items. Lots or items not listed in the Price Schedule shall be assumed to be not included in the bid.

1.11.7 **Taxes & Duties: At actuals. The purchases made by the purchaser for scientific purpose are exempt from Custom Duty under notification 51/96.**

1.12. BID CURRENCIES

1.12.1 Prices shall be quoted in Indian Rupees for offers received for supply within India and in freely convertible foreign currency in case of offers received for supply from foreign countries.

1.13. DOCUMENTS ESTABLISHING BIDDER'S ELIGIBILITY AND QUALIFICATIONS

1.13.1 The bidder shall furnish, as part of its bid, documents establishing the bidders' eligibility to bid and its qualification to perform the contract if its bid is accepted.

1.13.2 The documentary evidence of the bidders qualification to perform the contract if the bid is accepted shall establish to the purchasers satisfaction that;

(a) The bidder meets the qualification criteria listed in bidding documents, if any.

(b) Bidder that doesn't manufacture the goods it offers to supply shall submit to Manufacturers' Authorization Form (MAF) to demonstrate that it has been duly authorized by the manufacturer of the goods to quote and/or supply the goods.

(c) In case a bidder not doing business within India, it shall furnish the certificate to the effect that the bidder is or will be represented by an agent in India equipped and able to carry out the supply, maintenance, repair obligations etc. during the warranty and post warranty period or ensure a mechanism at place for carrying out the supply, maintenance, repair obligations etc. during the warranty and post-warranty period.

1.13.3 Conditional tenders shall not be accepted

1.14. DOCUMENTS ESTABLISHING GOODS' ELIGIBILITY AND CONFORMITY TO BIDDING DOCUMENTS

1.14.1 To establish the goods' eligibility, the documentary evidence of the goods and services eligibility shall consist of a statement on the country of origin of the goods and services offered which shall be confirmed by a certificate of origin at the time of shipment.



- 1.14.2 To establish the conformity of the goods and services to the specifications and schedule of requirements of the bidding document, the documentary evidence of conformity of the goods and services to the bidding documents may be in the form of literature, drawings and data, and shall consist of:
(a) A detailed description of the essential technical and performance characteristics of the goods;
(b) A list giving full particulars, including available sources and current prices, of spare parts, special tools, etc., necessary for the proper and continuing functioning of the goods during the warranty period following commencement of the use of the goods by the Purchaser in the Priced bid; and
(c) An item-by-item commentary on the Purchaser's Technical Specifications demonstrating substantial responsiveness of the goods and services to those specifications or a statement of deviations and exceptions to the provisions of the Technical Specifications.
- 1.14.3 For purposes of the commentary to be furnished pursuant to above, the Bidder shall note that standards for workmanship, material and equipment, designated by the Purchaser in its Technical Specifications are intended to be descriptive only and not restrictive. The Bidder may substitute these in its bid, provided that it demonstrates to the Purchaser's satisfaction that the substitutions ensure substantial equivalence to those designated in the Technical Specifications.
- 1.15. BID SECURITY**
- 1.15.1 The Bidder shall furnish, as part of its bid, a bid security (BS) for an amount as specified in the Invitation for Bids. In the case of foreign bidders, the BS shall be submitted either by the principal or by the Indian agent and in the case of indigenous bidders; the BS shall be submitted by the manufacturer or their specifically authorized dealer/bidder.
- 1.15.2 The bid security shall be in Indian Rupees for offers received for supply within India and denominated in the currency of the bid or in any freely convertible foreign exchange in the case of offers received for supplies from foreign countries in equivalent Indian Rupees. The bid security shall be in one of the following forms at the bidders' option:
(a) A bank guarantee issued by a Nationalized/Scheduled bank/Foreign Bank operating in India in the form provided in the bidding documents and valid for 45 days beyond the validity of the bid. In case a bidder desires to submit a BG issued from a foreign bank, then the same should be confirmed by a Nationalized/Scheduled Indian bank; or
(b) Fixed Deposit receipt pledged in favour of the IISER-TVM.
(c) A Banker's cheque or demand draft in favour of IISERTVM issued by any Nationalised/Scheduled Indian bank.
- 1.15.3 The bid security shall be payable promptly upon written demand by the purchaser in case the conditions listed in the ITB clause 15.11 are invoked.
- 1.15.4 The bid security should be submitted in its original form. Copies shall not be accepted.
- 1.15.5 While Bid security (EMD) is a requirement, the Director IISER-TVM may grant exemption of Bid security to some specific parties having sound credentials and are of national/international repute.
- 1.15.6 The bid security of unsuccessful bidder will be discharged /returned as promptly as possible positively within a period of 15 days after the expiration of the period of bid validity or placement of order whichever is later, without any interest.
- 1.15.7 The successful Bidder's bid security will be discharged upon the Bidder furnishing the performance security, without any interest. Alternatively, the BS could also be adjusted against PS, if it is paid through DD/BC.
- 1.15.8 **The firms registered with DGS&D, NSIC if any, are exempted from payment of bid security (BS) provided such registration includes the item they are offering which are manufactured by them and not for selling products manufactured by other companies.**
- 1.15.9 In case a bidder intimates at the time of tender opening in writing that the bid security is kept inside the financial bid, then in such cases, the technical bid of the party would be accepted provisionally till opening of the financial bids with which the party has attached the bid security.
- 1.15.10 The bid security may be forfeited:
(a) If a Bidder withdraws or amends or impairs or derogates its bid during the period of bid validity specified by the Bidder on the Bid Form; or
(b) In case of a successful Bidder, if the Bidder fails to furnish order acceptance within 15 days of the order or fails to sign the contract and/or fails to furnish Performance Security within 21 days from the date of contract/ order.
- 1.16. PERIOD OF VALIDITY OF BIDS**
- 1.16.1 Bids shall remain valid for minimum of 90 days after the date of bid opening prescribed by the Purchaser. **A bid valid for a shorter period shall be rejected by the Purchaser as non-responsive.**
- 1.16.2 In exceptional circumstances, the Purchaser may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing (or by cable, telex, fax or e-mail). The bid security provided shall also be suitably extended. A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request will not be required nor permitted to modify its bid.
- 1.16.3 Bid evaluation will be based on the bid prices without taking into consideration the above corrections.
- 1.17. CONFIDENTIALITY**
- 1.17.1 Information relating to the examination, evaluation, comparison, and post qualification of bids, and recommendation of contract award, shall not be disclosed to bidders or any other persons not officially concerned with such process until publication of the Contract Award.



