

**भारतीय उष्णदेशीय मौसम विज्ञान संस्थान**  
**INDIAN INSTITUTE OF TROPICAL METEOROLOGY**  
(पृथ्वी विज्ञान मंत्रालय, भारत सरकार का एक स्वायत्त संस्थान)  
(An autonomous Institute under the Ministry of Earth Sciences, Govt. of India)  
पाषाण, पुणे - 411 008  
PASHAN, PUNE - 411008

**वैश्विक निविदा सूचना/ GLOBAL TENDER NOTICE**

निदेशक, भारतीय उष्णदेशीय मौसम विज्ञान संस्थान, डॉ. होमी भाभा मार्ग, पाषाण, पुणे - 411 008 (भारत) निम्नलिखित की आपूर्ति, प्रवर्तन, संस्थापन एवं संतोषप्रद निरूपण हेतु निर्माताओं/आपूर्तिकारों एवं उनके प्रत्यायित विक्रय एजेंटों से निविदाएं (भाग-I तकनीकी बोली, भाग - II कीमत बोली) आमंत्रित करते हैं :

Director, Indian Institute of Tropical Meteorology, Dr. Homi Bhabha Road, Pashan, Pune - 411008 (India) invites tenders (Part-I – Technical Bid, Part-II – Price Bid) from Manufacturers / Suppliers and their accredited selling agents for the supply, installation, commissioning, and satisfactory demonstration of following.

क्रम सं. Sr. No.	निविदा सूचना सं. RFP / Tender Notice No.	विवरण / Description
01.	पीएस/128/18/2018 PS/128/18/2018	मुम्बई महानगर क्षेत्र में लघु परास एक्सबैंड ध्रुवणमिति क्रमवीक्षण रडार नेटवर्क - - मात्रा 04 सेट्स। Short Range X-Band Polarimetric Scanning Radar Network in Mumbai Metropolitan Region Qty - 04 Sets.

बोली-पूर्व बैठक (ऑफलाइन)

: 7 जनवरी 2019 को 15:00 बजे

Pre-bid Meeting (Offline)

: 7<sup>th</sup> January, 2019 at 1500 hrs.

ऑनलाइन मोड पर निविदा प्रस्तुत करने की अंतिम तिथि

: 23 जनवरी 2019 को 15:00 बजे

Last date of submission of Tender on online mode

: 23<sup>rd</sup> January, 2019 at 1500 hrs.

ऑनलाइन (तकनीकी बोलियाँ केवल) निविदा खोलने की तिथि

: 23 जनवरी 2019 को 15:30 बजे

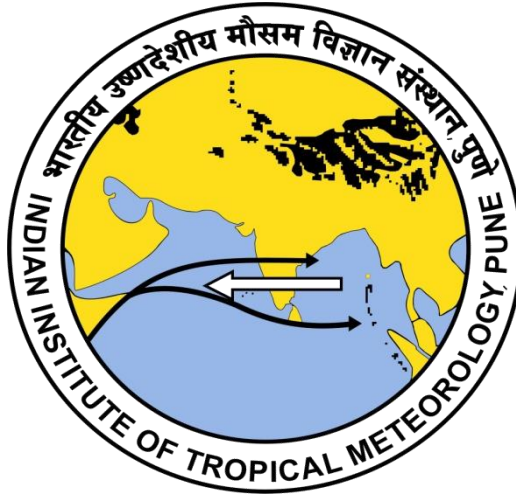
Opening of Tenders online (Technical bids only)

: 23<sup>rd</sup> January, 2019 at 1530 hrs.

संस्थान को किसी निविदा या सभी निविदाओं को बिना कारण बताए निरस्त करने का अधिकार है। विस्तृत विवरण एवं बोलियों के प्रस्तुतीकरण हेतु कृपया वेबसाइट <http://www.mstcecommerce.com/eprochome/iitm> देखें। संभावित बोलीदाताओं की जानकारी के लिए, निविदा विवरण भी इस संस्थान की वेबसाइट <http://www.tropmet.res.in> एवं सरकार का सेंट्रल प्रोक्यूरमेंट पोर्टल (सीपीपी) <http://www.eprocure.gov.in> पर भी उपलब्ध है।

The Institute reserves the right to reject any or all tenders without assigning any reason thereof. For details and submission of bids please visit website <http://www.mstcecommerce.com/eprochome/iitm>. For the information of the prospective bidders, the tender details are also available on this Institute's Website: <http://www.tropmet.res.in> and Government's Central Procurement Portal (CPP) <http://www.eprocure.gov.in>.

Sd-  
प्रशासनिक अधिकारी, कृते निदेशक  
Administrative Officer, for Director  
ईमेल/Email : [psu.iitm@tropmet.res.in](mailto:psu.iitm@tropmet.res.in)



**TENDER DOCUMENT**

**FOR**

**SUPPLY, INSTALLATION AND COMMISSIONING OF SHORT-  
RANGE X-BAND POLARIMETRIC SCANNING RADAR  
NETWORK IN MUMBAI METROPOLITAN REGION QTY – 04  
SETS**

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**INDIAN INSTITUTE OF TROPICAL METEOROLOGY  
(AN AUTONOMOUS INSTITUTE OF MINISTRY OF  
EARTH SCIENCES, GOVERNMENT OF INDIA)  
DR. HOMI BHABHA ROAD, PASHAN, PUNE 411 008  
MAHARASHTRA, INDIA**



**INDIAN INSTITUTE OF TROPICAL METEOROLOGY**  
(AN AUTONOMOUS INSTITUTE OF MINISTRY OF EARTH SCIENCES, GOVERNMENT OF INDIA)  
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Email: psu.iitm@tropmet.res.in

Website: www.tropmet.res.in

**Invitation for Bids through E-procurement**

**Date: 19/12/2018**

The Indian Institute of Tropical Meteorology (IITM), Pune an autonomous body under Ministry of Earth Sciences (MoES), Govt. of India. IITM is country's premiere research Institute to generate scientific knowledge in the field of meteorology and atmospheric sciences that has potential application in various fields such as agriculture, economics, health, water resources, transportation, communications, etc. It functions as a national centre for basic and applied research in monsoon meteorology. The Director, IITM would like to procure the following Goods / Services for its day-to-day research. The Technical specifications, Allied requirements and Scope of Supply are given in **Chapter 4** appended herewith.

Sr. No.	Tender No.	Brief Description of Goods / Services	Quantity	Single / Two Bid
1	PS/128/18/2018	Supply, installation and commissioning of Short-Range X-Band Polarimetric Scanning Radar Network in Mumbai Metropolitan Region	04 Sets	Two

- The bid has to be submitted online on Institute's e-procurement system hosted at website <http://www.mstcecommerce.com/eprochome/iitm> as per the process mentioned on the same website. Bidder has to register on the above website & to pay the transaction fee directly to MSTC Limited to participate in the bidding process through e-procurement. Bidders are advised to follow the instructions provided in 'Vendor's Guide' available on the said e-procurement website. Bidders can contact at **022-2286 6261** for any technical queries regarding registration and submission of bid on the above portal.
- The address for submission of technical bids only and for obtaining further information:  
The Director,  
Indian Institute of Tropical Meteorology,  
Dr.Homi Bhabha Road, Pashan,  
Pune - 411008 (India)

- A Pre-bid Conference will be held on schedule 6 mentioned below. All prospective bidders are requested to kindly submit their queries to the address indicated above so as to reach the Stores & Purchase Officer at least one day before Pre-Bid Conference.

	Date	Time in hours (IST)	Venue
Pre-Bid Conference	7 <sup>th</sup> January, 2019	1500 hrs.	IITM, Pune.

- The Bid prepared by the Bidder shall include the following:-

i)	<b>Bid Security</b> a) In case of Foreign Bidder : USD 69470.00 b) In case of Indigenous Bidder : ₹ 50,00,000/-
ii)	Forms as specified in Chapter No.8

- All bids must be accompanied by a Bid Security as specified above and must be delivered to the above office before the date and time indicated below. In the event of the date specified for bid receipt is declared as a closed holiday, the due date for submission of bids will be the following working day at the appointed time.
- The Schedule for Submission of Bids is as follows:-

	Date	Time in hours (IST)	Submit to / Venue
Submission of Bids	23 <sup>rd</sup> January, 2019	Upto 1500 hrs.	As detailed at Sr. No.1
Opening of Bids	23 <sup>rd</sup> January, 2019	1530 hrs	

- The Director, **The Indian Institute of Tropical Meteorology (IITM), Pune** reserves the right to accept or reject any or all tenders / offers either in part or in full or to split the order without assigning any reasons there for. NIT has also been published on Government's Central Procurement Portal (CPP) <http://www.eprocure.gov.in> as well as this Institute's Website: <http://www.tropmet.res.in> which may also be referred for more details.

## CONTENTS OF TENDER / BIDDING DOCUMENT

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4	Specifications, Allied Technical Details And Scope of Supply	34
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### LIST OF SHORT FORMS AND FULL FORMS

SHORT FORM	FULL FORM
BG	BANK GUARANTEE
BS	BID SECURITY
CIF	COST INSURANCE & FREIGHT
CIP	CARRIAGE PAID TO
IITM	INDIAN INSTITUTE OF TROPICAL METEOROLOGY,
CVC	CENTRAL VIGILANCE COMMISSION
DGS&D	DIRECTOR GENERAL OF SUPPLIES & DISPOSAL
EMD	EARNEST MONEY DEPOSIT
ESIC	EMPLOYEES STATE INSURANCE CORPORATION
FCA	FREE CARRIER
FOB	FREE ON BOARD
GCC	GENERAL CONDITIONS OF CONTRACT
GOI	GOVERNMENT OF INDIA
ICC	INTERNATIONAL CHAMBERS OF COMMERCE
IEMs	INDEPENDENT EXTERNAL MONITORS
IP	INTEGRITY PACT
IPC	INDIAN PENAL CODE
IST	INDIAN STANDARD TIME
IT	INCOME TAX
ITB	INSTRUCTIONS TO BIDDERS
JS (A)	JOINT SECRETARY (ADMINISTRATION)
LC	LETTER OF CREDIT
LD	LIQUIDATED DAMAGES
MAF	MANUFACTURER AUTHORISATION FORM
NIT	NOTICE INVITING TENDER
NSIC	NATIONAL SMALL INDUSTRIES CORPORATION
MSME	MICRO, SMALL AND MEDIUM ENTERPRISES
PS	PERFORMANCE SECURITY
SCC	SPECIAL CONDITIONS OF CONTRACT
UNCITRAL	UNITED NATIONS COMMISSION ON INTERNATIONAL TRADE LAW

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## A. Introduction

Instructions to bidder are broad guidelines to be followed while formulating the bid and its submission to the Purchaser. It also describes the methodology for opening and evaluation of bids and consequent award 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.
- 1.1.3. Bidders who fulfil the Eligibility Criteria mentioned in **Chapter 5** will be considered for Technical Evaluation of bids.

### 1.2 Cost of Bidding

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. In pursuit of this policy, the following are defined:

Sr. No.	Term	Meaning
(a)	Corrupt practice	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.
(b)	Fraudulent practice	a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract.
(c)	Collusive practice	means a scheme or arrangement between two or more bidders, with or without the knowledge of the purchaser, designed to establish bid prices at artificial, non-competitive levels.
(d)	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.

- 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.

## B. The Bidding Documents

### 1.4 Cost of Bidding Documents

The bidding documents are to be downloaded from Institute's e-procurement website hosted at <http://www.mstcecommerce.com/eprochome/iitm> as per the procedure mentioned on the said website. The bidding document is free of cost however transaction fees mentioned on the website has to be paid according to the procedure mentioned at the website.

### 1.5 Content of Bidding Documents

- 1.5.1. The Goods / Services required, bidding procedures and contract terms are prescribed in the bidding documents which should be read in conjunction. The bidding documents, apart from the Invitation for Bids / Notice Inviting Tender have been divided into Eight Chapters.

- 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. In case when there is NO PRE-BID CONFERENCE**

A prospective Bidder requiring any clarification of the Bidding Documents shall contact the Purchaser in writing at the Purchaser's address specified in the Special Conditions of Contract (SCC). 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 due date for submission of bids. The Purchaser shall host the response on its website, 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 1.7* relating to amendment of bidding documents and *Clause 1.19* relating to Due date for Submission of Bids. The clarifications and amendments issued would also be hosted on the website of the purchaser for the benefit of the prospective bidders who are expected to take cognizance of the same before formulating and submitting their bids.

### **1.6.2. In case when there is PRE-BID CONFERENCE**

- a) A prospective Bidder requiring any clarification of the Biding Documents shall contact the Purchaser in writing at the Purchaser's address specified in the Special Conditions of Contract (SCC), latest by the date specified in the Invitation for Bids / NIT which would be deliberated as per **Clause 1.6.2 (b)** of Instructions to the Bidders. No request for clarification or query shall be normally entertained after the **Pre-Bid Conference**. 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 1.7* relating to amendment of Bidding Documents and *Clause 1.19* relating to Due Date 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.
- b) A Pre-bid Conference shall be held as indicated in Invitation to Bid. All prospective bidders are requested to kindly attend the Pre-bid Conference. In order to facilitate IITM for proper conduct of the Pre-bid Conference, all prospective bidders are requested to kindly submit their queries (with envelope bearing Tender No. and Date on top and marked "Queries for Pre-bid Conference") so as to reach IITM as indicated in Invitation to Bid. IITM shall answer the queries during the pre-bid conference, which would become a part of the proceedings of the Pre-bid Conference. These proceedings will become a part of clarifications / amendments to the bidding documents and would become binding on all the prospective bidders. These proceedings would also be hosted on IITM website [www.tropmet.res.in](http://www.tropmet.res.in) for the benefit of all the prospective bidders. Before formulating and submitting their bids, all prospective bidders are advised to surf through the IITM website after the Pre-bid Conference, in order to enable them take cognizance of the changes made in the bidding document.

## **1.7 Amendment to Bidding Documents**

- 1.7.1. At any time prior to the due date 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 downloaded the Tender Document should surf Institute's e-procurement website <http://www.mstcecommerce.com/eprochome/iitm/> from time to time to know about the changes / modifications in the Tender Document. All prospective bidders are expected to surf the website before formulating and 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 formulating their bids, the Purchaser, at its discretion, may extend the due date for the submission of bids and host the changes on the website of the purchaser.

## **C. 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, if GOI makes it mandatory under Rajbhasha Abhiyan, in that case views of Rajbhasha unit of IITM may be sought.

- 1.8.2. The Supplier shall bear all costs of translation, if any, to the English language and bear all risks of the accuracy of such translation, for documents provided by the Supplier.

## 1.9 **Documents Comprising the Bid**

The bid prepared by the Bidder shall include the following as per the requirement of the Tender Document:

a	Bid Security as specified in the Invitation to Bids
b	Bidder Information Form
c	Manufacturer's Authorization Form
d	Documents required to fulfil Eligibility and Qualification criteria as specified in Chapter-5
e	Detailed Technical Specifications and Scope of Supply as specified in Chapter-4 and its Appendix-1
f	Schedule of requirements
g	Performance Statement Form
h	Service support details form
i	Deviation Statement Form
j	Bid form
k	Price Schedule Form(s)
l	Documentary evidence establishing that the bidder is eligible to bid and is qualified to perform the contract if its bid is accepted
m	Documents establishing goods eligibility and conformity to bidding documents
n	DGS&D Registration certificate in case the items under procurement falls under the restricted category of the current export-import policy of the Government of India

The documents comprising bid should be submitted in the **above sequence in orderly manner**.

## 1.10 **Bid form and Price Schedule**

The bidder shall complete the Bid Form and the appropriate Price Schedule form as given in Chapter- 6 furnished in the bidding documents. These forms must be completed without any alterations to its format and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested. The Bid Form and the appropriate Price Schedule form shall be submitted in accordance with **ITB Clause 1.18.3** of the bidding documents.

## 1.11 **Bid Prices**

- 1.11.1. The Bidder shall indicate on the appropriate price schedule form, the unit prices and total bid prices of the Goods / Services it proposes to supply / to provide (render) 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)	GST and other taxes like LBT / Octroi etc. which will be payable on the goods if the contract is awarded.
iii)	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 form.
iv)	The installation, commissioning and training charges including any incidental services, if any.

### (b) **For Goods manufactured abroad:**

i)	The price of the goods, quoted on FCA (named Airport abroad) or FOB (named port of shipment), as specified in the price schedule form.
ii)	The charges for insurance and transportation of the goods to the port / place of destination.
iii)	The agency commission charges payable to Indian agent in Indian rupees, 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. The purchases made by the purchaser for scientific purpose are exempt from Custom Duty and GST and are charged at a concessional rate, as follows:-

<b>Custom Duty</b>	The Purchaser is <b>exempted from payment of Custom Duty</b> vide Govt. Of India Notification No.51/96-Customs dated 23 <sup>rd</sup> July, 1996.
<b>GST</b>	The Purchaser is registered with Department of Scientific and Industrial Research (DSIR) for purposes of availing <b>GST concession</b> in terms of Notification No. 47/2017-Integrated Tax (Rate) dt. 14/11/2017, Notification No. 45/2017-Central Tax (Rate) dt. 14/11/2017 and Notification No. 45/2017-Union Territory Tax (Rate) dt. 14/11/2017. The maximum GST is applicable @ 5% only for goods procured for research purpose of the Institute.

- 1.11.8. In case of imports the freight & insurance will be paid by the Purchaser, as the consignments are to be shipped through the Purchaser nominated freight forwarder **unless otherwise mentioned specifically**.
- 1.11.9. The quotation should be only in Indian Rupees for indigenous items. In case of foreign quote, the vendors may quote their rates in Indian Rupees as well as in Foreign Currency.
- 1.11.10. In case of INR bids the price criteria should be on Free Delivery to IITM, Pune. Govt. Levies like GST, LBT / Octroi etc., if any, shall be paid at actual rates applicable on the date of delivery. Rates should be quoted accordingly giving the basic price, GST etc., if any. IITM is exempted from paying Local Body Tax (LBT) & hence supplier supplying items from outside Pune Municipal limits should quote excluding LBT.
- 1.11.11. Custom Duty is levied on all import meant for IITM. Hence, the suppliers are requested to quote only on FOB/FCA basis, freight, insurance and custom duty as applicable to R&D Institutions will be paid by the Purchaser.