- 1.17.2 Any effort by a Bidder to influence the Purchaser in the examination, evaluation, comparison, and post qualification of the bids or contract award decisions may result in the rejection of its Bid.
- 1.18. CLARIFICATION OF BIDS**
- 1.18.1 To assist in the examination, evaluation, comparison and post qualification of the bids, the Purchaser may, at its discretion, ask the Bidder for a clarification of its bid. The request for clarification and the response shall be in writing and no change in prices or substance of the bid shall be sought, offered or permitted. However, no negotiation shall be held except with the lowest bidder, at the discretion of the purchaser. Any clarification submitted by a bidder in respect to its bid which is not in response to a request by the purchaser shall not be considered.
- 1.19. CONVERSION TO SINGLE CURRENCY**
- 1.19.1 To facilitate evaluation and comparison, the Purchaser will convert all bid prices expressed in the amounts in various currencies in which the bid prices are payable to Indian Rupees at the selling exchange rate established by any bank in India on the date of bid opening in the case of single part bidding and the rates prevalent on the date of opening of the Priced bids in the case of two-part bidding. For this purpose, exchange rate notified in www.xe.com or www.rbi.org or any other website could also be used by the purchaser.
- 1.20. CONTACTING THE PURCHASER**
- 1.20.1 Subject to ITB Clause 1.24, no Bidder shall contact the Purchaser on any matter relating to its bid, from the time of the bid opening to the time the Contract is awarded.
- 1.20.2 Any effort by a Bidder to influence the Purchaser in its decisions on bid evaluation, bid comparison or contract award may result in rejection of the Bidder's bid.
- 1.21. POST QUALIFICATION**
- 1.21.1 In the absence of pre-qualification, the Purchaser will determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated responsive bid is qualified to perform the contract satisfactorily, in accordance with the criteria listed in ITB Clause 13.
- 1.21.2 The determination will take into account the eligibility criteria listed in the bidding documents and will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, as well as such other information as the Purchaser deems necessary and appropriate.
- 1.21.3 An affirmative determination will be a prerequisite for award of the contract to the Bidder. A negative determination will result in rejection of the Bidder's bid.
- 1.22. PURCHASER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS**
- 1.22.1 The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders.
- 1.23. WARRANTY**
- 1.23.1 The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.
- 1.23.2 The Supplier further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in India.
- 1.23.3 Unless otherwise specified, the warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated, or for eighteen (18) months after the date of shipment from the port or place of loading in the country of origin, whichever period concludes earlier.
- 1.23.4 The Purchaser shall give notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof.
- 1.23.5 The Purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects.
- 1.23.6 Upon receipt of such notice, the Supplier shall, within a reasonable period of time, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser.
- 1.23.7 If having been notified, the Supplier fails to remedy the defect within the reasonable period of time; the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.
- 1.23.8 Goods requiring warranty replacements must be replaced on free of cost basis to the purchaser.
- 1.23.9 Performance Guarantee:**
The successful bidder is required to submit a performance Guarantee of 3% of Purchase Order value valid during warranty period, plus two months grace period.
- 1.24. PENALTY CLAUSE**
- 1.24.1 Subject to GCC Clause on Force Majeure, if the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as penalty, a sum equivalent to the percentage specified in contract of the delivered price of the delayed Goods or unperformed Services or contract value for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the Percentage specified in contract. Once the maximum is reached, the Purchaser may consider termination of the Contract pursuant to GCC. Clause on Termination for Default. The SCC shall also indicate the basis for ascertaining the value on which the penalty shall be applicable.
- 1.25. INSURANCE**



- 1.25.1 Should the purchaser elect to buy on CIF/CIP basis, the Goods supplied under the Contract shall be fully insured in Indian Rupees against any loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in contract.
- 1.25.2 Where delivery of the goods is required by the purchaser on CIF or CIP basis the supplier shall arrange and pay for Cargo Insurance, naming the purchaser as beneficiary and initiate & pursue claims till settlement, on the event of any loss or damage.
- 1.25.3 Where delivery is on FOB or FCA basis, insurance would be the responsibility of the purchaser.
- 1.25.4 With a view to ensure that claims on insurance companies, if any, are lodged in time, the bidders and /or the Indian agent shall be responsible for follow up with their principals for ascertaining the dispatch details and informing the same to the Purchaser and he shall also liaise with the Purchaser to ascertain the arrival of the consignment after clearance so that immediately thereafter in his presence the consignment could be opened and the insurance claim be lodged, if required, without any loss of time. Any delay on the part of the bidder/Indian Agent would be viewed seriously and he shall be directly responsible for any loss sustained by the purchaser on the event of the delay.

1.26 TRANSPORTATION

- 1.26.1 Where the Supplier is required under the Contract to deliver the Goods FOB, transport of the Goods, up to and including the point of putting the Goods on board the vessel at the specified port of loading, shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract price. Where the Supplier is required under the Contract to deliver the Goods FCA, transport of the Goods and delivery into the custody of the carrier at the place named by the Purchaser or other agreed point shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract price.
- 1.26.2 Where the Supplier is required under the Contract to deliver the Goods CIF or CIP, transport of the Goods to the port of destination or such other named place of destination in the Purchaser's country, as shall be specified in the Contract, shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract Price.
- 1.26.3 In the case of supplies from within India, where the Supplier is required under the Contract to transport the Goods to a specified destination in India, defined as the Final Destination, transport to such destination, including insurance and storage, as specified in the Contract, shall be arranged by the Supplier, and the related costs shall be included in the Contract Price.

1.27 PACKING

Should be as per standards prescribed for international trade and movement of the goods.

1.38 STANDARDS

The Goods supplied and services rendered under this Contract shall conform to the standards mentioned in the Technical Specifications and Schedule of Requirements, and, when no applicable standard is mentioned, to the authoritative standard appropriate to the Goods' country of origin and such standards shall be the latest issued by the concerned institution.

1.39 PERFORMANCE SECURITY

- 1.39.1 Within 21 days of receipt of the notification of award/PO, the Supplier shall furnish performance security of 3% of Contract/ Purchase Order value in the amount specified in the Contract, valid till 60 days beyond the completion of contractual obligations.
- 1.39.2 The proceeds of the performance security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.
- 1.39.3 The Performance Security shall be denominated in Indian Rupees for the offers received for supplies within India and denominated in the currency of the contract in the case of offers received for supply from foreign countries.
- 1.39.4 In the case of imports, the PS may be submitted either by the principal or by the Indian agent and, in the case of purchases from indigenous sources, the PS may be submitted by either the manufacturer or their authorized dealer/bidder.
- 1.39.5 The Performance security shall be in one of the following forms:
- (d) A Bank guarantee or stand-by Letter of Credit issued by a Nationalized/Scheduled bank located in India or a bank located abroad in the form provided in the bidding documents. Or,
 - (e) A Banker's cheque or Account Payee demand draft in favour of the purchaser. Or,
 - (f) A Fixed Deposit Receipt pledged in favour of the Purchaser.

1.40 DELIVERY SCHEDULE : Delivery schedule should be specified clearly

1.41 PAYMENT TERMS

For Indigenous supplies payment will be made within 30 days from the date of supply, installation & commissioning and on submission of Performance Bank Guarantee for 3% of Purchase Order value which should be valid during warranty period. However the advance payment to the vendors is not encouraged.