**Note:** All payments due under the contract shall be paid after deduction of statutory levies at source (like ESIC, IT (TDS), GST, LBT / Octroi etc.), wherever applicable.

## **1.12 Bid Currencies**

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 who doesn't manufacture the goods it offers to supply shall submit Manufacturers' Authorization Form using the form specified in the bidding document 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.
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1.13.3. Conditional tenders / offers 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 Price- 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 (BS) / Earnest Money Deposit (EMD)**

1.15.1. The Bidder shall furnish, as part of its bid, a Bid security (BS) / Earnest Money Deposit (EMD) of amount as specified in NIT in the form of a Bank Guarantee / Demand Draft drawn on any Scheduled / Commercial / Nationalized Bank in favour of the Director, **The Indian Institute of Tropical Meteorology (IITM), Pune**, The scan copy of the Bid Security / Earnest Money Deposit (EMD) has to be uploaded in the e-procurement website of the Institute and Original copy of the same has to be kept in the Technical Bid envelop which needs to be submitted on or before date submission of bids. Alternately EMD amount can be deposited in IITM, Pune account by RTGS/NEFT/SWIFT. The details of online transfer may be communicated to IITM Pune immediately.

**A. In case of Foreign Bidder(s):**

- a) The BS shall be submitted either by the principal or by the Indian agent.
- b) The bidder who submits the tender on behalf of their principals should produce documentary evidence in support of their authority to quote.
- c) The Bank Guarantee is insisted due to steep fluctuations in foreign exchange hence the foreign DDs are not accepted towards BS/EMD

**B. In the case of indigenous bidders:**

- a) The BS shall be submitted by the manufacturer or their specifically authorized dealer/bidder.

1.15.2. Bids submitted without BS/EMD will stand rejected. BS/EMD will not be accepted in the form of cash / cheque or any other form other than DD/Banker's Cheque/TDR/Bank Guarantee as per Chapter-8: **Annexure A**. No interest is payable on BS/EMD

1.15.3. The bid security is required to protect the Purchaser against the risk of Bidder's conduct, which would warrant the Bid security's forfeiture.

1.15.4. 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 (BG) issued by a Nationalized / Scheduled bank / Commercial /
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	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 Nationalised / Scheduled Indian bank;  <b>OR</b>
(b)	A Banker's cheque or demand draft in favour of the <b>Purchaser</b> issued by any Nationalised / Scheduled Indian bank / Commercial bank.  <b>OR</b>
(c)	EMD amount can be deposited in IITM, Pune account by RTGS/NEFT/SWIFT. Account No. : 11099449733 Bank Name and address : STATE BANK OF INDIA IFSC Code : SBIN0000454 Swift Code : SBININBB238

1.15.5. The bid security shall be payable promptly upon written demand by the purchaser in case the conditions listed in the **ITB clause 1.15.11** are invoked.

1.15.6. The bid security should be submitted in its original form. Copies shall not be accepted.

1.15.7. Bid security / EMD is mandatory requirement and exemption is applicable to the firms registered with NSIC / MSME only for the manufacture of the tendered goods and not for selling products manufactured by other companies.

1.15.8. The Bid Security of unsuccessful bidder will be discharged / returned as promptly as possible but positively within a period of 30 days after the expiration of the period of bid validity or placement of order whichever is later, without any interest.

1.15.9. 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 Performance Security, if it is paid through Demand Draft / Banker's Cheque.

1.15.10. 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.

1.15.11. The bid security may be forfeited:

(a)	If Bidder withdraws or amends or modifies or impairs or derogates its bid during the period of bid validity specified by the Bidder on the Bid Form;  <b>OR</b>
(b)	In case of successful Bidder, if the Bidder fails to furnish order acceptance within 14 days of the order or fails to sign the contract and / or fails to furnish Performance Security within 14 days from the date of contract / order.

1.15.12. Whenever the bidder chooses to submit the Bid Security in the form of Bank Guarantee, then he should advise the banker issuing the Bank Guarantee to immediately send by Registered Post (A.D.) an unstamped duplicate copy of the Guarantee directly to the Purchaser with a covering letter to compare with the original BG for the correctness, genuineness, etc.

## **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 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 Format and Signing of Bid**

- 1.17.1. The bids may be submitted as Single-bid or Two-bid as specified in the Invitation for Bids / NIT through e-procurement system hosted at website <http://www.mstcecommerce.com/eprochome/iitm> as per the process mentioned on the same website.
- 1.17.2. In case the bids are invited on single bid basis, then the Bidder shall submit his / her techno-commercial offer (technical literature / specifications & commercial terms & condition only) in a single bid envelope & shall prepare two copies of the bid, clearly marking each "Original Bid" and "Copy Bid", as appropriate. In the event of any discrepancy between them, the original shall govern. Scan copy of the same (Technical Bid) has also to be uploaded on E-procurement portal. Price bid must be submitted through e-procurement portal only.
- 1.17.3. In case the bids are invited on two-bid system, the Bidder shall submit the bids in two separate parts. First part shall contain Technical bid comprising all documents listed under clause relating to Documents Comprising the Bid excepting bid form and price schedule forms. The second part shall contain the Price-Bid comprising Bid Form and Price Schedule forms. The Bidder shall prepare two copies of the technical bid, clearly marking each "Original Bid" and "Copy Bid", as appropriate & the copies of the documents submitted as a part of Technical Bid in e-procurement system should reach IITM, Pune within 5 working days from the last date of submission of bids on e-procurement system. However, it may please be noted that price bid must be submitted through e-procurement portal only; no hard copy of price bid will be acceptable in any case.
- 1.17.4. The original and all copies of the bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to bind the Bidder to the Contract. All pages of the bid, except for un-amended printed literature, shall be initialled by the person or persons signing the bid.
- 1.17.5. Any interlineations, erasures or overwriting shall be valid only if they are initialled by the person or persons signing the bid.

#### **D. Submission and sealing of Bids**

#### **1.18 Submission, Sealing and Marketing of Bids**

**1.18.1.** The bidders may submit their bids online on Institute's e-procurement portal hosted at [http://www.mstcecommerce.com/eprochome/hild/buyer\\_login.jsp](http://www.mstcecommerce.com/eprochome/hild/buyer_login.jsp) and duly sealed technical bids (with soft copy) along with Earnest Money Deposit may be submitted generally by post or by hand at the Institute on or before last date of submission of bids.

- a) **The soft copy of the Technical Bid has to be submitted on Institute e-procurement site <http://www.mstcecommerce.com/eprochome/iitm> as per the instruction given at the site.**
- b) Price has to be filled on Institute's e-procurement site <http://www.mstcecommerce.com/eprochome/iitm>. The scanned copy of dully filled in and signed Price Bid has to be uploaded on the above e-procurement site. The prices filled in the e-procurement site will be treated final and shall be binding to the vendor.
- c) Bidders are advised to follow the instructions provided in 'Vendor's Guide' available on the said e-procurement website. For any query / technical help regarding MSTC E-procurement portal, bidders may directly contact to the following officials of MSTC Limited : -
- |  |                  |   |                |
|--|------------------|---|----------------|
| i) Shri. Tejas, Executive              | - (022) 22882854 | / | +91-9535718617 |
| ii) Shri. Jamil Akhtar, Senior Manager | - (022) 22866261 | / | +91 9391057727 |
| iii) Smt. Lisbeth Dias, Senior Manager | - (022) 22883501 | / | +91 9820158988 |

#### **1.18.2. Sealing of Bids in the case of bids invited on Single Bid basis:**

The Bidder shall mark the Technical Bids as "original" and "copy". The original and copy Bids shall then be sealed in an envelope & shall submit to this Institute not more than 5 days from the last date of submission of bid online.

#### **1.18.3. Sealing of Bids in the case of bids invited on Two bid basis:**

- d) Technical Bid should contain documents as listed in Clause- 1.9 **without mentioning Prices** on Bid Form and Price Schedule Form(s). The Bidder shall seal the original Bid and copy Bid, duly marking the Bids as "original" and "copy". The original and copy Bids shall then be sealed in the **Envelope** and marked as **Technical Bid**.
- e) Price Bid should contain Bid Form and Price Schedule Form(s) with Rates / Prices filled in as per Chapter 6. Price Bid must be submitted online only through e-procurement portal.

**1.18.4. Marking of Envelopes for submission of Technical Bids :**

- a) The Technical bid envelope shall be addressed to the Purchaser indicated in the Special Conditions of Contract (SCC).
- b) The name and address of the bidder, Tender No., due date and a warning "Do not open before \_\_\_\_\_" to be completed with the time and date as specified in the invitation for bids.
- c) Envelope should be super scribed with
- Tender Number: \_\_\_\_\_
  - Due Date \_\_\_\_\_ Time \_\_\_\_\_
  - Name of the Vendor \_\_\_\_\_
  - Addressed To:  
**THE DIRECTOR**  
**THE INDIAN INSTITUTE OF TROPICAL METEOROLOGY,**  
**Dr. HOMI BHABHA ROAD, PASHAN,**  
**PUNE-411 008 (MAHARASHTRA)- INDIA**

1.18.5. If Technical Bid envelope is not sealed and marked as required above, the Purchaser will assume no responsibility for the bid's misplacement or premature opening of the submitted bid. In such cases, bids received in open condition within the due date and time will be accepted at the risk of the bidder if the same is presented to the Stores & Purchase Officer before expiry of the due date and time of opening of the bids.

**1.19 Due date for Submission of Bids**

1.19.1. Bids must be received by the Purchaser at the address specified in NIT not later than the time and date specified in NIT. In the event of the specified date for the submission of Bids being declared a holiday for the Purchaser, the Bids will be received up to the appointed time on the next working day.

1.19.2. The Purchaser may, at its discretion, extend the due date for submission of bids by amending the bid documents in accordance with Clause relating to Amendment of Bidding Documents in which case all rights and obligations of the Purchaser and Bidders previously subject to the due date will thereafter be subject to the due date as extended.

1.19.3. The online tender should be submitted strictly as per the terms and conditions and procedures laid down in the website <http://www.mstcecommerce.com/eprhome/iitm> e-procurement portal of the Institute.

1.19.4. Bidders may also refer instructions towards terms and conditions and procedures for bidding through e-procurement portal <http://www.mstcecommerce.com/eprhome/iitm> as per detailed in **Annexure – N**.

**1.20 Submission of Bids**

1.20.1. Online submission of the bid will not be permitted on the e-procurement portal after expiry of submission time and the bidder shall not be permitted to submit the same by any other mode.

1.20.2. The copies of the documents submitted as a part of Technical Bid in e-procurement system should reach IITM, Pune within 5 working days from the last date of submission of bids on e-procurement system. The bids shall be liable to reject if the document not received within stipulated deadline and the uploaded online bid on the portal shall be considered as non-responsive and shall not be processed further. In case of any discrepancy between online uploaded technical bid and hard copy submitted at this Institute, the online copy shall be considered as final.

**1.21 Withdrawal, substitution and Modification of Bids**

- 1.21.1. The Withdrawal, substitution and Modification of Bids is permitted as per the provisions of the e-procurement system.
- 1.21.2. No bid may be withdrawn, substituted, or modified in the interval between the due date for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Bid Form or any extension thereof.

**E. Opening and Evaluation of Bids**

**1.22 Opening of Bids by the Purchaser**

- 1.22.1. Opening of Bids by the Purchaser will be done as per the provisions of the e-procurement system.  
In the event of the specified date of Bid opening being declared a holiday for the Purchaser, the Bids shall be opened at the appointed time and location on the next working day. In case of two-bid, the Price bid shall be opened only after technical evaluation.
- 1.22.2. Bidders interested in participating in the bid opening process, should witness the tender opening process on e-procurement system.

**1.23 Confidentiality**

- 1.23.1. 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 Award of the Contract.
- 1.23.2. 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.

**1.24 Clarification of Bids**

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.

**1.25 Preliminary Examination**

- 1.25.1. The Purchaser shall examine the bids to confirm that all documents and technical documentation requested in **ITB Clause 1.9** have been provided, and to determine the completeness of each document submitted.
- 1.25.2. The Purchaser shall confirm that the documents and Information as specified in ITB Clause 1.9 & in Chapter 8 of the RFP document have been provided in the Bid. If any of these documents or information is missing, the offer shall be rejected.

- (a) All the tenders received will first be scrutinized to see whether the tenders meet the basic requirements as incorporated in the tender enquiry document. The tenders, who do not meet the basic requirements, will be treated as non-responsive and ignored. The following are some of the important points, for which a tender may be declared as non-responsive and will be ignored, during the initial scrutiny:

i	The Bid is unsigned
ii	The Bidder is not eligible
iii	The Bid validity is shorter than the required period
iv	The Bidder has quoted for goods manufactured by a different firm without the required authority letter from the proposed manufacturer
v	Bidder has not agreed to give the required performance security
vi	The goods quoted are sub-standard, not meeting the required specification, etc.
vii	Against the Requirement (Scope of supply) the bidder has not quoted for the entire requirement as specified in Chapter 4

viii	The bidder has not agreed to some essential condition(s) incorporated in the tender.
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- (b) Bid Form and Price Schedule Form, in accordance with **ITB Clause 1.10**. In case of two-bid system these forms shall be examined after opening of the Price Bids of the technically qualified bidders.

**1.26 Responsiveness of Bids**

1.26.1. Prior to the detailed evaluation, the purchaser will determine the substantial responsiveness of each bid to the bidding documents. For purposes of this clause, a substantive responsive bid is one, which conforms to all terms and condition of the bidding documents without material deviations, reservations or omissions. A material deviation, reservation or omission is one that:

(a)	affects in any substantial way the scope, quality, or performance of the Goods and Related Services specified in the Tender; <b>OR</b>
(b)	limits in any substantial way, inconsistent with the Bidding Documents, the Purchaser's rights or the Bidder's obligations under the Proposed Contract; <b>OR</b>
(c)	if rectified, would unfairly affect the competitive position of other bidders presenting substantially responsive bids.

1.26.2. The Purchasers' determination of a bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.

1.26.3. If a bid is not substantially responsive, it will be rejected by the Purchaser and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation or omission.

**1.27 Non-Conformity, Error and Omission**

1.27.1. Provided that a Bid is substantially responsive, the Purchaser may waive any non-conformities or omissions in the Bid that do not constitute a material deviation.

1.27.2. Provided that a bid is substantially responsive, the Purchaser may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify non-material non-conformities or omissions in the bid related to documentation requirements. Such omission shall not be related to any aspect of the price of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.

1.27.3. Provided that the Bid is substantially responsive, the Purchaser shall correct arithmetical errors on the following basis:

(a)	if there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of the Purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the line item total as quoted shall govern and the unit price shall be corrected;
(b)	if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
(c)	if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.

1.27.4. Provided that a bid is substantially responsive, the purchaser may request that a bidder may confirm the correctness of arithmetic errors as done by the purchaser within a target date. In case, no reply is received then the bid submitted shall be ignored and its Bid Security may be forfeited.

**1.28 Examination of Terms & Conditions, Technical Evaluation**

1.28.1. The Purchaser shall examine the Bid to confirm that all terms and conditions specified in the GCC and the SCC have been accepted by the Bidder without any material deviation or reservation.

- 1.28.2. The Purchaser shall evaluate the technical aspects of the Bid submitted in accordance with **ITB Clause 1.14**, to confirm that all requirements specified in Chapter 4 of the Bidding Documents have been met without any material deviation or reservation.
- 1.28.3. If, after the examination of the terms and conditions and the technical evaluation, the Purchaser determines that the Bid is not substantially responsive in accordance with **ITB Clause 1.26**, it shall reject the Bid.

### 1.29 **Conversion to Single Currency**

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 as notified in the Newspapers on the date of bid opening in the case of single bid and the rates prevalent on the date of opening of the Price Bids in case of two-bid. For this purpose, exchange rate notified in [www.rbi.org](http://www.rbi.org) or any other website would be used by the purchaser.

### 1.30 **Evaluation and comparison of bids**

- 1.30.1. The Purchaser shall evaluate each bid that has been determined, up to this stage of the evaluation, to be substantially responsive.
- 1.30.2. To evaluate a Bid, the Purchaser shall only use all the factors, methodologies and criteria defined below. No other criteria or methodology will be used.
- 1.30.3. The bids shall be evaluated on the basis of final landing cost which shall be arrived as under:

(a) **For Goods manufactured within India**

i)	The price of the goods quoted Ex-works including taxes already paid.
ii)	GST and other taxes like LBT / Octroi etc. which will be payable on the goods if the contract is awarded.
iii)	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 form.
iv)	The installation, commissioning and training charges including any incidental services, if any as given in Scope of Supply (Chapter 4)

(b) **For Goods manufactured abroad**

i)	The price of the goods, quoted on FCA (named Airport abroad) or FOB (named port of shipment), as specified in the price schedule form.
ii)	The charges for insurance and transportation of the goods to the port / place of destination i.e. CIP/CIF Price.
iii)	The agency commission charges payable to Indian agent in Indian rupees, if any.
iv)	The installation, commissioning and training charges including any incidental services, if any

- 1.30.4. The comparison between the indigenous and the foreign offers shall be made on FOR destination basis and CIF / CIP basis respectively. However, the CIF / CIP prices quoted by any foreign bidder shall be loaded further as under:-
- (a) Towards customs duty and other statutory levies-as per applicable rates.
- (b) Towards custom clearance, inland transportation etc.- 2% of the CIF / CIP value.

**Note:** Where there is no mention of packing, forwarding, freight, insurance charges, taxes etc. such offers shall be rejected as incomplete.