Deputy Registrar (Purchase & Stores)



Annexure 7

Technical Specification and Additional T&C for this tender

Annexure 1

Eddy Covariance Flux Tower

Detailed Conditions and Technical Specifications

General Conditions	
1	The broad scope of supply is to provide, erect and commission as a turnkey project, an advanced Eddy Covariance Flux and Weather Monitoring Station for the Indian Institute of Science Education and Research (IISER) Thiruvananthapuram. The System should consist of "a Data Logger and Fast and Slow Meteorological Sensors on a 36-meter-tall Meteorological Tower".
2	The specifications mentioned below are most preferred and any deviation OR proposal for equivalent configuration should be mentioned clearly in the technical compliance statement.
3	The vendor should have demonstrated installation and maintenance of Eddy Covariance systems with tower heights over 10 meters in at least three sites in India for reputed institutes and maintained them for at least one-year. Documentary evidence in the form of purchase orders, completion certificates and maintenance reports must be submitted along with the bid.
4	The identified location of the tower is in a remote area near the IISER Thiruvananthapuram. The vendor should take responsibility for the transport and installation of the tower and all the sensors on-site without any additional charges. The vendor should provide on-site installation and demonstration and provide support in case of a relocation of sensors. User manuals for all sensors should be given.
5	Sensors should be calibrated before installations and a calibration certificate (including details of calibration) should be provided.
6	After the installation, the vendor should undertake the free calibration as per the standards of the instruments every 6 months during the warranty period (i.e. 3 years).
7	After the installation, the vendor should undertake free maintenance every three months during the warranty period, i.e., 3 years. The vendor should undertake preventive and breakdown maintenance immediately by replacement of defective sensors with new ones to ensure no data loss during the maintenance/calibration.
8	The quoted cost should also include the installation charges including tower erection, foundation works, soil testing, hired labor charges, transportation, etc.
9	Sensor Operating Temperature range: -10 °C to +50 °C or better; Operating Relative Humidity range: 0 to 100%. All sensors should work at Mean Sea Level (MSL) to 2 km above MSL.
10	The designing, installation and commissioning of an independent grounding system for all the instruments and a data acquisition system for the trouble-free working of all the systems should be done. A detailed scheme of the grounding system should be submitted to the engineer-in-charge for approval.
11	The vendor should take safety measures and provide insurance of the personnel undertaking the installation and maintenance/AMC.
12	The system should consist of fully developed and established hardware for Data Logger, 12 V rechargeable Lead Acid Battery, Solar Panel, Charge Controller, Meteorological Sensors and Accessories.
13	The data logger should be programmable by higher level language for flexible R&D requirements. The fully integrated system will only be accepted.



14	The sensors must comply with the type, range, accuracy, resolution and operating temperature and relative humidity conditions of the specifications.
15	The data logger, sensors and solar panel should be mounted on a 36-meter tall tower.
16	All the sensors should be provided with their complete accessories, i.e., connectors, enough cables and mounting fixtures, etc. The integration of the sensors with the data logger will be ensured by the vendor.
17	Training should be provided to the IISER Thiruvananthapuram Officials on the operation and maintenance of the station.
18	Necessary protection equipment (including sensor and data logger enclosures, lightning protection, radiation shields etc.) required for the system quoted by the vendor should be part of the supply and installation of the complete system.
19	The vendor should provide the Software, if any, for processing the data collected through Mini USB Port /Memory Card/ RS 232 Port / Ethernet Port.
20	All the sensors should be compatible with the data logger
21	The Tower should be provided with a proper lightning arrestor and earthing for safety purposes as per the specification given.
22	During the warranty period, if any issue is reported related to the normal operation of the sensors, the vendor should undertake preventive and breakdown maintenance, immediately (within four working days) by replacement of defective sensors with new ones to ensure no data loss during the maintenance.

Technical Conditions

1. Open Path CO₂/H₂O gas analyzers, 3D Sonic Anemometer and Thermometer (Quantity: 1 set)

1.1	Type of gas analyzer	Open Path, fast response sensors for measuring both CO ₂ and H ₂ O concentrations
1.2	Sampling rate	20 Hz or better, user selectable
1.3	Accuracy	Within 1% or better for CO ₂ Within 2% or better for H ₂ O
1.4	Root Mean Squared (RMS) error for CO ₂	Less than 0.2 mg m ⁻³ at 20 Hz
1.5	Root Mean Squared (RMS) error for H ₂ O	Less than 0.004 g m ⁻³ at 20 Hz
1.6	Zero Drift with Temperature	±0.55 mg m ⁻³ per °C or better for CO ₂ ±0.037 g m ⁻³ per °C or better for H ₂ O
1.7	Gain Drift with Temperature	±0.1% per °C or better for CO ₂ ±0.3% per °C or better for H ₂ O
1.8	Operating temperature range	-30 °C to +50 °C or better
1.9	Mean wind speed measuring range	0 to 60 m/s or better
1.10	Wind speed resolution	0.01 m/s or better
1.11	Wind speed accuracy	RMS less than 1.5%
1.12	Wind direction range	0 to 360°
1.13	Wind direction resolution	0.10°
1.14	Wind direction accuracy	1.0° or better
1.15	Sonic Temperature range	-40 °C to +60 °C or better
1.16	Sonic Temperature resolution	0.05 °C or better
1.17	Sonic temperature accuracy	±0.2 °C or better