- 1.30.5. In case of Purchase of many items against one tender, which are not inter- dependent or, where compatibility is not a problem, normally the comparison would be made on ex-works, ( in case of indigenous items) and on FOB / FCA (in the case of imports) prices quoted by the firms for identifying the lowest quoting firm for each item.
- 1.30.6. Orders for Imported Goods need not necessarily be on FOB / FCA basis rather it can be on the basis of any of the Incoterms latest edition as may be amended from time to time by the ICC or any other designated authority and favourable to IITM.
- 1.30.7. Wherever the price quoted on FOB / FCA and CIF / CIP basis are the same, the Contract would be made on CIF / CIP basis only.



1.30.8. The GCC and the SCC shall specify the mode of transport i.e. whether by air / ocean / road / rail.

**1.31 Comparison of Bids**

The Purchaser shall compare all substantially responsive bids to determine the lowest valued bid, in accordance with **ITB Clause 1.30**.

1.31.1 **This Institute is following and abide with the Public Procurement (Preference to Make in India), Order 2017, DIPP, MoCI Order No. P-45021/2/2017-B.E.II dated 15th June 2017 and subsequent amendments to the order. Accordingly preference will be given to the Make in India products while evaluating the bids, however, it is the sole responsibility of the bidder(s) to specify the product quoted by them is of Make in India product along with respective documentary evidence as stipulated in the aforesaid order in the technical bid itself.**

**1.32 Contacting the Purchaser**

1.32.1. 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.

1.32.2. 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.

**1.33 Post qualification**

1.33.1. 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 1.13**.

1.33.2. The determination will take into account the Eligibility & Qualification 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.

1.33.3. 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.

**F. Award of contract**

**1.34 Negotiations**

Normally, there shall not be any negotiation. Negotiations, if at all, shall be an exception and only in the case of items with limited source of supply. Negotiations shall be held with the lowest evaluated responsive bidder. Counter offers tantamount to negotiations, shall be treated at par with negotiations.

**1.35 Award Criteria**

Subject to **ITB Clause 1.37**, the Purchaser will award the contract to the successful Bidder whose bid has been determined to be substantially responsive and has been determined to be the lowest evaluated bid, provided further that the Bidder is determined to be qualified to perform the contract satisfactorily. The details of the award would be hosted on the website of the Purchaser.

**1.36 Purchaser's right to vary Quantities at Time of Award or later**

The Purchaser reserves the right at the time of Contract award to increase or decrease the quantity of goods and services originally specified in the Chapter 4 without any change in unit price or other terms and conditions. Further, at the discretion of the purchaser, the quantities in the contract may be enhanced by 25% within the delivery period.

**1.37 Purchaser's right to accept any Bid and to reject any or all Bids**

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.

**1.38 Notification of Award**

- 1.38.1. Prior to the expiration of the period of bid validity, the Purchaser will notify the successful bidder in writing by registered letter or by cable or telex or fax or e mail that the bid has been accepted and a separate purchase order shall follow through post.
- 1.38.2. Until a formal contract is prepared and executed, the notification of award should constitute a binding contract.
- 1.38.3. Upon the successful Bidder's furnishing of the signed Contract Form and Performance Security pursuant to **ITB Clause 1.41**, the Purchaser will promptly notify each unsuccessful Bidder and discharge its bid security.

**1.39 Signing of Contract**

- 1.39.1. Promptly after notification, the Purchaser shall send the successful Bidder the Purchase Order.
- 1.39.2. Within twenty-one (21) days of date of the Purchase Order, the successful Bidder shall enter into Contract Agreement as per Chapter 7.

**1.40 Order Acceptance**

- 1.40.1. The successful bidder should submit Order acceptance within 14 days from the date of issue of Purchase Order, failing which it shall be presumed that the vendor is not interested and his bid security is liable to be forfeited pursuant to **ITB Clause 1.15.11**.
- 1.40.2. The order acceptance must be received within 14 days. However, the Purchaser has the powers to extend the time frame for submission of order acceptance and submission of Performance Security (PS). Even after extension of time, if the order acceptance / PS are not received, the contract shall be cancelled and limited tenders irrespective of the value shall 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 shall not be considered again for re-tendering in the particular case.

**1.41 Performance Security (PS)**

Within 14 days of receipt of the notification of award / Purchase Order as per the GCC Clause 2.12, the Supplier shall furnish Performance Security for the amount specified in SCC, valid for the time 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 BS should be kept valid till such time the PS is submitted.

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.

For more details of the PS, please refer tender clause No. 2.12.1 to 2.12.9.

**CHAPTER 2**

**CONDITIONS OF CONTRACT**

**GENERAL CONDITIONS OF CONTRACT**

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**Note: The General Conditions of Contract shall form the part of Purchase Order / Contract.**

## **A.GENERAL CONDITIONS OF CONTRACT**

### **2.1. Definitions**

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

<b>Sr. No.</b>	<b>Words / Expressions</b>	<b>Meaning</b>
(a)	Contract	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	The documents listed in the Contract Agreement, including any amendments thereto.
(c)	Contract Price	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	Calendar day
(e)	Completion	The fulfilment of the Related Services by the Supplier in accordance with the terms and conditions set forth in the Contract.
(f)	GCC	The General Conditions of Contract.
(g)	Goods	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)	Services	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	The Special Conditions of Contract.
(j)	Subcontractor	Any natural person, private or government entity, or a combination of the above, to which any part of the Goods to be supplied or execution of any part of the Related Services is subcontracted by the Supplier.
(k)	Supplier	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)	Purchaser	The Director, The Indian Institute of Tropical Meteorology (IITM), Pune an autonomous body under Ministry of Earth Sciences (MoES), Govt. of India. as specified in SCC
(m)	The final destination	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.

2.2.2 Successful bidder shall have to enter into Contract Agreement on Rs.500/- non judicial stamp paper as per Contract Form given in Chapter 7 within 14 days of placement of Purchase Order having value above Rs. 25 lakh or equivalent amount in Foreign Currency.

### **2.3 Fraud and Corruption**

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	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	A misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract

III	Collusive practice	A scheme or arrangement between two or more bidders, with or without the knowledge of the Borrower, designed to establish bid prices at artificial, non-competitive levels
IV	Coercive practice	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/Amalgamation/Acquisition, Patent Indemnity etc.**

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 fulfilment 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.

### **2.4.1. Amalgamation/Acquisition etc.:**

In the event the Manufacturer/Supplier proposes for amalgamation, acquisition or sale its business to any firm during the contract period, the Buyer/Successor of the Principal Company are liable for execution of the contract and also fulfilment of contractual obligations i.e. supply, installation, commissioning, warranty, maintenance/replacement of spares accessories etc. You may confirm this condition while submitting the bid.

### **2.4.2 Indemnity Bond**

In order to safeguard the interest of IITM, the supplier should submit Indemnity Bond as given in Chapter-8 (Annexure-J) on Rs.500/- non judicial stamp paper within 14 days of placing of the order for Purchase Order having value above Rs. 25 lakh or equivalent amount in Foreign Currency.

### **2.4.3 Patent Indemnity**

- a) The Supplier shall, subject to the Purchaser's compliance with GCC Sub-Clause 2.4.3(a), 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:

(I)	the installation of the Goods by the Supplier or the use of the Goods in India
<b>AND</b>	
(II)	the sale in any country of the products produced by the Goods

- b) 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.

## **2.5 Scope of Supply**

Scope of Supply (i.e. the Goods to be supplied and Related Services to be performed) shall be as specified in the Chapter-4 clause 4.2

## **2.6 Suppliers' Responsibilities**

The Supplier shall supply all the Goods and perform all Related Services included in the Scope of Supply-Clause 2.5 of the GCC and the Delivery &Completion Schedule, as per GCC Clause 2.15 relating to delivery and document.

## **2.7 Contract price**

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 Copy Right**

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**

These General Conditions shall apply to the extent that they are not superseded by provisions in other parts of the Contract.

**2.10 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.

**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 Performance Security (PS)**

2.12.1 Within 14 days of receipt of the notification of award of contract / Purchase Order, 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 BS should be kept valid till such time the PS is submitted.

2.12.2 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.

2.12.3 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.

2.12.4 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.

2.12.5 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. <b>OR</b>
(b)	A Banker's cheque or Account Payee demand draft in favour of the purchaser.

- 2.12.6 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.
- 2.12.7 In the event of any contract amendment, the supplier shall, within 14 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.
- 2.12.8 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 acceptance and 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.
- 2.12.9 Whenever, the bidder chooses to submit the Performance Security in the form of Bank Guarantee, and then he should advise the banker issuing the Bank Guarantee to immediately send by Registered Post (A.D.) an unstamped duplicate copy of the Guarantee directly to the Purchaser with a covering letter to compare with the original BG for the correctness, genuineness, etc.

**2.13 Installation, Commissioning, Demonstration, Inspections and Tests**

Bidder shall be responsible for Installation, Commissioning, Demonstration, Inspections and Tests wherever applicable and for after sales service during the warranty and thereafter as specified in Chapter 4.

**2.14 Packing**

- 2.14.1. 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.
- 2.14.2. 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.

**2.15 Delivery and Documents**

- 2.15.1. 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 as given below or /and as specified in SCC.

<b>Details of Shipping and other Documents to be furnished by the Supplier are :</b>	
<b>A)</b>	<b>For goods manufactured or supplied from within India</b>
	Within 24 hours of dispatch, the supplier shall notify the purchaser the complete details of dispatch and also supply following documents by registered post / speed post and copies thereof by FAX/email
(a)	Three copies of Supplier's Invoice indicating, inter-alia description and specification of the goods, quantity, unit price, total value
(b)	Packing list
(c)	Certificate of country of origin
(d)	Insurance certificate, if required under the contract
(e)	Railway receipt/Consignment note
(f)	Manufacturer's warrantee certificate and in-house inspection certificate, if any
(g)	Inspection certificate issued by purchaser's inspector, if any
(h)	Any other document(s) as and when required in terms of the contract
<b>NOTE:</b>	
<b>1</b>	The nomenclature used for the item description in the invoice(s), packing list(s) and the delivery note(s) etc. should be identical to that used in the contract. The dispatch particulars including the name of the transporter should also be mentioned in the Invoice(s).

2	The above documents should be received by the Purchaser before arrival of the Goods and, if not received, the Supplier will be responsible for any consequent expenses.
<b>B)</b>	<b>For goods manufactured or supplied from abroad</b>
	Within 24 hours of dispatch, the supplier shall notify the purchaser the complete details of dispatch and also supply following documents by Registered Post / courier and copies thereof by FAX.
(a)	Three copies of supplier's Invoice giving full details of the goods including quantity, value, etc.
(b)	Packing list
(c)	Certificate of country of origin
(d)	Manufacturer's warrantee and Inspection certificate, if any
(e)	Inspection certificate issued by the Purchaser's Inspector, if any
(f)	Insurance Certificate, if required under the contract
(g)	Name of the Vessel / Carrier
(h)	Bill of Lading / Airway Bill
(i)	Port of Loading
(j)	Date of Shipment
(k)	Port of Discharge & expected date of arrival of goods
(l)	Any other document(s) as and when required in terms of the contract
<b>NOTE:</b>	
1	The nomenclature used for the item description in the invoice(s), packing list(s) and the delivery note(s) etc. should be identical to that used in the contract. The dispatch particulars including the name of the transporter should also be mentioned in the Invoice(s).
2	The above documents should be received by the Purchaser before arrival of the Goods and, if not received, the Supplier will be responsible for any consequent expenses.
	The clearing of the consignment at Mumbai Airport shall be done by our authorized Custom House Agents (CHA). The corresponding shipping documents may be forwarded to them accordingly. It is advised to give us and our CHA, a pre-alert before the consignment is dispatched. If there is delay in clearing of the consignment for <u>not</u> giving timely pre-alert then demurrage (Ware house charges), if applicable has to be refunded to us.

2.15.2. 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 (ICC), Paris.

2.15.3. The mode of transportation shall be as specified in SCC.

2.15.4. The Bidders may please note that the delivery of the system should be strictly within delivery schedule mentioned in the Chapter-4 / Purchase Order.

2.15.5. Goods should not be dispatched until the vendor receives a firm Purchase Order

## **2.16 Insurance**

2.16.1. Indigenous goods, 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.

2.16.2. Where delivery of the goods is required by the purchaser on CIF / CIP basis for imported goods or FOR destination for Indigenous goods, the supplier shall arrange and pay for Marine / Transit Insurance, naming the purchaser as beneficiary and initiate & pursue claims till settlement, in the event of any loss or damage.

2.16.3. Where delivery is on FOB or FCA basis for imported goods or FOR dispatch station for indigenous goods, then insurance would be the responsibility of the purchaser.

2.16.4. The equipment to be supplied will be insured by the supplier against all risks of loss or damage from the date of shipment till such time it is delivered at IITM site in case of Rupee transaction

2.16.5. 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.

## **2.17 Transportation**

- 2.17.1. Where the Supplier is required under the Contract to deliver the Goods on FOB basis, 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 on FCA basis, 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.
- 2.17.2. 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.
- 2.17.3. 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.
- 2.17.4. The clearing of the consignment at Mumbai Airport shall be done by our authorized Custom House Agents (CHA) for CIP / CIF consignments. The details of CHA will be given in the Purchase Order. The corresponding shipping documents may be forwarded to them accordingly. It is advised to give us and our CHA, a pre-alert before the consignment is dispatched. If there is delay in clearing of the consignment for not giving timely pre-alert then demurrage (Ware house charges), if applicable has to be refunded to us by the Supplier / Indian Agent or the same will be deducted from any payment due to Supplier / Indian Agent against this order or any other Purchase order.

## **2.18 Incidental Services**

The supplier may be required to provide any or all of the services, including training, if any, as specified in **Chapter 4: Clause-4.2**.

## **2.19 Spare Parts**

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.

## **2.20 Warranty**

- a) 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.
- b) 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.
- c) **Unless otherwise specified in the SCC**, the warranty shall remain valid for Thirty Six (36) 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 Forty Two (42) months after the date of

shipment from the port or place of loading in the country of origin, whichever period concludes earlier.

- d) The warranty on the associated software should cover providing of upgraded version/s, if any, released during the warranty period free of cost.
- e) The bidder shall assure the supply of spare parts after warranty is over for maintenance of the equipment supplied if and when required for a period of 10 years from the date of supply of equipment on payment on approved price list basis.
- f) The equipment must be supported by a Service Centre manned by the principal vendor's technical support engineers. The support through this Centre must be available 24 hours in a day, seven days a week and 365 days a year. Also it should be possible to contact the Principal's vendor support Centre on a toll free number/web/mail.
- g) An undertaking from the manufacturer is required in this regard stating that they would facilitate the Bidder, Service provider on regular basis with technology / product updates & extend support for the warranty as well.
- h) Supplier will have to arrange for all the testing equipment & tools required for installation, testing & maintenance etc.
- i) The Principal Supplier must have a local logistics support by maintaining a local spares depot in the country of deployment of the equipment. This is to ensure immediate delivery of spares parts from Principal Supplier of equipment to its channel partner/system integrator.
- j) Details of onsite warranty, Name of Agency that shall maintain during warranty and undertake Annual Maintenance Contract/Comprehensive Service Maintenance Contract beyond warranty shall be given in the offer. In case of foreign quote, the name of Indian Agent who shall maintain during warranty and AMC beyond warranty shall be given in the Technical Offer.
- k) 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. The Purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects.
- l) 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.
- m) If having been notified, the Supplier fails to remedy the defect within a 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.
- n) In case the Equipment / System remains non-operational or performs below the desired level for more than 1 week after intimation of the fault in the Equipment / System then Warranty period shall be extended for further period for which Equipment / System remained non-operational or performed below the desired level, without prejudice to any other terms and conditions of the Contract. **In addition to that penalty will be imposed and will be recovered from Performance Security Deposit or from any amount due to the supplier as specified in warranty clause of Appendix-1.**
- o) The defects, if any, during the warranty period are to be rectified free of charge by arranging free replacement wherever necessary.
- p) In case of any replacement during the warranty period the same shall be made free of cost i.e. DDP for import replacement and/or free delivery to IITM for indigenous replacement. All the duties / taxes relating to these replacements have to be borne by the supplier. Dispatch details of such warranty replacements have to be informed in advance to enable us to provide documents for custom clearance.
- q) Any replacements during warranty period should be free of cost. If the defective item has to be sent back to the Principal Supplier, for such replacements / returns to the Principal Supplier / Indian Agent has to bear documentation charges. If the cost of replacement is upto Rs. 5 Lakh then the documentation charges will be Rs. 5,000 and above Rs. 5 Lakh it is Rs. 10,000. Such charges have to be paid in favour of The Director, IITM, Pune. These charges are only for documentation. Any charges regarding packing, forwarding, freight, insurance, etc. should be

borne by the Principal supplier / Indian Agent for returning of defective items. In other words, any warranty replacement has to be done immediately/within a week (7 days) without expecting IITM to export the defective items to Principal supplier for repair/replacements. All charges involved for re-export of defective items have to be borne by Principal supplier / Indian Agent.

**2.21 Terms of Payment**

- 2.21.1. The method and conditions of payment to be made to the Supplier under this Contract shall be as specified in the SCC.
- 2.21.2. 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 fulfilment of other obligations stipulated in the contract.
- 2.21.3. 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.
- 2.21.4. Payment shall be made in currency as indicated in the contract.

**2.22 Change Orders and Contract Amendments**

- 2.22.1. 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:

a)	Drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;
b)	The method of shipping or packing;
c)	The place of delivery; and/or
d)	The Services to be provided by the Supplier.
e)	The delivery schedule.

- 2.22.2. 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 ascertained within fifteen (15) days from the date of the Supplier's receipt of the Purchaser's change order.
- 2.22.3. No variation or modification in the terms of the contract shall be made except by written amendment signed by the parties.

**2.23 Assignment**

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.

**2.24 Subcontracts**

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.

**2.25 Extension of time**

- 2.25.1. Delivery of the Goods and performance of the Services shall be made by the Supplier in accordance with the Delivery schedule specified by the Purchaser.
- 2.25.2. 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 to the Contract.

2.25.3. Except as provided under the Force Majeure clause of the GCC, a delay by the Supplier in the 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.

**2.26 Penalty clause**

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.