1.18	Required outputs from the sensor	<ul style="list-style-type: none"> a. CO₂ and H₂O concentrations and fluxes b. Gas analyzer diagnostic parameters c. CO₂ and H₂O signal strength d. 3D wind components, U_x, U_y, and U_z e. Sonic Temperature f. Sonic Diagnostics
1.19	Should include a calibration kit for the open path gas analyzer.	
1.20	Should have an internal measuring frequency of more than 25 Hz.	
1.21	Software for the analysis of the Eddy Covariance data to derive the fluxes of CO ₂ and H ₂ O, with appropriate corrections, including crosswind and tilt, should be provided.	
2. Air Temperature (Ta) and Relative Humidity (RH) Sensors (Quantity: 5 sets)		
2.1	Levels of measurement	2 m, 4 m, 8 m, 16 m, 32 m above land surface
2.2	RH measurement range	0 to 100% RH
2.3	RH measurement accuracy at 25 °C	± 5% or better
2.4	RH Operating temperature range	-40 °C to +60 °C or better
2.5	Ta measurement range	-40 °C to +60 °C or better
2.6	Ta measurement accuracy at 25 °C	±0.4 °C or better
2.7	Ta measurement resolution	0.002 °C or better
2.8	Housing Classification	IP67
2.9	A naturally aspirated radiation shield should be provided with the sensor.	
3. Wind Speed and Direction Sensor (Quantity: 5 set)		
3.1	Wind speed measurement range	0 to 50 m/s or wider
3.2	Wind speed sensor accuracy	± 0.5 m/s or better
3.3	Wind speed resolution	± 0.5 m/s or better
3.4	Wind direction measurement range	0 to 360°
3.5	Wind direction accuracy	±5° or better
3.6	Wind direction resolution	1° or better
3.7	Levels of measurement	2 m, 4 m, 8 m, 16 m, 32 m above land surface
4. Rainfall Sensor (Quantity: 2 Nos)		
4.1	Sensor type	Tipping bucket
4.2	Operating temperature range	0 °C to +50 °C or better
4.3	Rainfall measurement resolution	1 tip or better
4.4	Rainfall per tip	0.1 mm or better
4.5	Accuracy of rainfall measurement	±2% at 50 mm per hour or better
4.6	Levels of measurement	At the land surface and at 32 m height
5. Atmospheric Pressure Sensor (Quantity: 1 No)		
5.1	Pressure measurement range	500 to 1100 hPa or better



5.2	Pressure measurement resolution	± 0.1 hPa or better
5.3	Pressure measurement accuracy	± 0.5 hPa
5.4	Operating temperature range	-40° to $+60^{\circ}\text{C}$
6. Soil Moisture and Soil Temperature Profiler (Quantity: 2 Nos)		
6.1	TDR or FDR based soil moisture and temperature sensors as a single encapsulated unit to measure soil moisture and soil temperature at least 9 levels below the ground surface.	
6.2	If required, soil specific testing and calibration for soil moisture and soil temperature should be performed and the calibration certificate should be provided before installation.	
6.3	Preferred levels of measurements	5 cm, 10 cm, 20 cm, 30 cm, 40 cm, 50 cm, 60 cm, 75 cm, and 100 cm
6.4	Operating Temperature Range	-40° to $+60^{\circ}\text{C}$ or better
6.5	Volumetric moisture content measurement range	0 to 100%
6.6	Volumetric moisture content accuracy	$\pm 3\%$ or better
6.7	Soil temperature accuracy	$\pm 0.15^{\circ}\text{C}$
7. Soil Heat Flux Sensor (Quantity: 4 Nos)		
7.1	Operating temperature range	-30 to $+70^{\circ}\text{C}$ or better
7.2	Soil heat flux measurement range	-1000 to $+1000$ W/m^2 or better
7.3	Soil heat flux measurement accuracy	$\pm 5\%$ of true value or better
7.4	Levels of measurements	5 cm and 10 cm below the ground surface
8. Four Component Net Radiometer (Quantity: 2 Nos)		
8.1	Four component net radiometer with 25 m cable along with mounting kit. Should provide the all 4-component upwelling and downwelling shortwave and longwave fluxes.	
8.2	The net radiometer should have a heating unit to prevent dew deposition on the pyrgeometer.	
8.3	Shortwave (SW) Spectral response	285-3000 nm or better
8.4	Range of Shortwave Radiative flux	10 to 1400 W/m^2 or better
8.5	Accuracy of Shortwave Radiative flux	5 W/m^2 or better
8.6	Resolution of Shortwave Radiative flux	0.5 W/m^2 or better
8.7	Longwave (SW) Spectral response	4500 to 40,000 nm or better
8.8	Range of Longwave Radiative flux	100 to 700 W/m^2 or better
8.9	Accuracy of Longwave Radiative flux	10 W/m^2 or better
8.10	Resolution of Longwave Radiative flux	0.5 W/m^2 or better
8.11	Response time of Radiation Sensor	20 s or better
8.12	Level of measurement	Above and below tree canopy
9. Infrared Temperature Sensor (Quantity: 2 Nos)		
9.1	Operating Temperature Range	-55° to $+80^{\circ}\text{C}$
9.2	Operating Relative Humidity Range	0 to 100% RH
9.3	Response Time	1 s or less
9.4	Field of View	22° half angle or better
9.5	Temperature measurement accuracy	$\pm 0.2^{\circ}\text{C}$ or better
9.6	Levels of measurement	Above and below tree canopy
9.7	Should measure the temperature of the canopy and stem	