**2.27 Termination for Default**

2.27.1. 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:

(a)	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;
(b)	If the Supplier fails to perform any other obligation(s) under the Contract
(c)	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.

2.27.2. 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:

(a)	The Performance Security/EMD will be forfeited;
(b)	The Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods similar to those undelivered, and the supplier shall be liable for all available actions against it in terms of the contract.
(c)	However, the supplier shall continue to perform the contract to the extent not terminated.

**2.28 Force Majeure**

2.28.1. 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.

2.28.2. 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.

2.28.3. 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.

2.28.4. 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.

**2.29 Termination for Insolvency**

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.

**2.30 Termination for Convenience**

2.30.1. 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.

2.30.2. The Goods that 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:

(a)	To have any portion completed and delivered at the Contract terms and prices ; <b>and / or</b>
(b)	To cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods / Services and for materials and parts previously procured by the Supplier.

**2.31 Settlement of Disputes**

2.31.1. 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.

2.31.2. 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.

2.31.3. 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 Director <b>The Indian Institute of Tropical Meteorology (IITM), Pune</b> 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 the Contract.
(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.

2.31.4. The venue of the arbitration shall be the place from where the Purchase Order or Contract is issued.

2.31.5. Notwithstanding any reference to arbitration herein,

(a)	the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; <b>and</b>
(b)	the Purchaser shall pay the Supplier any monies due the Supplier.

### **2.32 Governing Language**

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.

### **2.33 Applicable Law / Jurisdiction**

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.

### **2.34 Notices**

2.34.1. 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.

2.34.2. A notice shall be effective when delivered or on the notice's effective date, whichever is later.

### **2.35 Taxes and Duties**

2.35.1. 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.

2.35.2. For goods Manufactured within India, the Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred till its final manufacture / production.

2.35.3. 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.

2.35.4. All payments due under the contract shall be paid after deduction of statutory levies (at source) (like ESIC, IT, etc.) wherever applicable.

2.35.5. IITM is exempted from paying LBT & hence supplier supplying from outside Pune Municipal limits should quote prices excluding LBT.

### **2.36 Right to use Defective Goods**

If after delivery, installation and within commissioning & acceptance and within 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.

### **2.37 Protection against Damage**

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 or 415 Volt for 3 phase ( $\pm 10\%$ )
- (b) Frequency 50 Hz.

### **2.38 Site preparation and Installation**

The Purchaser is solely responsible for the construction of the equipment sites unless otherwise specified in Chapter 4 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 purchaser's site immediately after notification of award / contract. For the installation site, please refer the clause of Final Destination as specified in Chapter 2 (Special Contract Conditions).

### **2.39 Integrity Pact**

2.39.1. As per directive of the CVC all organizations including IITM have to adopt an Integrity pact (IP) to ensure transparency, equity and competitiveness in major Public procurement having procurement value above Rs.5 Crore. The integrity pact envisages an agreement between the prospective bidders / vendors with the buyer committing the persons / officials of both the parties with the aim not to

exercise any corrupt influence on any aspect of the contract. Only those bidders / vendors, who are willing to enter in to such an integrity pact with the Purchaser, would be competent to participate in the bidding.

- 2.39.2. IP also envisages Panel of Independent External Monitors (IEMs) which shall be provided / recommended by MoES and institutes with the approval of by CVC.
- 2.39.3. The integrity Pact would be effective from the date of invitation of bids till complete execution of the contract.
- 2.39.4. The bidder is required to sign Pre-Contract Integrity Pact as specified in Chapter 2 (Special Contract Conditions). The format of Integrity Pact is as given in **Chapter – 8**.

## CHAPTER 2

### SPECIAL CONDITIONS OF CONTRACT (SCC)

The following Special Conditions of Contract (SCC) shall supplement and / or amend the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the GCC.

GCC Clause	Special Condition of Contract (SCC)
GCC 2.1.1(l)	<b>The Purchaser is:</b> THE DIRECTOR INDIAN INSTITUTE OF TROPICAL METEOROLOGY Dr.HOMI BHABHA ROAD, PASHAN, PUNE-411 008 (MAHARASHTRA)- INDIA
GCC 2.1.1(m)	<b>The Final Destination is:</b> Regional Meteorological Centre (Tentative sites: Juhu, Thane, Navi Mumbai and Borivali), Mumbai, India.  Sites are subject to change as per the requirement of Purchaser but will be within Mumbai Metropolitan Region only.
GCC 2.12.1	The amount of the <b>Performance Security</b> shall be <b>10% of the contract value</b> , valid up to 60 days after the date of completion of contract obligations including warranty obligations.
GCC 2.14.2	<b>The marking and documentation</b> within and outside the packages shall be marked with proper paint / indelible ink. (a) Each package should have a packing list within it detailing the Part No.(s), description, quantity etc. (b) Outside each package, the Contract No., the name and address of the Purchaser and the Final destination should be indicated on all sides and top. (c) Each package should be marked as 1/x, 2/x, 3/x.....x/x, where "x" is the total No. of packages contained in the consignment. (d) All the sides and top of each package should carry an appropriate indication / label / stickers indicating the precautions to be taken while handling / storage.
GCC 2.15.3	(a) In case of supplies from within India, the <b>mode of transportation</b> shall be by <b>Air / Rail / Road</b> . (b) In case of supplies from abroad, the <b>mode of transportation</b> shall be by <b>Air/Sea</b> .
GCC 2.16.1	The <b>Insurance</b> shall be for an amount equal to <b>110% of the CIF or CIP</b> value of the contract from "warehouse to warehouse (final destination)" on "all risk basis" including strikes, riots and civil commotion, in addition to <b>storage policy for 60 days</b> is advised so as to ensure the inspection by the Indian Agent at the time of opening the packages.
GCC 2.20 (c)	The period of validity of the Warranty shall be: The warranty shall remain valid for <b>Thirty Six (36)</b> months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination or for <b>Forty Two (42)</b> months after the date of shipment from the port or place of loading in the country of origin, whichever period concludes earlier.
GCC 2.21.1	The <b>method and conditions of payment</b> to be made to the Supplier under this Contract shall be as follows: <b>A</b> <b>Payment for Goods supplied from abroad:</b> Payment of foreign currency portion shall be made in currency of the Contract in the following manner: (a) On Shipment: <b>Sixty (60%)</b> percent of the Contract Price of the Goods shipped shall be paid through irrevocable letter of credit opened in favour of the Supplier in a bank in its country, upon submission of documents specified in GCC Clause 2.15. <i>Successful bidder / supplier must have to submit the detailed FAT report before shipment of the goods to the buyer.</i> (b) On Acceptance: <b>Thirty (30%)</b> percent of the Contract Price of Goods received shall be paid within thirty (30) days of receipt of the Goods and successful installation & commissioning upon submission of claim supported by the acceptance certificate issued by the Purchaser along with the <b>Performance security</b> , if any. (c) <b>Ten (10%)</b> percent of the Contract Price of Goods received, upon acceptance of Performance Security / Performance Bank Guarantee submitted by supplier. (d) The LC for 100% value of the contract shall be established after deducting the agency commission payable if any, to the Indian agent from the FOB / FCA value. (e) The LC will be confirmed at the suppliers cost, if requested specifically by the supplier.



		All bank charges abroad shall be to the account of the beneficiary i.e. supplier and all bank charges in India shall be to the account of the opener i.e. purchaser. If LC is requested to be extended/ reinstated for reasons not attributable to the purchaser, the charges thereof would be to the suppliers' account. Payment of local currency portion shall be made in Indian Rupees within thirty (30) days of presentation of claim supported by a certificate from the Purchaser declaring that the Goods have been delivered and that all other contracted Services have been performed.
	<b>B</b>	<b>Payment for Goods and Services supplied from India:</b>
		The payment shall be made in Indian Rupees, as follows:
	(a)	On shipment : <b>Sixty (60%)</b> percent of the Contract Price shall be paid on receipt of the Goods and upon submission of the documents specified in <b>GCC Clause 2.15 Successful bidder / supplier must have to submit the detailed FAT report before shipment of the goods to the buyer.</b>
	(b)	On Acceptance: The remaining <b>Thirty (30%)</b> percent of the Contract value shall be paid to the Supplier within thirty (30) days after the date of the acceptance certificate issued by the Purchaser subject to submission of performance security, if any.
	(c)	<b>Ten (10%)</b> percent of the Contract Price of Goods received, upon acceptance of Performance Security / Performance Bank Guarantee.
	(d)	In case of supplies where installation & commissioning is not required payment will be made within 30 days from receipt of items by purchaser as per purchase order contract.
	(e)	<b>E-Payment:</b> All payments, IITM prefers to make Electronic Transfers (RTGS) / (NEFT)
		<b>NOTE:</b>
		➤ All payments due under the Contract shall be paid after deduction of statutory levies at source (like ESIC, Income Tax, etc.), wherever applicable.
GCC 2.26.1	(a)	As time is the essence of the contract, Delivery period mentioned in the Purchase Order should be strictly adhered to. Otherwise we will have to forfeit EMD/PS and also LD clause will be applicable /enforced
	(b)	If the supplier fails to Supply, Install and Commission the system as per specifications mentioned in the order within the due date, the Supplier is liable to pay liquidated damages of 1% of order value per week of delay subject to a maximum of 10% beyond the due date. Such money will be deducted from any amount due or which may become due to the supplier
	(c)	IITM reserves the right to cancel the order in case the delay is more than 10 weeks. Penalties, if any, will be deducted from the EMD/PS
	(d)	The <b>maximum</b> amount of <b>penalty</b> shall be <b>10%</b> .
	(e)	The liquidated damages shall be levied on the delivered price of the delayed Goods or unperformed Services or contract value.
GCC 2.33.1		The <b>place of jurisdiction</b> is <b>Pune, India.</b>
GCC 2.34.1		<b>For notices</b> , the Purchaser's address is  THE DIRECTOR INDIAN INSTITUTE OF TROPICAL METEOROLOGY Dr.HOMI BHABHA ROAD, PASHAN, PUNE-411 008 (MAHARASHTRA)- INDIA Telephone # : 0091-20-25904200 Facsimile number : 0091-20- 2586-5142 E-mail address: <a href="mailto:psu.iitm@tropmet.res.in">psu.iitm@tropmet.res.in</a>
GCC 2.39.4		<b>The integrity pact is to be signed.</b> The details of the Independent External Monitors (IEMs) is as below;  <b>1. Shri. Arun Kumar</b> Ex. Secretary, Oil Industry Development Board (OIDB), B-38, Vrindavan Apartment, Plot No. 1, Sector 6, Dwarka, New Delhi -110 075 Email : kumararun_53@rediffmail.com Mob. : 9810621113  <b>2. Shri. Sushil Gupta</b> Ex. Chairman, Central Ground Water Board (CGWB) & Central Ground Water Authority (CGWA), No. B 702, Aravali Height, Sector 21 C, Faridabad, Haryana Pin - 121 001 Email : sushilanitagupta@yahoo.com Mob. : 09999744061

### CHAPTER 3

(To be filled by the bidder and enclosed with the Technical Bid)

#### SCHEDULE OF REQUIREMENT

The Schedule of Requirement must clearly specify the time frame required (Schedule) for delivery of goods and services to be completed by the bidder (in reference to Scope of Supply given in Clause-4.2 of Chapter-4) if the Contract is awarded for the offer / proposal submitted by the bidder in response to this Tender.

**A) Delivery Schedule:**

Sr. No.	Brief Description of Goods and Services	Quantity & Unit	Delivery Schedule

Period of delivery shall start from : \_\_\_\_\_

**B) Term of delivery / Delivery Term :**

Goods from Abroad	
Goods from India	

**C) Time frame required for conducting installation, commissioning of the equipment, acceptance test, training, etc. after the arrival of consignment or before dispatch of equipment:**

Sr. No.	Activity	Time Frame
1	Site Preparation (if required)	
2	Installation & Commissioning	
3	Acceptance Test (Factory Acceptance Test, and Site Acceptance Test)	
4	Training (Factory training, Site training)	
5		

Place : \_\_\_\_\_

Signature of the Bidder : \_\_\_\_\_

Date : \_\_\_\_\_

## **CHAPTER 4**

### **SPECIFICATIONS AND ALLIED TECHNICAL DETAILS**

#### **4.1 Specifications of Supply, installation and commissioning of Short-Range X-Band Polarimetric Scanning Radar Network in Mumbai Metropolitan Region Qty - 04 Sets.**

##### **Technical Requirements and Specifications**

**(Please refer Appendix No. – 1, available on page no. 70 to 87 of tender documents. If there is any clashes or dispute between the scope of supply, technical specifications, terms and conditions relating to pure technical parts of the equipment, training, warranty, AMC/CMAC etc., the wording / matter available in Appendix-1 prevails over the wording / matter available herein Chapter 4).**

Note: 1) Optional items mentioned in the quotation will not be considered for commercial evaluation

2) Items to be supplied from India should be quoted in Indian Currency only

#### **4.2 Scope of Supply**

**Scope of Supply includes the following:**

- (i) Supply of the equipment / system as specified in 4.1 above
- (ii) Installation & Commissioning
- (iii) Training as specified below in 4.4
- (iv) On site comprehensive Warranty as specified in 4.5 (i) below
- (v) Supply of Spare parts as specified in 4.1 above
- (vi) Comprehensive Annual Maintenance Contract (CAMC) as specified in 4.5 (ii) below

#### **4.3 Inspection & Tests**

##### **4.3.1 General**

- (i) 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 here. The Supplier shall at its own expense and at no cost to the IITM carry out all such tests and/or inspections of the Goods and Related Services as are specified in the chapter 4 or as discussed and agreed to during the course of finalization of contract.
  - a. 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 IITM
- (ii) 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.
- (iii) The IITM 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 IITM and what inspections and tests the IITM requires and where they are to be conducted. The IITM shall notify the Supplier in writing in a timely manner of the identity of any representatives retained for these purposes.

- (iv) 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.
- (v) 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.
- (vi) The Supplier shall provide the Purchaser with a report of the results of any such test and/or inspection.
- (vii) With a view to ensure that claims on insurance companies, if any, are lodged in time, the bidders and /or the Indian agent, if any, 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 customs 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.
- (viii) Before the goods and equipment are taken over by the Purchaser, the Supplier shall supply operation and maintenance Manuals together with Drawings of the goods and equipment built. These shall be in such details as will enable the Purchase to operate, maintain, adjust and repair all parts of the works as stated in the specifications.
- (ix) The Manuals and Drawings shall be in the ruling language (English) and in such form and numbers as stated in the Contract.
- (x) Unless and otherwise agreed, the goods and equipment shall not be considered to be completed for the purposes of taking over until such Manuals and Drawing have been supplied to the Purchaser.
- (xi) On successful completion of acceptability test, receipt of deliverables, etc and after the Purchaser is satisfied with the working of the equipment, the acceptance certificate signed by the Supplier and the representative of the Purchaser will be issued. The date on which such certificate is signed shall be deemed to be the date of successful commissioning of the equipment. Acceptance certificate form as given in Annexure-I (Chapter 8) should be signed by authorised representative of Supplier & Purchaser.
- (xii) Installation, commissioning, demonstration and testing to be arranged by the supplier and the same are to be done within 90 days of the arrival of the equipment at site.

#### **4.3.2 Manufacturer's Inspection Certificate**

After the goods are manufactured and assembled, inspection and testing of the goods shall be carried out at the supplier's plant by the supplier, prior to shipment to check whether the goods are in conformity with the technical specifications. Manufacturer's test certificate with data sheet shall be issued to this effect and submitted along with the delivery documents. The purchaser reserves the options to be present at the supplier's premises during such Pre- dispatch inspection and testing.

#### **4.3.3 Installation, Commissioning & Acceptance Test**

The acceptance test will be conducted by the Purchaser, their consultant or other such person nominated by the Purchaser at its option after the equipment is installed at Purchaser's site in the presence of supplier's representatives. The acceptance will involve trouble free operation. There shall not be any additional charges for carrying out acceptance test. No malfunction, partial or complete failure of any part of the equipment is expected to occur. The Supplier shall maintain necessary log in respect of the result of the test to

establish to the entire satisfaction of the Purchaser, the successful completion of the test specified.

In the event of the ordered item failing to pass the acceptance test, a period not exceeding two weeks will be given to rectify the defects and clear the acceptance test, failing which, the Purchaser reserve the right to get the equipment replaced by the Supplier at no extra cost to the Purchaser.

Successful conduct and conclusion of the acceptance test for the installed goods and equipment shall also be the responsibility and at the cost of the Supplier.

#### 4.4 Training

(i)	<b>Location:</b>	IITM
(ii)	<b>Number of persons:</b>	For a group of students / technical staff
(iii)	<b>Period of Training:</b>	5 working days after installation
(iv)	<b>Nature of training:</b>	To operate the equipment efficiently, training to collection & processing of the data, structure solution & refinement, safe handling of the equipment and minimum maintenance.

#### 4.5 Incidental Services

(I) **On site Comprehensive Warranty:**

- The system excluding X-ray source and detector should be warranted for a period of 3 year (comprehensive warranty) from the date of installation whereas the warranty for the X-ray source and detector should be for a period of 5 years.
- Down-time call attendance should be within 24 hrs.
- In case the Equipment / System remains non-operational for more than 7 days then warranty period will be extended for the equivalent period for which Equipment / System remained non-operational. Warranty extension in such case shall be done without prejudice to any other Term & condition of the contract

(II) **Comprehensive Annual Maintenance Contract (AMC):**

- Comprehensive AMC for seven years after expiry of warranty may be quoted separately.

#### 4.6 Delivery Schedule

All the radars will be delivered within 6 months from the date of clearance of critical design review.

#### 4.7 Commercial evaluation of bid

The bid will be treated as **incomplete** if bidder has **not quoted** for all the components given in scope of supply (clause 4.2) and **the incomplete bid will be rejected**. The bidder should also quote for all incidental services (clause 4.5). The bid will be commercially evaluated for the components in the scope of supply.

## CHAPTER 5

### Qualification Requirements

**The Bidder shall furnish documentary evidence along with Technical Bid to support the following Qualification Criteria:**

1) The bidder shall furnish documentary evidence to demonstrate that the bidder satisfies the bidders' **eligibility criteria**, as mentioned in **ITB Clause 1.1.2** in the form as per **Annexure-K of Chapter- 8**.

2) **Financial Qualifying Criteria:**

The Bidder shall furnish documentary evidence to meet the following Financial Qualifying Criteria:

a) An **undertaking (self-certificate)** is to be submitted that the Organization has not been blacklisted during last 3 years by any Central / State Government Department/Organization in the form as per **Annexure-L of Chapter- 8**.

b) The Creditworthy report - **MIRA inform report** of the **OEM / Principal** supplier for the Current Financial Year is to be enclosed along with the Technical Bid **if the total price of the Equipment/System is more than Rs. 1 crore (Rs.10 million)**. The minimum rating for Financial Qualification is **Rating-Ba**.

The Creditworthy Report may be obtained from:

M/s. MIRA INFORM PRIVATE LIMITED,  
605, Palmspring, Near D'Mart,  
Link Road, Malad (West),  
Mumbai: 400 064;  
Tel Nos.: 022 - 40448000 (44 lines)  
Fax No. 022-0448045 / 40448046;  
E-mail: [mira@mirainform.com](mailto:mira@mirainform.com); [info@mirainform.com](mailto:info@mirainform.com)  
Website: <http://www.mirainform.com>

Note: The creditworthy report from other reputed and equivalent firms (such as Dun & Bradstreet) is also acceptable. However, report should have been obtained after **1<sup>st</sup> April 2018**.

3) The Bidder should be a manufacturer /authorized representative of a manufacturer who must have designed, manufactured, tested and supplied the equipment(s) similar to the type specified in the "Technical Specification". The **Manufacturers' Authorization Form** Chapter-8: Annexure B must be enclosed with the technical bid.

4) **Experience and Technical Capacity:**

The Bidder shall furnish documentary evidence to demonstrate that it meets the following experience requirement(s):

a) Equipment / System offered must be of the most recent series/models incorporating the latest improvements in design. The models should be in successful operation for at least one year as on date of Bid Opening.

b) The bidder (OEM/Direct Distributor/Dealer) should have supplied and installed during **past 3 years, at least two similar equipments / systems** as mentioned in Chapter-4. The Bidder should furnish the information on all past supplies and satisfactory performance during past 3 years in the **Performance Statement Form** (Chapter-8, Annexure D). Bidders shall invariably furnish documentary evidence (Client's certificate) in support of the **satisfactory operation of the equipment / system**.

c) Details of Service Centres and information on service support facilities that would be provided after the warranty period (in the **Service Support Form- Chapter-8 Annexure-F**).

- d) That adequate and specialized expertise is already available **or** will be made available following the execution of the contract in the Purchaser's country, to ensure that **the support services are responsive and adequate** as per **ITB 1.13.2(c)**.
- 5) The Indian Agents of foreign manufacturers/ suppliers quoting directly on behalf of their principals for items appearing in the **restricted list of the current EXIM policy of the Govt. of India** must be registered with DGS&D.
- 6) Either the Indian Agent on behalf of the foreign principal or the foreign principal directly could bid in a tender **but not both**. However, the offer of the Indian Agent should also accompany the authorization letter from their principal. Further, to maintain sanctity of tendering system **one Indian agent cannot represent two different foreign principals in one tender**.

**The bidders who do not fulfil the above Eligibility, Financial and Technical Qualification Criteria shall be rejected during the Evaluation of Technical Bid.**

**CHAPTER 6:- PRICE SCHEDULE**

<b>Sr. No.</b>	<b>Item Description</b>	<b>Foreign Currency Component as per Chapter 6-A</b>	<b>INR Price Component as per Chapter 6-B</b>
		<b>A</b>	<b>B</b>
<b>01</b>	<b>Total Cost of</b>  (Supply, Installation & Commissioning Charges, Warranty Charges for 3 years if any, Applicable Duties & Taxes etc.).  (The details may be submitted as per the pro-forma given at Chapter 6-A & 6-B accordingly)		
<b>02</b>	<b>Cost of Comprehensive Maintenance Contract (CAMC) for seven years.</b>		
<b>03</b>	<b>Grand Total (01 + 02)</b>		

**Note : The prices mentioned at Sr. No. 03 should exactly be submitted at e-procurement website (Price Bid) and soft copies of price schedule along with relevant chapter 6A & 6B have to be uploaded on e-procurement web portal. The prices submitted on e-procurement website will treated as final and comparison will based on the said prices only.**



**CHAPTER 6- A:PRICE SCHEDULE FOR GOODS BEING OFFERED FROM ABROAD**

*(Bidder should quote in this format however, if quoted in different format; all parameters given below should be covered)*

Tender No: \_\_\_\_\_ Tender Date: \_\_\_\_\_  
 Quotation No. \_\_\_\_\_ Date: \_\_\_\_\_ Quotation Valid Upto: \_\_\_\_\_

Country of Origin: _____		Currency: _____				
Sr.No.	Description of Item		Quantity	Unit	Rate	Amount
	Catalogue, Part/Model No.	Specifications				
1.	Item name					
2.	Required Spares/Consumables (if any)					
3.	Accessories (if any)					
4.	Additional Items					
Total Ex-Works Price						
(-) LESS: Discount ___% (if any)						
Net Ex-Works Price						
(+ ) Packing & Forwarding Charges						
(+ ) Inland Freight Charges						
(INCO TERM): FOB / FCA _____ International Airport, _____ Country						
(+ ) Freight upto Mumbai & Insurance Charges						
<b>CIF / CIP MUMBAI Price</b>						
Approximate Weight of the Consignment			Approximate Dimensions of the Consignment			

TENDER CLAUSE NO.	TERM	CONDITION	
GCC/SCC 2.15.3	Mode of Shipment	BY AIR / SEA	
GCC 2.15.2	Delivery Term(INCOTERM)		
CHAPTER 3	Delivery Schedule	As enclosed in Technical Bid as per Chapter-3	
	Period of delivery shall count from Time Frame required for conducting Installation & commissioning of the equipment, Acceptance Test, Training, etc.		
	Port of destination	Mumbai, India	
	Final Destination	Regional Meteorological Centre, Mumbai, India	
	Installation & Commissioning Charges		
4.4	Training Details & Charges		
GCC/SCC 2.20 (c)	Warranty	Period	Charges if any
Annual Maintenance Contract	Comprehensive		
	Non-Comprehensive		
GCC/SCC 2.21.1	Payment Term		
GCC/SCC 2.21.1 (d)	Bank Charges	Inside India to IITM account and Outside India to beneficiary's account	

**SIGNATURE OF AUTHORISED PERSON**

**CHAPTER 6- B :PRICE SCHEDULE FOR GOODS BEING OFFERED FROM INDIA**

*(Bidder should quote in this format however, if quoted in different format; all parameters given below should be covered)*

Tender No: \_\_\_\_\_ Tender Date: \_\_\_\_\_  
 Quotation No. \_\_\_\_\_ Date: \_\_\_\_\_ Quotation Valid Upto: \_\_\_\_\_

Sr.No.	Description of Item		Quantity	Unit	Rate	Amount (Rs.)
	Catalogue, Part/Model No.	Specifications				
1.	Item name					
2.	Required Spares/Consumables (if any)					
3.	Accessories (if any)					
4.	Additional Items					
Total Ex-Works Price						
(-) LESS: Discount ___% (if any)						
Net Ex-Works Price						
(+ ) Packing & Forwarding Charges						
(+ ) Transportation Charges						
GST Charges						
(IITM is having GST Concession and maximum GST is applicable @ 5% on supplies only) <a href="#">{Please refer clause no. 1.11.7 of the tender document}</a>						
SUB TOTAL						
Local Body Tax: IITM is exempted vide PMC Reg.No. LBT-005-0064836 for supplies from outside Pune Municipal Corporation Limits						
GRAND TOTAL						
Approximate Weight of the Consignment			Approximate Dimensions of the Consignment			

TENDER CLAUSE NO.	TERM		CONDITION	
GCC/SCC 2.15.3	Mode of Shipment		BY AIR / RAIL / ROAD	
GCC 2.15.2	Delivery Term			
CHAPTER 3	Delivery Schedule		As enclosed in Technical Bid as per Chapter-3	
	Period of delivery shall count from			
	Time Frame required for conducting Installation & commissioning of the equipment, Acceptance Test, Training, etc.			
	Port of destination		Mumbai, India	
	Final Destination		Regional Meteorological Centre, Mumbai, India	
	Installation & Commissioning Charges including taxes			
4.4	Training Details & Charges including taxes			
GCC/SCC 2.20.3	Warranty		Period	Charges If any including taxes
				including taxes
	Annual Maintenance Contract	Comprehensive (including taxes)		
		Non-Comprehensive (including taxes)		
GCC/SCC 2.21.1	Payment Term			

**SIGNATURE OF AUTHORISED PERSON**

**FORMAT FOR DELIVERABLES FOR SUPPLY OF 04 Nos. SHORT-RANGE X-BAND DUAL POL. DOPPLER WEATHER RADARS**

SI.No	Items	Qty.	Cost Per Unit		Applicable Duties & Taxes	Total cost
			In foreign currency	In INR		
1	Short-range X-band dual polarized Doppler weather radar system including all units/sub units and accessories : (Overall prices for system may be quoted in respective column and also price bifurcation may please be provided for the systems sub unit and accessories as detailed below i.e. for 1.1 to 1.8).	4 Sets				
1.1	Transmitter	4 Sets				
1.2	Receiver	4 Sets				
1.3	Antenna control unit and Radar control unit	4 Sets				
1.4	Radar signal processor	4 Sets				
1.5	Radome, Antenna &Antenna Pedestal	4 Sets				
1.6	Built in Test equipment (BITE)	4 Sets				
1.7	Work Stations with Displays Servers for GIS	4 Sets				
1.8	Radar Application and Operating Software	4 Sets				
2	Laptop with radar control	4 Sets				
3	Storage / Archival	4 Sets				
4	UPS each of 10 KVA capacity	4 Sets				
5	Suitable Diesel Generator	4 Sets				
6	Voltage stabilizer	4 Sets				
7	Communication hardware/software for data transfer to central location.	4 Sets				
8	Application software for product generation as listed in APPENDIX NO. - 1, Section 5)	4 Sets				
9	Factory Training as listed in in APPENDIX NO. - 1, Section 13	4 Sets				
10	Warranty services for the first three years	4 Sets				
11	Documentation (technical and manual) both hard copy and soft copy (1 Sets per Site)	4 Sets				
12	Installation & commissioning charges :	4 Sets				
13	Training to IITM personnel at each site after completion of installation / commissioning for five working days as listed in APPENDIX NO.-1, Section 13	4 Sites				
14	7 years (Year-wise) Comprehensive Annual Maintenance Contract (CAMC) after the expiry of 3 years warranty period	4 Sites				
	1stYear CAMC					
	2ndyear CAMC					
	3rdYear CAMC					
	4ThYear CAMC					
	5ThYear CAMC					
	6ThYear CAMC					
7ThYear CAMC						

**\*Note:**

All the above items are to be supplied in quantities shown above. However, if a particular item is combined with another item the fact may be so stated against that item without dropping it.

If a particular item is not used in the radar system it may be so stated against that item.

If an item equivalent to the listed items is used in the radar details of same may be stated against that item.

Manufacturer shall also include any other recommended spares (one each) specific to their radar system and identified as critical item.

Any other unit/subunits/item not listed above but required for functioning of DWR shall also be included

**CHAPTER 7**

**Contract Form**

Contract No. \_\_\_\_\_ Date: \_\_\_\_\_

THIS CONTRACT AGREEMENT is made  
the [ *insert: number* ] day of [ *insert: month* ], [ *insert: year* ].

**BETWEEN**

- (1) Indian Institute of Tropical Meteorology registered under the Societies Registration Act 1860 of the Government of India having its registered office at Dr. Homi Bhabha Road, Pashan, Pune – 411 008, India (hereinafter called “the Purchaser”), and
- (2) [ *insert name of Supplier* ], a corporation incorporated under the laws of [ *insert: country of Supplier* ] and having its principal place of business at [ *insert: address of Supplier* ] (hereinafter called “the Supplier”).

WHEREAS the Purchaser invited bids for certain Goods and ancillary services, viz., [ *insert brief description of Goods and Services* ] and has accepted a Bid by the Supplier for the supply of those Goods and Services in the sum of [ *insert Contract Price in words and figures, expressed in the Contract currency(ies)* ] (hereinafter called “the Contract Price”).

**NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:**

- 01. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
- 02. The following documents shall constitute the Contract between the Purchaser and the Supplier, and each shall be read and construed as an integral part of the Contract:

(a)	This Contract Agreement
(b)	General Conditions of Contract
(c)	Special Conditions of Contract
(d)	Technical Requirements (including Schedule of Requirements and Technical Specifications)
(e)	The Supplier’s Bid and original Price Schedules
(f)	The Purchaser’s Notification of Award
(g)	[ <i>Add here any other document(s)</i> ]

- 03. This Contract shall prevail over all other Contract documents. In the event of any discrepancy or inconsistency within the Contract documents, then the documents shall prevail in the order listed above.
- 04. In consideration of the payments to be made by the Purchaser to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Purchaser to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
- 05. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the Goods and Services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of Union of India on the day, month and year indicated above.

For and on behalf of the IITM, Pune.

Signed : [ *insert signature* ]  
in the capacity of [ *insert title or other appropriate designation* ]  
in the presence of [ *insert identification of official witness* ]

Signed : [ *insert signature* ]  
in the capacity of [ *insert title or other appropriate designation* ]  
in the presence of [ *insert identification of official witness* ]

For and on behalf of the Supplier

Signed : [ *insert signature of authorized representative(s) of the Supplier* ]  
in the capacity of [ *insert title or other appropriate designation* ]  
in the presence of [ *insert identification of official witness* ]

**CHAPTER 8**

**OTHER STANDARD FORMS**

<b>Sr. No.</b>	<b>Name of the Form</b>	<b>Annexure</b>
1	Bidder Information Form	A
2	Manufacturers' Authorization Form	B
3	Bid Security Form / Earnest Money Deposit	C
4	Performance Statement Form	D
5	Deviation Statement Form	E
6	Service Support Detail Form	F
7	Bid Form	G
8	Performance Security Form	H
9	Acceptance Certificate Form	I
10	Indemnity Bond	J
11	Eligibility Certificate	K
12	Non Black List Certificate	L
13	Pre-Contract Integrity Pact	M

**NOTE: The Successful Bidder shall submit Documents with reference to Annexure – H, I & J after Award of Contract as mentioned in Purchase Order.**

**Bidder Information Form**

- (a) [The Bidder shall fill in this Form in accordance with the instructions indicated below. No alterations to its format shall be permitted and no substitutions shall be accepted. This should be done of the letter head of the firm]

Date : [Insert date (as day, month and year) of Bid Submission]

Tender No : [Insert number from Invitation for bids]

01.	Bidder's Legal Name [Insert Bidder's legal name]
02.	In case of JV, legal name of each party: [Insert legal name of each party in JV]
03.	Bidder's actual or intended Country of Registration: [Insert actual or intended Country of Registration]
04.	Bidder's Year of Registration: [Insert Bidder's year of registration]
05.	Bidder's Legal Address in Country of Registration: [Insert Bidder's legal address in country of registration]
06.	Bidder's Authorized Representative Information  Name: [Insert Authorized Representative's name]  Address: [Insert Authorized Representative's Address]  Telephone/Fax numbers: [Insert Authorized Representative's telephone/fax numbers]  Email Address: [Insert Authorized Representative's email address]
07.	Attached are copies of original documents of:  Articles of Incorporation or Registration of firm named in 1, above.

Signature of Bidder \_\_\_\_\_

Name \_\_\_\_\_

Business Address \_\_\_\_\_

**MANUFACTURERS' AUTHORIZATION FORM**

***[The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer.]***

Date : *[Insert date (as day, month and year) of Bid Submission]*

Tender No. : *[Insert number from Invitation For Bids]*

To : *[Insert complete name and address of Purchaser]*

**WHEREAS**

We *[Insert complete name of Manufacturer]*, who are official manufacturers of *[insert type of goods manufactured]*, having factories at *[Insert full address of Manufacturer's factories]*, do hereby authorize *[Insert complete name of Bidder]* to submit a bid the purpose of which is to provide the following Goods, manufactured by us *[insert name and or brief description of the Goods]*, and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with Clause 2.20 of the General Conditions of Contract, with respect to the Goods offered by the above firm.

Signed: *[Insert signature(s) of authorized representative(s) of the Manufacturer]*

Name: *[Insert complete name(s) of authorized representative(s) of the Manufacturer]*

Title: *[Insert title]*

Duly authorized to sign this Authorization on behalf of: *[Insert complete name of Bidder]*

Dated on \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ *[Insert date of signing]*

**BID SECURITY FORM**

Whereas \_\_\_\_\_  
(hereinafter called the tenderer)

has submitted their offer dated \_\_\_\_\_  
for the supply of \_\_\_\_\_  
(hereinafter called the tender)

Against the Purchaser's Tender 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 \_\_\_\_\_ of  
\_\_\_\_\_

For 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 of \_\_\_\_\_ 20\_\_\_\_\_.

## THE CONDITIONS OF THIS OBLIGATION ARE:

(1)	If the tenderer withdraws or amends or modifies or 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
(3)	If the tenderer fails to furnish the Performance Security for the due _____ Performance of the contract.
(4)	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 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 to 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 & address of the Bank and address of the

Branch

**Note:** Whenever the bidder chooses to submit the Bid Security in the form of Bank Guarantee, then he should advise the banker issuing the Bank Guarantee to immediately send by Registered Post (A.D.) an unstamped duplicate copy of the Guarantee directly to the Purchaser with a covering letter to compare with the original BG for the correctness, genuineness, etc.