10. Datalogger & Communication Module (Quantity: 1 No)		
10.1	The data logger should support all sensors: fast response eddy covariance sensors (1 set), and all the slow response sensors including, air temperature and relative humidity sensors (5 set), wind speed and direction sensors (5 set), rainfall sensors (2 Nos), atmospheric pressure sensor (1 No), soil moisture and soil temperature profiler (2 Nos), soil heat flux sensor (4 Nos), four component net radiometer (2 No), infrared temperature sensor (2 Nos).	
10.2	Data logger should support 100 Hz or better data storage and processing.	
10.3	Data logger should have a watchdog timer to reset the system and restore the previous set-up case of microprocessor resets and power glitch	
10.4	Data logger should have a battery backed real time clock so that the time is updated even during power failure	
10.5	Data logger should support communication with a PC/laptop through USB/Ethernet	
10.6	Data should be stored in tables with time-stamps and record numbers	
10.7	Data logger should have an in-built storage facility to operate in remote locations without using a PC/laptop or alternate storage options.	
10.8	Data logger should support a telemetry system (external module) of 3G/4G/5G speed for real-time data transmission.	
10.9	Adequate channels are required to augment all the sensors.	
10.10	Data logger should be compatible with future addition of sensors and expansion modules.	
10.11	Operating Temperature Range	-40° to +70°C or better
10.12	Operating Humidity Range	0 to 100%
10.13	Number of analog input channels	16 or better
10.14	Real-time clock accuracy	±3 minutes per year or better
10.15	Analog to digital conversion bits	24 bit or better
10.16	Data storage expansion	16 GB or more
10.17	Data file formats	CSV, XML, JSON, binary, encrypted, custom user definable
10.18	Analog resolution	0.1 micro voltage or better
11. Telemetry and External Data Acquisition System (Quantity: 1 set)		
11.1	GPRS/3G/4G/5G modem for data transfer and remote access should be provided for real-time data transmission to IISER Thiruvananthapuram servers.	
11.2	A suitable rugged laptop or similar devices of configuration (i7 processor, Windows 10 Pro or newer OS, 8 GB RAM, and at least 500 GB SSD storage) for collecting data from the data logger via connecting through a USB cable should be provided. All necessary software essential for viewing, processing, and collecting data should be installed in the laptop.	
11.3	Should be compatible with all network providers in the tower site.	
12. Solar Power Supply Unit (Quantity: 1 set)		
12.1	The unit should be compatible with all the sensors, data logger and other attachments.	
12.2	Solar power setup for all sensors.	
12.3	A suitable battery to provide two weeks' power supply to the system without sunshine should be provided	
12.4	Sensors should be able to operate without solar power for up to 72 hours or more.	
12.5	Vendor will provide Sealed Maintenance-Free Lead Acid Batteries along with battery enclosures.	



12.6	A suitable charge controller of capacity having over and under voltage protection should be provided in the DCP.	
12.7	Vendor should provide weather-resistant enclosures for the power supply unit and battery.	
12.8	The capacity of the Solar panels should be at least 200 Watts for a 12 VDC configuration.	
12.9	Vendor should provide the make, model, and capacity of the solar panel and the battery proposed.	
12.10	Operating Temperature Range	-10 °C to +60 °C or better
12.11	Operating Humidity Range	0 to 100%
13. Enclosure		
13.1	Weather-Resistant Enclosures should be provided as per the design recommendation of sensors or the data logger.	
13.2	The color of the enclosure should be white or equivalent (reflects solar radiation, reducing temperature gradients inside the enclosure without using a separate radiation shield).	
13.3	The enclosure shall meet at least the IP66 standards.	
14. Meteorology Tower of 36-meter height and with fixtures suitable for mounting the fast and slow response sensors (Quantity: 1 set)		
14.1	Tower height	36 meters
14.2	Design basis wind	Up to 70 m/s
14.3	Operating temperature	-40 °C to +70 °C
14.4	Relative Humidity	0 to 100%
14.5	Levels of measurements	2 m, 4 m, 8 m, 16 m, 32 m, and 36 m above land surface. The tower should support future addition of sensors at any levels.
14.6	Design process: The designing of Tower and foundation should be carried out by vendor/contractor in a logically planned sequence in accordance with prescribed procedures, standard code and practices in sufficient details to permit inspection and verification. Design activities should be performed to ensure that specified requirements are correctly translated into design output such as functional requirements, performance requirements, and design specification, provision for in-service inspection, operation and maintenance.	
14.7	Design analysis: Design analysis should be performed to confirm or clarify the design basis parameter specified. Analysis should address the general design criteria. Analysis should be sufficiently detailed and recorded to enable assessment by technical personnel. The vendor/contractor should submit the detailed design report along with drawing with approval (duly signed) of Structural Engineer and that Should be submitted to Engineer-In-Charge, IISER Thiruvananthapuram. The vendor should conduct a site study before the tower and foundation design.	
14.8	Design Input: The inputs for designing the rectangular tower and foundation considering the practical conditions such as in-service inspection, maintainability and replacement/repair of meteorological components and sensors fixed at all levels of tower are detailed in 14.9 to 14.28.	
14.9	Minimum Weight of structural steel of meteorological tower should not less than 1.45 Ton Or the vendor should make sure that the designed weight of the tower should be sufficient for the long-term operation (10 years or more) of the tower and the proposed Eddy Covariance System. The Tower should withstand extreme events like cyclones and storms.	
14.10	The Meteorological tower should be galvanized (IS 2629:1985), Zinc coated (IS 2633:1986) and painted as per aviation guidelines.	



14.11	Rectangular meteorological tower of lattice type and height of 36-meter should be made of Corrosion resistant Hot Dip Galvanized Mild Steel (MS).
14.12	The Tower can be made up of a tubular section of suitable size.
14.13	The Tower's 3.0/6.0-meter section should be assembled with flags, galvanized HT nut bolts and accessories providing sufficient strength to the Tower.
14.14	The Tower should be GI guyed at four levels (at least) as per the design. SS316 grade 12 mm diameter (19 strand) guy wires should be attached to all 4 legs. D-shackles, Thimbles, Turnbuckles, wire clamps etc. should be of SS304 grade.
14.15	Minimum diagonal/clear internal spacing between vertical members of the tower should be 750.0 mm or better.
14.16	Landing platforms which can be lifted while raising up and fell & rest automatically on the cross member of the tower when cross over the platform, should be provided at every 10.0-meter Level.
14.17	Provision for fixing control panel box at about 1.5-meter Level from ground level should be provided.
14.18	Projected square retractable booms of 60 x 60 mm size (at six levels) should be provided for fixing meteorological instruments, each should carry a weight at about 5 kg, at six levels. The length of booms from the tower should be about 4.0 meters with a provision to fix the boom on the tower. Booms holding the sensors should not vibrate. The vendor should mention details of booms (thickness, shape and material) for mounting the sensors. The advantage of the retractable booms is that it facilitates easy replacements, repairs of the sensors at every level without the need to bring the sensors down.
14.19	The meteorological clamps are to be made up with H carbon steel and hot dip galvanized to withstand the variation in the atmosphere.
14.20	The Tower should be provided with a proper lightning arrestor and earthing for safety purposes as per the specification given. Highly sensitive lightning protection should be provided in the 36-meter tower with the copper lightning rod setup or with a better option, ground up to a 3-meter depth or better.
14.21	The Tower should be provided with provision for GI clamping arrangement to clamp the conduits carrying electrical & instrument circuits.
14.22	The tower should be installed on an adequate foundation. Minimum Grade of concrete should be used for foundation is M25. Civil foundation for erecting of the tower should be done by the vendor. Base plate required for the erection of the tower should be fabricated by the vendor.
14.23	The color scheme should conform to the aviation warning colors of orange and white with coats of epoxy primer and polyurethane.
14.24	Aviation lamps should be provided as per aviation guidelines.
14.25	Vendor should complete all the required designs and testing for erecting the 36-meter-tall tower.
14.26	Vendors should fix a Chain-link fence of 10 m (Length) x 10 m (Width) x 2m (Height) dimension safeguarding the tower, sensors and other accessories. The fence material shall be strictly rust proof and Weather-Resistant. The standards of fence material should be mentioned in the document.
14.27	Vendors should provide the schematic diagram of the entire flux tower and accessories along with the markings for fixtures for sensors.
14.28	The vendor should submit the plan, certificates pertaining to the load and structural configuration of the tower, guys, civil foundation etc. from authorized Structural Design Consultant to the Engineer-in-Charge, IISER Thiruvananthapuram.
15. Software	