**PERFORMANCE STATEMENT FORM**

**Details of similar equipment / systems supplied & installed during past 3 years in India & Abroad**

**Name of the Firm** \_\_\_\_\_

Order Placed by (full address of Purchaser)	Order No. and date	Description and quantity of ordered equipment	Value of order	Date of completion of deliver as per contract	Date of actual completion of delivery	Remarks indicating reasons for late delivery, if any	Has the equipment been installed/ working satisfactory? (Attach a certificate from the purchaser / Consignee)	Name of Contact person along with Telephone No., FAX No. and e-mail address

Signature and Seal of the manufacturer/Bidder .....

Place :

Date :

**DEVIATION STATEMENT FORM**

**PART -I**

**The following are the particulars of deviations from the requirements of the tender specifications:**

<b>CLAUSE</b>	<b>DEVIATION</b>	<b>REMARKS (INCLUDING JUSTIFICATION)</b>

**Place:**

**Date:**

**Signature and seal of the  
Manufacturer/Bidder**

**NOTE:**

Where there is no deviation, the statement should be returned duly signed with an endorsement indicating "No Deviations".

**PART – II**  
**(Refer Clause 1.25 of Tender Document)**

Sr.No.	TENDER REQUIREMENT	COMPLIANCE	Document Submitted
1	Bid is Signed	Yes / No	Yes / NA
2	This is to certify that we are eligible to bid for this tender as per Annexure-C	Yes / No	Yes / NA
3	Bid Validity (90 days after the date of Bid opening)	Yes / No Bid valid up to	Yes / NA
4	Warranty: As per Clause 13 of Tender Document from Installation & Commissioning and date of acceptance.	Yes / No	Yes / NA
5	Agree to submit Performance Security 10% of PO Value as per Clause 17(ii)	Yes / No	Yes / NA
6	Bidder Information Form enclosed as per Annexure –A	Yes / No	Yes / NA
7	Manufacturers Authorisation Form (MAF) (If Applicable), Annexure-B	Yes / No	Yes / NA
8	Certification of non-black listing (Self Certification) as per Annexure-D	Yes / No	Yes / NA
9	Performance Statement Form enclosed as per Annexure F	Yes / No	Yes / NA
10	Service Support details enclosed as per Annexure E	Yes / No	Yes / NA
12	Copy of Firm's / Company's Permanent Account No. (PAN) issued by Income Tax Department, Govt. of India.	Yes/No.	Yes/NA
13	Copy of Firm's / Company's Goods & Service Tax (GST) Registration issued by GST Department / Authority of the respective state.	Yes/No.	Yes/NA
14	Agree to sign & submit the Pre-Contract Integrity Pact as per Annexure - M	Yes/No.	Yes/NA

The Bidder should **submit other documents** such as fulfilment of financial qualification criteria (MIRA Information Report), Schedule of Requirement (Chapter-3) and various forms as specified in Chapter-8.

**SERVICE SUPPORT DETAIL FORM**

<b>Sr. No.</b>	<b>List of similar type of equipments serviced in the past 3 years</b>	<b>Address, Telephone Nos., Fax No. and e-mail address of the buyer</b>	<b>Nature of training Imparted/ service provided</b>	<b>Name and address of service provider</b>

Signature and Seal of the manufacturer/Bidder.....

Place :

Date :

**Bid Form**

[The Bidder shall fill in this Form in accordance with the instructions indicated No alterations to its format shall be permitted and no substitutions shall be accepted.]

Date : [Insert date (as day, month and year) of Bid Submission]

Tender No. :

To : Director, IITM, Pune

We, the undersigned, declare that:

(a)	We have examined and have no reservations to the Bidding Documents, including Addenda No.: [Insert the number and issuing date of each Addenda]
(b)	We offer to supply in conformity with the Bidding Documents and in accordance with the Delivery Schedules specified in the Schedule of Requirements the following Goods and Related Services [Insert a brief description of the Goods and Related Services] as specified in Chapter 4
(c)	The total price of our Bid, excluding any discounts offered in item (d) below, is: [Insert the total bid price in words and figures, indicating the various amounts and the respective currencies]
(d)	The discounts offered and the methodologies for their application are: <b>Discounts.</b> If our bid is accepted, the following discounts shall apply. [Specify in detail each discount offered and the specific item of the Schedule of Requirements to which it applies.]
(e)	Our bid shall be valid for the period of time specified in ITB Clause 1.16, from the date fixed for the bid submission due date in accordance with ITB Clause 1.19 and it shall remain binding upon us and may be accepted at any time before the expiration of that period
(f)	If our bid is accepted, we commit to obtain a performance security in accordance with ITB Clause 1.41 and GCC Clause 2.12 for the due performance of the Contract
(g)	The following commissions, gratuities, or fees have been paid or are to be paid with respect to the bidding process or execution of the Contract: [Insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity]

Name of Recipient	Address	Reason	Amount
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

(If none has been paid or is to be paid, indicate "none.")

(h)	We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed.
(i)	We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.

Signed : [Insert signature of person whose name and capacity are shown]

In the capacity of [Insert legal capacity of person signing the Bid Submission Form]

Name : [Insert complete name of person signing the Bid Submission Form]

Duly authorized to sign the bid for and on behalf of: [Insert complete name of Bidder]

Dated on \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ [Insert date of signing]

**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

**Note:** Whenever, the bidder chooses to submit the Performance Security in the form of Bank Guarantee, then he should advise the banker issuing the Bank Guarantee to immediately send by Registered Post (A.D.) an unstamped duplicate copy of the Guarantee directly to the Purchaser with a covering letter to compare with the original BG for the correctness, genuineness, etc.

Acceptance certificate form

No.

Dated:

M/s.

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**Sub: Certificate of commissioning of equipment**

**01.** This is to certify that the equipment as detailed below has/have been received in good condition along with all the standard and special accessories (subject to remarks in Para 2). The same has been installed and commissioned.

(a)	Contract No. Date:	
(b)	Description of the equipment	
(c)	Name of the consignee	
(d)	Scheduled date of delivery of the consignment to the Laboratory / Institutes	
(e)	Actual date of receipt of consignment by the Laboratory / Institutes	
(f)	Scheduled date for completion of installation/commissioning	
(g)	Actual date of completion of installation/commissioning	
(h)	Penalty for late delivery (at Laboratory / Institutes level) Rs.	
(i)	Penalty for late installation (at Laboratory / Institutes level) Rs.	

**02** Details of accessories/items not yet supplied and recoveries to be made on that account:

Sr. No.	Description	Amount to be recovered

**03** The acceptance test has been done to our entire satisfaction. The supplier has fulfilled his contractual obligations satisfactorily

**OR**

The supplier has **failed to fulfil** his contractual obligations with regard to the following:

Sr. No.	Failure	Amount to be recovered
(a)		
(b)		
(c)		

The amount of recovery on account of failure of the supplier to meet his contractual obligations is as indicated at para03.

**For Supplier**

Signature .....

Name .....

Designation .....

Name of the firm .....

**For Purchaser**

Signature .....

Name .....

Designation .....

**INDIAN INSTITUTE OF TROPICAL METEOROLOGY**

Date .....

Date .....

**INDEMNITY BOND**

No. \_\_\_\_\_

Date:\_\_\_\_\_

**1) Amalgamation/Acquisition**

In the event of M/s. \_\_\_\_\_proposes for amalgamation, acquisition or sale of its business to any other firm during this contract period, M/s.\_\_\_\_\_ and proposed Buyer/Successor of the Principal Company are liable to execute, fulfill contractual obligations without any deviations. For this purpose M/s. \_\_\_\_\_/M/s.\_\_\_\_\_ and proposed Buyer/Successor of the Principal Company shall indemnify itself to the Director, INDIAN INSTITUTE OF TROPICAL METEOROLOGY, Pune to fulfill the contractual obligations as per the terms of the IITM Global Tender and quotation of M/s. \_\_\_\_\_No. \_\_\_\_\_ dated\_\_\_\_\_and INDIAN INSTITUTE OF TROPICAL METEOROLOGY P.O. No.\_\_\_\_\_dated \_\_\_\_\_. The contractual obligations are supply, installation, commissioning, warranty maintenance/replacement of spares, accessories etc. as per the above mentioned Purchase Order.

**2) Joint Venture, Consortium or Association**

If the Supplier is a joint venture, consortium, or association, all the parties shall be jointly and severally liable to the IITM 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 IITM.

**3) Patent Indemnity**

The Supplier shall, subject to IITM's compliance and indemnify and hold IITM and its employees and officers harmless 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 IITM 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.

For M/s. \_\_\_\_\_  
Principal Supplier.

For M/s. \_\_\_\_\_  
Indian Agent.



**ANNEXURE-K**

**Eligibility Certificate**

This is to certify that we are not 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 / Tender No. \_\_\_\_\_ dated \_\_\_\_\_.

Authorised Signatory

Name: \_\_\_\_\_

Designation: \_\_\_\_\_

**ANNEXURE-L**

**Non-Black listing Self Certificate**

This is to certify that M/s. \_\_\_\_\_ has not been blacklisted by any Central / State Government Department / organization in last 3 years.

Authorised Signatory

Name: \_\_\_\_\_

Designation: \_\_\_\_\_

## Format of the Integrity Pact

### PRE CONTRACT INTEGRITY PACT

#### General

This pre-bid-contract Agreement (hereinafter called the Integrity Pact) is made on \_\_\_\_\_ day of the month of \_\_\_\_\_ 2017, between, on one hand, the **Director IITM, Pune** acting through Dr. /Shri \_\_\_\_\_, \_\_\_\_\_, Designation of the officer, Ministry/ Department, Government of India (hereinafter called the 'BUYER', which expression shall mean and include, unless the context otherwise required, his successors in office and assigns) of the First Part and M/s \_\_\_\_\_ represented by Shri \_\_\_\_\_, Chief Executive Officer (hereinafter called the 'BIDDER/Seller' which expression shall mean and include, unless the context otherwise requires, his successors and permitted assigns) of the Second Part.

WHEREAS the BUYER proposes to procure (Name of the Stores/Equipment/Item) and the BIDDER /Seller is willing to offer/has offered the stores and

WHEREAS the BIDDER is private company/public company/Government undertaking/partnership/registered export agency, constituted in accordance with the relevant law in the matter and the BUYER is a Ministry/Department of the Government of India/PSU performing its functions on behalf of the President of India

NOW, THEREFORE,

To avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to :-

Enabling the BUYER to obtain the desired said stores/equipment at a competitive price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement, and

Enabling BIDDERS to abstain from bribing or indulging in any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and BUYER will commit to prevent corruption, in any form, by its officials by following transparent procedures.

The parties hereto agree into this Integrity Pact and agree as follows:-

#### Commitments of the BUYER

- 1.1 The BUYER undertakes that no official of the BUYER, connected directly or indirectly with the contract, will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the BIDDER, either for themselves or for any person, organization or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the contract.
- 1.2 The BUYER will, during the pre-contract stage, treat all BIDDERS alike, and will provide to all BIDDERS the same information and will not provide such information to any particular BIDDER which could afford an advantage to that particular BIDDER in comparison to other BIDDERS.
- 1.3 All the officials of the Buyer will report the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.

2. In case any such preceding misconduct on the part of such official(s) is reported by the BIDDER to the BUYER with full and verifiable facts and the same is prima facie found to be correct by the BUYER, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceeding, or any other action as deemed fit, including criminal proceedings may be initiated by the BUYER and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted the BUYER the proceedings under the contract would not be stalled.

### **Commitments of BIDDERS**

3. The BIDDER commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its bid or during any pre-contract stage in order to secure the contract or in furtherance to secure it and in particular commit itself to the following :-
  - 3.1 The BIDDER will not offer directly or through intermediaries, any bribe, gift, consideration, reward, favor, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the BUYER, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.
  - 3.2 The BIDDER further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration Reward, favor, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the BUYER or otherwise in procuring the Contract or forbearing to do so having done any act in relation to the obtaining or execution of the contract or any other contract with the Government for showing or forbearing to show favor or disfavor to any person in relation to the contract or any other contract with the Government.
  - 3.3\* BIDDERS shall disclose the name and address of agents and representatives and Indian BIDDERS shall disclose their foreign principals or associates.
  - 3.4\* BIDDERS shall disclose the payments to be made by them to agents/brokers or any other intermediary, in connection with this bid/contract.
  - 3.5\* The BIDDER further confirms and declares to the BUYER that the BIDDER is the original manufacturer/integrator/authorized government sponsored export entity of the defense stores and has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the BUYER or any of its functionaries, whether officially or unofficially to the award of the contract to the BIDDER, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company in respect of any such intercession, facilitation or recommendation.
  - 3.6\* The BIDDER, either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payments he has made, is committed to or intends to make to officials of the BUYER or their family members, agents, brokers or any other intermediaries in connection with the contract and the details if services agree upon for such payments.
  - 3.7 The BIDDER will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.
  - 3.8 The BIDDER will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.
  - 3.9 The BIDDERS shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information provided by the BUYER as part of the business relationship, regarding plans,

technical proposals and business details, including information contains in any electronic data carrier. The BIDDER also undertakes to exercise due and adequate care lest any such information is divulged.

- 3.10 The BIDDER commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.
- 3.11 The BIDDER shall not instigate or cause to instigate any third person to commit any of the action mentioned above.
- 3.12 If BIDDER or any employee of the BIDDER or person acting on behalf of the BIDDER, either directly or indirectly, is a relative of any of the officers of the BUYER, or alternatively, if any relative of an officer of the BUYER has financially interested/stake in the BIDDER's firm, the same shall be disclosed by the BIDDER at the time of filling of tender.

The term 'relative' for this purpose would be as define in Section 6 of the Companies Act 1956.

- 3.13 The BIDDER shall not lend to or borrow any money from or entire into any monetary dealings or transactions, directly or indirectly, with any employee of the BUYER.

#### **4. Previous Transgression**

- 4.1 The BIDDER declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could justify BIDDER's exclusion from the tender process.
- 4.2 The BIDDER agrees that if it makes incorrect statement on this subject BIDDER can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

#### **5. Earnest Money (Security Deposit)**

- 5.1 While submitting commercial bid, the Bidder shall deposit an amount \_\_\_\_\_ (to be specified in tender document as Earnest Money/ Security Deposit, with the BUYER through any of the following instruments:
  - i) Bank Draft or a Pay Order in favor of \_\_\_\_\_
  - ii) A confirmed guaranteed by an Indian Nationalized Bank. Promising payment of the guaranteed sum to the BUYER on demand within three working days without any demur whatsoever and without seeking any reason whatsoever. The demand for payment by the BUYER shall be treated as conclusion proof of payment.
  - iii) Any other mode or through any other instruments (to be specified in the tender document.
- 5.2 The Earnest Money/ Security Deposit shall be valid upto a period of six months or the complete conclusion of the contractual obligation to the complete satisfaction of the both the BIDDER and the BUYER, including warranty period, whichever is later.
- 5.3 In case of the successful BIDDER a clause would also be incorporated in the Article pertaining to performance Bond in the Purchase Contract that the provisions of Sanctions for Violation shall be applicable for forfeit the same without assigning any reason for imposing sanction for violation of this Pact.
- 5.4 No interest shall be payable by the BUYER to the BIDDER on Earnest Money/Security Deposit for the period of its currency.

## **6. Sanction for Violations**

6.1 Any breach of the aforesaid provisions by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER) shall entitle the BUYER to take all or any one of the following actions, wherever required:

i) To immediately call off the pre contract negotiations without assigning any reason or giving any compensation to the BIDDER. However, the proceedings with the other BIDDER(s) would continue.

ii) The Earnest Money (in pre-contract stage) and/or Security Deposit/ Performance Bond (after the contract is signed) shall stand forfeited either fully or partially, as decided by the BUYER and the BUYER shall not be required to assign any reason thereof.

iii) To immediately cancel the contract. If already signed, without giving any compensation to the BIDDER.

iv) To recover all sums already paid by the BUYER, and in case of an Indian BIDDER with interest thereof at 2% higher than the prevailing Prime Lending Rate of State Bank of India, while in case of a BIDDER from a country other than India with interest thereon at 2% higher than the LIBOR. If any outstanding payment is due to the bidder from the BUYER in connection with any other contract for any other stores, such outstanding payment could also be utilized to recover the aforesaid sum and interest.

v) To encash the advance bank guarantee and performance bond/warranty bond, if furnished by the BIDDER, in order to recover the payments, already made by the BUYER, along with interest.

vi) To cancel all or any other Contracts with the BIDDER. The BIDDER shall be liable to pay compensation for any loss or damage to the BUYER resulting from such cancellation/rescission and the BUYER shall be entitled to deduct the amount so payable from the money(s) due to the BIDDER.

vii) To debar the BIDDER from participating in future bidding processes of the Government of India for a minimum period of five years, which may be further extended at the discretion of the BUYER.

Viii) To recover all sums paid in violation of this Pact by BIDDER(s) to any middleman or agent or broker with a view to securing the contract.

ix) in case where irrevocable Letters of Credit have been received in respect of any contract signed by the BUYER with the BIDDER, the same shall not be opened.

(x) Forfeiture of Performance Bond in case of a decision by the BUYER to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.

6.2 The BUYER will be entitled to take all or any of the actions mentioned at para 6.1 (i) to (x) of this Pact also on the Commission by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER), of an offence as defined in Chapter IX of the Indian Penal Code, 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.

6.3 The decision of the BUYER to the effect that a breach of the provisions of this Pact has been committed by the BIDDER shall be final and conclusive on the BIDDER. However, the BIDDER can approach the Independent Monitor(s) appointed for the purposes of this Pact.

## **7. Fall Clause**

7.1 The BIDDER undertakes that it has not supplied/is not supplying similar product/systems or subsystems at a price lower than that offered in the present bid in respect of any other Ministry/Department of the Government of India or PSU and if it is found at any stage that similar product/systems or sub systems was supplied by the BIDDER to any other Ministry/Department of the Government of India or a PSU at a lower price, then that very price, with due allowance for

elapsed time, will be applicable to the present case and the difference in cost would be refunded by the BIDDER to the BUYER, if the contract has already been concluded.

## **8. Independent Monitors**

8.1 The BUYER has appointed Independent monitors (hereinafter referred to as Monitors) for this Pact in consultation with the Central Vigilance Commission. The details of Independent External Monitors are as below;

(1) Shri. Arun Kumar,  
Ex. Secretary, Oil Industry Development Board (OIDB),  
B-38, Vrindavan Apartment, Plot No. 1,  
Sector 6, Dwarka,  
New Delhi -110075  
Email :-[kumalarun\\_53@rediffmail.com](mailto:kumalarun_53@rediffmail.com)  
Mob. : 9810621113

(2) Shri. Sushil Gupta,  
Ex. Chairman, Central Ground Water Board (CGWB) & Central Ground Water Authority (CGWA),  
No. B 702, Aravali Height,  
Sector 21 C, Faridabad, Haryana  
Pin - 121001  
Email : - [sushilanitagupta@yahoo.com](mailto:sushilanitagupta@yahoo.com)  
Mob. : 09999744061

8.2 The task of the Monitors shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact.

8.3 The Monitors shall not be subject to instructions by the representatives of the parties and perform their functions neutrally and independently.

8.4 Both the parties accept that the Monitors have the right to access all the documents relating to the project/procurement, including minutes of the meetings.

8.5 As soon as the Monitor notices, or has reason to believe, a violation of this Pact, he will so inform the Authority designated by the BUYER.

8.6 The BIDDER(s) accepts that the Monitor has the right to access without restriction to all Project documentation of the BUYER including that provided by the BIDDER. The BIDDER will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor shall be under contractual obligation to treat the information and documents of the BIDDER/Subcontractor(s) with confidentiality.

8.7 The BUYER will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the parties. The parties will offer to the Monitor the option to participate in such meetings.

8.8 The Monitor will submit a written report to the designated Authority of the BUYER/Secretary in the Department/ within 8 to 10 weeks from the date of reference or intimation to him by the BUYER / BIDDER and, should the occasion arise, submit proposals for correcting problematic situations.

## **9. Facilitation of Investigation**

In case of any allegation of violation of any provisions of this Pact or payment of commission, the BUYER or its agencies shall be entitled to examine all the documents including the Books of Accounts of the BIDDER and the BIDDER shall provide necessary information and documents in English and shall extend all possible help for the purpose of such examination.

**10. Law and Place of Jurisdiction**

This Pact is subject to Indian Law. The place of performance and jurisdiction is the seat of the BUYER.

**11. Other Legal Actions**

The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

**12. Validity**

12.1 The validity of this Integrity Pact shall be from date of its signing and extend upto 5 years or the complete execution of the contract to the satisfaction of both the BUYER and the BIDDER/Seller, including warranty period, whichever is later. In case BIDDER is unsuccessful, this Integrity Pact shall expire after six months from the date of the signing of the contract.

12.2 Should one or several provisions of this Pact turn out to be invalid, the remainder of this Pact shall remain valid. In this case, the parties will strive to come to an agreement to their original intentions.

13. The parties hereby sign this Integrity Pact at \_\_\_\_\_ on \_\_\_\_\_

**BUYER**

**BIDDER**

Name of the Officer

Designation

Deptt./Ministry/PSU

Witness

Witness

1. \_\_\_\_\_

1. \_\_\_\_\_

2. \_\_\_\_\_

2. \_\_\_\_\_

\*Provisions of these clauses would need to be amended/deleted in line with the policy of the BUYER in regard to involvement of Indian agents of foreign suppliers.

This is an E- Procurement event of IITM, Pune. The E-Procurement service provider is MSTC Ltd., 225C, A.J.C. Bose Road, Kolkata-700 020.

Bidders are requested to read the terms & conditions of this tender before submitting their online tenders. Bidders who do not comply with the conditions with documentary proof (wherever required) will not qualify in the Tender process for opening of Commercial bid.

**Process of E-Tender :**

**A) Registration:** The process involves Bidder's registration with MSTC E- Procurement portal which is free of cost. Only after registration, the Bidder(s) can submit his/their bids electronically. Electronic Bidding for submission of Technical Bid as well as Commercial Bid will be done over the internet. The Bidder should possess Class III signing type digital certificate. Bidders have to make their own arrangement for bidding from a P.C. connected with Internet. MSTC is not responsible for making such arrangement. (Bids will not be recorded without Digital Signature).

SPECIAL NOTE: THE TECHNICAL BID, COMMERCIAL BID HAVE TO BE SUBMITTED ON-LINE AT

[www.mstcecommerce.com/eprochome/iitm](http://www.mstcecommerce.com/eprochome/iitm)

- Bidders are required to register themselves online with [www.mstcecommerce.com/eprochome/iitm/](http://www.mstcecommerce.com/eprochome/iitm/) -> Register as vendor -- Filling up details and creating own user id and password and submit the details.
- Bidders will receive a system generated mail confirming their registration in their email which has been provided during filling the registration form.

In case of any clarification, please contact IITM, Pune /MSTC, (before the scheduled time of the e- tender).

**Contact person (IITM) :**

**Shri. Y. S. Belgude**

Assistant Manager (Purchase Section)

Telephone No. : 020 25904483

**Contact person (MSTC Ltd):**

**1. Shri Tejas V**

Executive

Tel: 022 22882854 / +91-9535718617

**2. Shri. Jamil Akhtar**

Sr. Manager

Tel. No.: 022 22022296 / +91-9869043055

e-mail: [jakhtar@mstcindia.co.in](mailto:jakhtar@mstcindia.co.in)

**3. Smt. Lisbeth Dias**

Sr. Manager

Tel No: 022 22883501 / +91-9820158988

email: [lpaadickan@mstcindia.co.in](mailto:lpaadickan@mstcindia.co.in)

**B) System Requirement:**

System Requirements are indicated under **Vendor Guide** available on Login Page of Website:

[www.mstcecommerce.com/eprochome/iitm](http://www.mstcecommerce.com/eprochome/iitm)

Latest version of Java software to be downloaded and installed in the system. Security level should be medium

To enable ALL active X controls and disable 'use pop up blocker' under Tools->Internet Options-> custom level (Please run IE settings from the page [www.mstcecommerce.com](http://www.mstcecommerce.com) once). **Prospective vendors are suggested to refer to "Vendor Guide" at**

[www.mstcecommerce.com/eprochome/iitm](http://www.mstcecommerce.com/eprochome/iitm).

- Part I Technical bid will be opened electronically on specified date and time as given in the NIT. Bidder(s) can witness electronic opening of bid.
- Part II Commercial bid will be opened electronically of only those bidder(s) whose Part-I Technical Bid is found to be acceptable by IITM, Pune. Such bidder(s) will be intimated date of opening of Part-II Commercial bid, through valid email confirmed by them.

- All entries in the tender should be entered in online Technical & Commercial Formats without any ambiguity.

**C) Special Note towards Transaction fee:** Transaction fee is to be paid by RTGS/NEFT to **MSTC Limited**. Vendor required to use link "Transaction Fee Payment" for generating. The detail procedure and to generate Challan for bank account details can be checked under **Vendor Guide** provided on Login Page of Website :

[www.mstcecommerce.com/eprochome/iitm](http://www.mstcecommerce.com/eprochome/iitm)

**OR**

Vendor Guide Can be Downloaded from below URL:

<http://www.mstcecommerce.com/eprochome/Vendor-Guide-V5.pdf>

- **NOTE:** The bidders should submit the transaction fee **ON OR BEFORE THE PRESCRIBED DATE** as they will be authorized for bid submission only after receipt of transaction fee by MSTC.
- Click on Transaction Fee Payment -> Select event no from the drop down box -> Select NEFT/ RTGS or Online Payment.  
On selecting NEFT, the vendor shall generate a challan by filling up a form. The vendor shall remit the transaction fee amount as per the details printed on the challan without making change in the same. **ake the printout of the challan and make the payment. There shall be auto authorization of payment. Bidder shall be receiving a system generated mail.**
- Bidders may please note that the transaction fee should be deposited by debiting the A/C of the bidder only; **transaction fee deposited from or by debiting any other party's a/c will not be accepted. Transaction fee is non-refundable.**
- In case of failure to submit the payment towards Transaction fee for any reason, the Bidder, will not have the access to online E-Tender.



D)	All notices, /corrigendum and correspondence to the bidder(s) shall be sent by email only during the process till finalization of tender by IITM, Pune. Hence the bidders are required to ensure that their corporate email I.D. provided is valid and updated at the stage of registration of Bidder with MSTC (i.e. Service Provider). Bidders are also requested to ensure validity of their DSC (Digital Signature Certificate).
E)	E-Tender cannot be accessed after the due date and time mentioned in NIT.
F)	<p>Bidding in E-Tender:</p> <ul style="list-style-type: none"> <li>Bidder(s) need to submit necessary Transaction fees to be eligible to bid online in the E-Tender. Transaction fees are non refundable.</li> <li>The process involves Electronic Bidding for submission of Technical and Commercial Bid</li> <li>The bidder(s) who have submitted the above fees can only submit their Technical Bid and Commercial Bid through internet in MSTC website <a href="http://www.mstcecommerce.com/eprochome/iitm/">www.mstcecommerce.com/eprochome/iitm/</a> → Vendor Login → My menu→ Auction Floor Manager→ live event →Selection of the live event</li> <li>The bidder should allow to run an application namely enApple by accepting the risk and clicking on run. This exercise has to be done twice immediately after opening of Bid floor. Then they have to fill up Common terms/Commercial specification and save the same. After that clicking on the Technical bid. If this application is not run then the bidder will not be able to save/submit his Technical bid.</li> <li>After filling the Technical Bid, bidder should click 'save' for recording their Technical bid. Once the same is done, the Commercial Bid link becomes active and the same has to filled up and then bidder should click on "save" to record their Commercial bid. Then once both the Technical bid &amp; Commercial bid has been saved, the bidder can click on the "Final submission" button to register their bid</li> <li>Bidders are instructed to use 'Attach Docs' link to upload documents in document library. Multiple documents can be uploaded. Maximum size of single document for upload is 5 MB.</li> </ul>
G)	In all cases, bidder should use their own ID and Password along with Digital Signature at the time of submission of their bid.
H)	During the entire E-Tender process, the bidders will remain completely anonymous to one another and also to everybody else.
I)	The E-Tender floor shall remain open from the pre-announced date & time and for as much duration as mentioned above.
J)	All electronic bids submitted during the E-Tender process shall be legally binding on the bidder. Any bid will be considered as the valid bid offered by that bidder and acceptance of the same by the Buyer will form a binding contract between Buyer and the Bidder for execution of supply.
K)	It is mandatory that all the bids are submitted with digital signature certificate otherwise the same will not be accepted by the system.
L)	Purchaser reserves the right to cancel or reject or accept or withdraw or extend the tender in full or part as the case may be without assigning any reason thereof.
M)	<p>Submission of bid in the E-Tender floor by any bidder confirms his acceptance of terms &amp; conditions for the tender.</p> <ul style="list-style-type: none"> <li>Unit of Measure (UOM) is indicated in the E-Tender. Rate to be quoted should be as per UOM indicated in the E-Tender floor.</li> </ul>
	<ul style="list-style-type: none"> <li>The Purchaser has the right to cancel this E-Tender or extend the due date of receipt of bid(s) without assigning any reason thereof.</li> </ul>
	<ul style="list-style-type: none"> <li>The online tender should be submitted strictly as per the terms and conditions and procedures laid down on website <a href="http://www.mstcecommerce.com/eprochome/iitm/">www.mstcecommerce.com/eprochome/iitm/</a> of MSTC Ltd.</li> </ul>
	<ul style="list-style-type: none"> <li>The bidders must upload all the documents required as per terms of NIT / Tender Document. Any other document uploaded which is not required as per the terms of the NIT / Tender Document shall not be considered. The bid will be evaluated based on the filled-in technical &amp; commercial formats.</li> </ul>
	<ul style="list-style-type: none"> <li>The documents uploaded by bidder(s) will be scrutinized. In case any of the information furnished by the bidder is found to be false during scrutiny, appropriate punitive action / legal action can also be taken against defaulting bidders.</li> </ul>
	<ul style="list-style-type: none"> <li>Bidders are requested to read the Bidder guide and see the video in the page <a href="http://www.mstcecommerce.com/eprochome/iitm/">www.mstcecommerce.com/eprochome/iitm/</a> to familiarize them with the system before bidding.</li> </ul>

**Scope of supply, technical specifications for supply, installation and commissioning of Short-Range X-Band Polarimetric Scanning Radar Network in Mumbai Metropolitan Region Qty - 04 Sets.**

**1. GENERAL:**

Indian Institute of Tropical Meteorology (IITM) is intended to establish a network of short-range X-band dual polarized Doppler weather scanning radar in Mumbai Metropolitan region for which IITM will procure total four (4) numbers of radar systems as per the requirement mentioned below in detail:

- a. The specifications described herein refer to short-range X-band (9.2-9.7 GHz) Polarimetric Doppler Weather Scanning Radar, hereafter referred to as "The System". The System shall be capable of detecting and estimating meteorological parameters of severe weather phenomena that cause widespread damage to life and property. Four radars need to deploy in network in the Mumbai metropolitan region.
- b. All the radar systems to have following latest state of the art facilities in addition for smooth operation of complete radar system and its accessories.
- c. Suitable 3-phase voltage stabilizer with Diesel Generator (DG) of 15 KVA which is suitable to take up the load of all the essential components and accessories of the Radar automatically when utility power fails. DG should have Auto ON & OFF facility along with at least 100 L capacity fuel Tank.
- d. Suitable 10 KVA online UPS along with batteries for at least 30 minutes power back-up.
- e. GPS based NTP server for system clock time synchronisation of the radar and computers.
- f. The configuration of the four radars should be set for the synchronous operation.
- g. Communication hardware and accessories for data transfer to central location (IITM, Pune).
- h. The system will have dual polarimetric capability, transmitting in both linear horizontal and vertical polarizations.
- i. The system shall have user selectable Single polarization and Dual polarization mode of operation.
- j. Latest state of art computer system shall be used for the generation of data and its processing. The entire operation of the System shall be fully computer controlled and remotely manageable.
- k. The locations of installation site are Mumbai Metropolitan region.
- l. The quoted signal processors/computers and its software should be in use in any operational weather services in the world to fulfill the functional requirements and the data products required to be generated, displayed, and archived which have been specified elsewhere in detail. At the time of supply of the store the latest state of art computer system and latest version of software shall be provided for the generation of data and it's processing, with OEM Licensed Version of Linux / Windows Operating System.
- m. All equipment shall be of industry standard so as to enable easy up-gradation and maintenance. Manufacturer shall submit the full details of the hardware, including model numbers and the software proposed to be employed for meeting the requirements given herein.
- n. Central server at IITM, Pune for processing the data from the radar to be provided. Data analysis and products generation of all the sites inclusive of dissemination of warnings and alerts are to be provided by the firm. Display of data such as reflectivity, rainfall rate, accumulated rain, horizontal winds at designated height, warnings etc to be overlaid on map. Access to GIS based display to be provided using internet browsers such as Microsoft Internet Explorer, Firefox, and Chrome etc.

- o. The firm has to clearly specify the way of achieving the sensitivity & detection capability (in ref. OVERALL SYSTEM REQUIREMENTS) with supportive documents of claim and appropriate calculations for both types of transmitters.
- p. Lightning protection is to be in place ensuring safety of the system and mounted elements by the way of grounding cable through ground bar or other best suited mechanism.
- q. The supplied DG Set, UPS etc, should have AMC service support facility in India.
- r. The antenna mount should be equipped with suitable leveling system to ensure horizontal alignment of azimuth and elevation axis. Suitable indicators / readers shall be included for confirming the antenna base alignment.
- s. IITM will take possession after appropriate test and evaluation meeting the required specifications and accept the radar after commissioning. It is the responsibility of the bidder to bear all the expenditure to operate the radar including manpower requirements, security and all radar peripherals till successful acceptance and commissioning.
- t. Transportation from the factory to the site will be the responsibility of the vendor.
- u. The entire work of installation and commissioning of the radar has to be carried out by the vendor, though IITM may station few of its officials at the site for guidance.
- v. The network link between the system and server at IITM will be provided by IITM; firm shall suggest suitable bandwidth for real time system control and monitoring; a near real-time receipt of data for generating composites of all the radars.
- w. Computers and software tools for data analysis and products generation at four sites inclusive of dissemination of warnings and alerts are to be provided.
- x. The price bids of technically qualified firms only shall be opened for further scrutiny and evaluation on a date notified after evaluation of the techno commercial bid.

IITM shall evaluate the price bids of technically qualified vendors for deciding lowest bidder (L-1) on the basis of total cost including cost of all the deliverables as per the tender document and all prevailing taxes and duties and any other charges as demanded by the vendor including custom duty.

## 2. OVERALL SYSTEM REQUIREMENTS:

IITM require establishing a network of short-range X-band Dual Polarimetric Doppler Weather Radar System as per technical specification mentioned in **Table-1**.

List of deliverable for establishing a network of four X-Band Dual Polarimetric Doppler Radars attached vide Annexure-I (FOR DELIVERABLES FOR SUPPLY OF 4 Nos. SHORT-RANGE X-BAND DUAL POL. DOPPLER WEATHER RADARS)

## 3. ARCHIVAL OF RADAR DATA:

- a. The base data which includes Reflectivity, Velocity, Spectrum Width and Dual Pol. Parameters (output of radar processor) shall be stored automatically on hard disk. Network Attached Storage on RAID 5 with a usable capacity of 10 TB based on SAS disk to be provided for archival of Base Parameters data
- b. A-4 Size Plain paper high resolution Laser Color Printer (20ppm, 600dpi) for taking hard copies of images and products shall be provided.
- c. Provision to record, store and offline playback for analysis of I& Q data.