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15.1	All necessary software essential for viewing, processing, and collecting data should be provided along with the system.
15.2	All software/algorithms should be provided for calculating the surface fluxes (latent heat flux, sensible heat flux, evapotranspiration, etc.) using the fast sensor data.
15.3	Essential software/programs for correcting the influence of the sonic tilt and crosswind for surface flux estimation should be provided
15.4	Data archival software/Graphical User Interface packages along with necessary license keys (if any) should be provided free of cost.
15.5	Archival support with time-to-time updates/patches/keys should be provided for at least 10 years from the date of installation.
16. Accessories	
16.1	All necessary cables of sufficient lengths to connect all the sensors to the data logger, power supply unit and any other unit of the device should be provided.
16.2	All mounting hardware/ sensor cables/ accessories should be provided for the continuous operation of all sensors.
16.3	The necessary and suitable field enclosure of stainless steel or any other weather-resistant, non-corrosive material for the protection of the sensor unit and the Power supply unit from damage should be provided.
16.4	Essential tools/ tool kits/utilities should be provided for the entire setup for regular operations and maintenance
17. Warranty	
17.1	Minimum three-year comprehensive onsite warranty for the entire setup (including sensors). Comprehensive Annual Maintenance Charges subsequent to the warranty period should be provided for additional three-years (i.e., after the warranty) in the price bid. The vendor should specify warranty details and AMC conditions.



Annexure -8

(ON COMPANY LETTER HEAD)

Declaration of Local Content

(In case the procurement value is less than or equal to Rs. 10 Crores declaration to be given in Bidder's/Company's letter head and if more than Rs. 10 Crores declaration to be issued from the statutory auditor or cost auditor of the company (in case of companies from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies)

To,
The Director,
Indian Institute of Science Education and Research Thiruvananthapuram,
Maruthamala P.O., Vithura, Thiruvananthapuram, Kerala, India – 695551

Subject: Declaration of local content and compliance of Public Procurement (Preference to Make in India) Order 2017 and its amendments regarding.

Sl No	Name of the goods/service/works	Category of the supplier (Class I / II / III)	Local Content (%)	Location at which value addition is made	Country of Origin	Comply to the above referred rule (Yes / No)
1						
2						
3						

- "Local Content" means the amount of value added in India which shall, be the total value of the item being offered (excluding net domestic indirect taxes) minus the value of the imported content in the item (including all customs duties) as a proportion of the total value, in percent.
- False declarations will be in breach of 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 permissible under law.

Date:

Place:

Signature with Date and Stamp of the Bidder



Annexure 9

(ON COMPANY LETTER HEAD)

CERTIFICATE BY THE BIDDER (FOR TENDERS)

(ON COMPANY LETTER HEAD)

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 company or, / if from such a country, has been registered with the Competent Authority (copy of the Registration Certificate enclosed). I hereby certify that this bidder fulfils all requirements in this regard and is eligible to be considered.

Date: Place:

Signature with Date and Stamp of the Bidder



Annexure _10
CERTIFICATE
(ON COMPANY LETTER HEAD)

I hereby certify that we M/s

_____ (name and address of the firm) is neither blacklisted by any Central/ State Government / Public Undertaking/ Institute nor is any criminal case registered / pending against the firm or its owner / partners anywhere in India.

I also certify that the above information is true and correct in every aspect and in any case at a later date it is found that any details provided above are incorrect, any contract given to the above firm may be summarily terminated and the firm blacklisted.

Date:

Place:

Signature with Date and Stamp of the Bidder



Annexure _10
CERTIFICATE
(ON COMPANY LETTER HEAD)

I hereby certify that we M/s

_____ (name and address of the firm) is neither blacklisted by any Central/ State Government / Public Undertaking/ Institute nor is any criminal case registered / pending against the firm or its owner / partners anywhere in India.

I also certify that the above information is true and correct in every aspect and in any case at a later date it is found that any details provided above are incorrect, any contract given to the above firm may be summarily terminated and the firm blacklisted.

Date:

Place:

Signature with Date and Stamp of the Bidder