#### 4. DATA FORMATS:

##### 4.1 Digital Data

- a) System should be capable of archiving of raw data (I & Q) and generating Polarimetric Doppler Weather Radar Base data and products in UF, BUFR, NETCDF, GRIB2, MDV, HDF5, KML, KMZ formats and NEXRAD-Level II formats.
- b) Stand-alone UF, BUFR, NETCDF, HDF5, GRIB2, NexRAD-Level II encoding and decoding software on Licensed Linux/MS-WINDOWS platform should be provided. The software should be able to convert the radar data to formats as per user requirements and IITM specifications mentioned at 4.1(a) above.
- c) NetCDF format data shall be provided in NCAR CFRadial format.
- d) Facility of data conversion into different formats (mentioned in 4.1a and 4.1b) should be available in the radar control software as well in offline version.
- e) The successful bidder shall provide all technical support during the concurrency of this contract as per IITM requirement for ingest of base product to independent weather radar data analysis software which IITM may develop in future.
- f) Data format if proprietary should be disclosed at byte level with software codes.
- g) The successful bidder shall provide Raw Data format as well as products conversion to ASCII.

##### 4.2 Image data

The system should be capable of generating images (JPEG, GIF, TIFF, PNG etc) files for publishing on web site. Images should have high resolution to meet full HD displays and also for webpage.

#### 5. PRODUCT GENERATION:

The radar system should be having required menu driven software with GUI controls for:

- a. Operating the radar.
- b. Setup of operational scan parameters.
- c. Configuration of weather products.
- d. Generation of alerts and warning,
- e. Setup of communication channels.
- f. Setup of display overlaid on map of India with political boundaries of international borders, states and district boundaries.
- g. Automatic calibration for antenna, receiver, dynamic range, etc.
- h. Monitoring the health of the radar using BITE.
- i. The process of setup/change of various scan parameters should be easily accessible to operators using GUI.
- j. Product generation and display.
- k. Generation of audio-visual warnings based on user defined thresholds for severe weather detection.
- l. Automatic transmission of warnings (visual and text) to users via communication channels.
- m. Facility to reprocess and display products from past data.
- n. Simultaneous display of data having more than one parameter.
- o. Requisite software protection for denying unauthorized access to be provided.
- p. The system shall perform optimized correction of reflectivity (Z) and differential reflectivity (ZDR) data for attenuation effects from heavy rain based on algorithm using polarimetric parameters such as differential phase ( $\Phi_{DP}$ ), specific differential phase ( $K_{DP}$ ) and correlation coefficient ( $\rho_{HV}$ ).

The System shall be capable of generating the following products from the base data output from the radar signal processor. Algorithms and references for all the products listed below and supplied should be provided.

## 5.1 Base Products

- a) The un-filtered I & Q data archival and playback facility to generate base products.
- b) The system shall generate base data comprising for Z, V,  $\sigma$  and Polarimetric products after applying different corrections to raw data (like attenuation effect due to precipitation, earth curvature, range normalization, beam blockage, non-uniform beam filling, interference due to external sources, non-meteorological echoes, second-trip recovery, ground reflection, bright band correction, etc.)
- c) Products are to be generated based on user defined parameters already selected and stored in workstation and NAS against the various scan schedules.
- d) Provision also should be available to generate all products in offline mode using the archived raw data.
- e) Provision for doing rain attenuation correction of Z and ZDR using  $\Phi_{DP}$  measurements and store the corrected data in the formats mentioned in 4.1a and 4.1b. Provide detail documentation on the algorithm used for the attenuation correction.
- f)  $\Phi_{DP}$  should be unfolded if exceeds initial set angle values.
- g) The data of radars that belong to the same area need to be interpolated (user defined resolution) and create a composite (Mosaic) map.
- h) Provision to have map of minimum detectable signal (MDS) to mitigate the situation of severe attenuation/extinction by particular radar.
- i) Correction of radar data in case of partial beam blockage using digital elevation map (DEM).

## 5.2 Primary Products

### 5.2.1 Maximum Display

The System shall compute and display maximum values of base data products (Z, V and  $\sigma$ ) in horizontal (East west and North South) and vertical columns between users defined heights and also display the partial images in a single frame with side panel heights to a resolution of 2 km covering 0 -18 km

### 5.2.2 CAPPI (Constant Altitude Plan Position Indicator)

The System shall interpolate from the volume scan data set for a geo-horizontal plane at user vertical defined height and display the same pertaining to user selectable data (e.g., Z, V and S etc).

### 5.2.3 PCAPPI (PSEUDO CAPPI)

The System shall incorporate data from the highest elevation scan near the radar and from lowest elevation scan for areas at far away from the radar for which radar beams are not intersected by user defined plane for CAPPI and display same pertaining to data selected by user.

### 5.2.4 VCUT (Vertical Cut)

The System shall interpolate all the base products (Z, V and S) in any vertical plane passing through user defined two points and display the same for the user selectable parameters.

### 5.2.5 EBASE (ECHO BASE)

The System shall identify from the volume scan data the minimum height up to which the user defined threshold value for each base data exists and display them for user selectable data.

### 5.2.6 ETOP (ECHO TOP)

The System shall identify from the volume scan data the maximum height up to which the user defined threshold value for each base data exists and display them for user selectable data.

### 5.2.7 HAIL WARNING

Based on reliable hail warning algorithm, the system shall generate a hail warning symbol at the appropriate place in the PPI display in one or more of the operator chosen fields.

### 5.2.8 HYDROMETEOR CLASSIFICATION

The System shall be capable of generating a product for Hydrometeor Classification of hydrometeors based on Polarimetric parameters ( $Z_{DR}$ ,  $\Phi_{DP}$ ,  $K_{DP}$  and  $\rho_{HV}$ ). Provision for changing parameters in a scientific way for customization of the hydrometeor classification is a requirement. Hail detection based on this classification shall be one of the products in this class. Provide detail documentation on the algorithm used for the classification.

## 5.3 Derived Meteorological Products:

### 5.3.1 Velocity Products

The System shall generate and display following velocity products:

- a. Radial velocity versus the azimuth for a fixed elevation and a fixed slant range (VAD).
- b. Radial velocity at a fixed user defined range on height and azimuth angles (Radial velocity display for fixed range, azimuth angles for various height and azimuth).
- c. Horizontal wind velocity and wind direction using barbs in a vertical column above the radar site for different heights including divergence & convergence product.
- d. Horizontal wind vectors (UWT) using barbs at user defined layer height with or without underlay of reflectivity or velocity in PPI / CAPPI format.
- e. Three-Dimensional Wind Field from Dual-Doppler Radar technique.
- f. Retrieval of wind field by synthesizing Doppler velocities observed by the radars that belong to the network.

### 5.3.2 Hydrological Products:

The system shall generate and display following hydrological products:

- a. Rainfall intensity (R) using polarimetric moments (provision to modify the equations) as well as Z-R in a user selectable surface layer and constants with constant height above ground. Provision of specifying freezing layer height dynamically.
- b. Instantaneous estimation of water content (VIL) residing in a user defined atmosphere layer in the atmosphere to be displayed in PPI type of display.
- c. Rain rate and Precipitation accumulation (PAC) using polarimetric and Z-R in a user definable time period.
- d. Provision to estimate rain rate based on the composite method; like if  $K_{DP} > 0.3 \text{ deg/km}$  (user defined) then use KDP-R to estimate rain otherwise Z-R, Z-ZDR-R method to be use.
- e. Rainfall map of each radar has to be estimated using several tilt angles ( $< 5^\circ$  elevation; typical) with highest weight should be given to lowest elevation angle.
- f. Rainfall amount in user defined catchment basins for user defined time span.
- g. Provision for putting river basin map overlay as per user requirement.
- h. Rainfall intensity, rainfall rate and accumulation products shall have an option to be adjusted in real time by Rain Gauge, Automatic Weather Station or disdrometer data. Rain gauge and disdrometer data shall be displayed along with the radar data.

- i. Adjustment of rainfall rate by appropriate rain gauge or disdrometer data shall be possible.
- j. The system shall convert data of reflectivity and polarimetric measurement to horizontal maps of rainfall intensity.
- k. The system shall use algorithm based on polarimetric parameters for correcting rain rate estimation errors arising out of hail, non-meteorological echoes and attenuation.
- l. Raindrop size distribution estimation from the radar polarimetric measurements.
- m. Google Earth integration of gridded rainfall products.
- n. Provision for generation of composite maps of rainfall from radar network (Mosaic).

### **5.3.3 Aviation Products**

- a. The System shall evaluate derivatives of wind velocity in radial, azimuth, elevation, North South, East West directions and derive horizontal, vertical and three dimensional shears
- b. The System shall also be able to generate warning product on microburst, meso-cyclones and wind shears beyond adaptable threshold levels.
- c. The System shall evaluate maximum turbulence within user defined atmospheric layer and display in top view.

### **5.3.4 Warning and Forecasting Products.**

- a. System shall generate and display warning symbols for thunderstorm, hail storm, dust storm, meso-cyclone, convergence, divergence and gust fronts. The forecast of probable places of likelihood, their track, etc using a reliable algorithm.
- b. System shall be capable of evaluating speed and direction of movement of weather systems.
- c. System shall also be capable of warning if any of the conditions defined by the user are reached or fulfilled on reflectivity, velocity, VIL, rainfall intensity, rainfall accumulation and wind shear.
- d. System shall be able to detect tornado and gust fronts associated with storms and issue visual and text warning message.
- e. System has to generate a storm relative velocity product e.g. PPI, PCAPPI removing the bias of storm motion velocity.
- f. TITAN software running in real time should be available with appropriate data intake.
- g. Storm Relative Helicity Product

**NOTE:** Detailed algorithm for generation of the above products as well as limitations of each product will be discussed and finalized with IITM officials during design review with the successful bidder.

### **5.4 Alphanumeric Products**

The system shall also be able to provide all the product data (i.e. base, primary and derived) in tabular form for ingesting these data in to numeric models for weather predictions.

## **6. Built In Test Equipment (BITE).**

A modern system making use of latest technology for continuous monitoring of the operational status of hardware and software functions and utilities of the radar system shall be supplied.

BITE processor shall measure and process a number of real time analog and digital parameters in the radar system and generate and display the error message whenever their value falls outside the specified permissible range. BITE processor shall continuously monitor input and output signals of every module/PCB for any deviation from the standard values. Whenever any error message is generated, BITE processor shall also hierarchically indicate failure from equipment, way down to PCB and sub module level. Audio alarm indication for occurrences of faults is to be provided.

Testing of major modules shall be made available without interlinking the demand of another module working status.

#### **7. Provision for Networking & Communication system for data transfer to central location:**

Provision shall be made with suitable communication hardware & software for real time transfer of digital radar data and images through networking to control and monitoring centre in respective state and central server System installed at IITM, Pune. All networking components required at radar site as well as command and control centre shall be provided by the supplier. Necessary interface shall be provided for sending radar data through GSM, VPN and internet. The centre should be able to monitor and control the functions of the radar. Data from radar under each centre will be utilized for real time display facility for monitoring the health parameters as well as the weather data acquired by radars in operational mode. The communication link will be provided by IITM. The supplier shall specify the bandwidth requirement.

Data of all radars to be overlaid on GIS map with option to select underlay map from google, Bhuvan or open street map or ESRI, Arc GIS Boundary of states will be provided by IITM in shape files.

The Products which are to be overlaid are:

- a. Reflectivity
- b. Rainfall
- c. Velocity
- d. Warnings based on Rainfall, Velocity, Hydrometeor Classification.

GIS server using open street map may be provided.

#### **8. INSTALLATION:**

All installation related work including civil work shall be carried out by the supplier. However, IITM personnel shall be associated with the installation process. All installation materials required shall be supplied by the firm.

Minimum space required should be clearly indicated.

The entire responsibility of civil construction/site preparedness for installation of the radar and its peripherals shall be the responsibility of the firm.

Pre requisite for both civil & electrical requirements for installation of radar be clearly mentioned separately, inclusive of suitable diagrams of antenna and radome installations, along with the technical bid.

The required no. of electrical earthing based on latest technology i.e. Chemical Gel Earthing is required for various peripherals inclusive of radar, has to be provided by the supplier.

Suitable Lightning Arresters for protecting the radar with reliable lightning protection system with deep chemical gel and copper plate based earth pit shall be carried out by the firm.

Aviation warning indicator lamps shall be supplied and installed by the firm on the top of the antenna/radome at appropriate height.



All other requirements such as building; Power and communication facility etc. will be arranged by IITM for enabling installation/ commissioning of radars of each respective site.

A set of standard and specialized tools required for repair, disassembly and assembly of the system (like flat head and Philips head screw drivers, ratchet-action multipurpose tool kit, LAN cable crimper, Nipper, Cutter, Adjustable wrenches, Pilers, Allen keys, Tool box, Short range Walkie-talkie and hand gloves etc.) should be provided by the supplier in the bid document.

Supplier should provide; Digital multimeter (5& 1/2 digit)-Fluke or similar and Electrical tester good one. The cost of spares & tools will be included for price comparison.

#### **9. LOCATION:**

The installation of 4 short-range X-Band Dual Polarized Doppler Weather Radars in network will be in Mumbai Metropolitan region.

#### **10. TESTING AND ACCEPTANCE:**

- a. The supplier shall submit detailed test plans for Factory Acceptance Testing (FAT) prior to shipment and Site Acceptance Test (SAT) after installation at site for system acceptance. The test plan shall require concurrence by the IITM.
- b. The objective of the tests shall be the verification of performance of the system as per the specifications and functional requirements as per the tender document.
- c. As per the mutually agreed test procedures, FAT shall be carried out at the supplier's premises (Buyer may waive off this condition) prior to shipment. The equipment shall be shipped only after satisfactory conclusion of the pre-shipment acceptance testing (FAT). **Successful bidder / supplier must have to submit the detailed FAT report before shipment of the goods to the buyer.**
- d. As per the mutually agreed test procedures, acceptance test should be carried out at each radar site after installation. The supplier shall arrange for necessary test equipment.
- e. Any defects/deviations noticed during the site acceptance tests shall be rectified within a maximum period of one month from the completion of the tests. After such rectification, the tests shall be repeated to verify the rectification.
- f. Within 30 days of installation of each system, the supplier should secure acceptance of the radar and its peripherals as a whole system.

#### **11. SYSTEM COMMISSIONING:**

After the satisfactory completion of the site acceptance tests, the supplier shall demonstrate the reliabilities and capability of the system to be operated continuously and satisfactorily for a period of 15 days (24x7) Endurance Test of the complete Radar System, after which it will be said to be commissioned.

#### **12. WARRANTY:**

- a. Warranty shall remain valid for three years after the system has been commissioned and accepted by the purchaser as per terms of the contract. The warranty shall also include all third party bought out items / subsystems including Computers, Generator Set and UPS, etc. OEM certification of warranty for the third party items is to be provided.
- b. This warranty clause is applicable at individual radar sites.
- c. Upon receipt of notice about faults, the supplier shall repair or replace the defective goods or parts thereof, free of cost, at the site.

- d. The supplier shall take over the replaced parts/ goods after providing their replacements and no claim, whatsoever shall lie on the purchaser for such replaced parts/ goods thereafter.
- e. The firm shall supply the software updates, if any, during the warranty and CAMC period, free of cost.
- f. Supplier shall ensure 95% of 365 days annual-uptime.
- g. The supplier has to attend the fault identification/rectification within 48 hours of the problem communicated by the consignee during the warranty period.
- h. If the supplier, could not meet the 95% annual-uptime and there is a failure of the system for more than the criteria stipulated then a penalty amount of 0.5% of the total equipment cost per week for that radar, for weeks it is down, will be deducted from the performance guarantee amount or any amount due to the supplier, subject to an upper ceiling of 10% of the total equipment cost. Furthermore, the purchaser may proceed to take such remedial action(s) as deemed fit by the purchaser, at the risk and expense of the supplier and without prejudice to other contractual rights and remedies, which the purchaser may have against the supplier.
- i. Maximum one week (for two times in year) shutdown for Annual maintenance shall not come under the clause. Delay due to external factors and natural calamity beyond human control will be exempted.
- j. During warranty period, the supplier is required to visit consignee's site at least once in six months commencing from the date of acceptance at site for preventive maintenance, calibration and various types of checks of the goods/ equipment and a detailed report consisting of all test procedure values etc. must be submitted to IITM. During warranty period, any complaint on system performance/defect/malfunction should be attended within 48 hours through ONLINE/OFFLINE and rectified within 7 days. The required spare/sub system should be readily available for vendor Site Engineer to achieve this.

### **13. TRAINING:**

The supplier shall provide training in operation, maintenance, calibration and fault identification of the radar system along with modification and up-gradation in application software to 4 persons from IITM, for a period of 4 weeks at factory site. The training shall also include lectures on the system design, computer hardware/software, operation and such other aspects which are considered essential for optimum utilization of the radar system. Onsite training in operations and first level fault identification to be provided for a period of five working days.

### **14. DOCUMENTATION:**

- a. The supplier shall furnish two copies of the following documentation in well-bound sets/volumes of good print quality for each radar site. Soft copy of all the manuals should also be provided along with hard copy.
- b. All standard manuals, technical data sheets and other pertinent information of functional, electrical, and mechanical modules used in the System shall be included in the manuals.
- c. Interface connectivity document has to be provided for hardware as well as software interfaces.
- d. Detailed documentation of all the proprietary data formats, bit-by-bit information on the header and data patterns should be provided. Free updates made to firmware, processing software and clarifications should also be supplied with relevant documentation during the period of warranty and CAMC thereof.
- e. The system functional block diagram shall be laid out so that a user can readily understand and identify the major functions of the system.
- f. The operating instructions shall include routine procedures, safety and emergency procedures as applicable. These instructions shall include switch-on, standby, normal operating procedures and switch off procedures. The sequence of turn-on procedures shall be optimized and shall account for controls at

different physical locations. The instructions shall provide assistance to an operator to use the System for optimum performance. Sufficient illustrations shall be included to identify and locate all operating controls and indicating devices.

- g. Layout and Schematic Assembly Drawings: Schematic Diagrams of all assemblies, modules shall be provided.
- h. Parts List: Detailed parts list with part numbers shall be provided. It shall contain each and every item, mechanical, electrical, etc. used in the System.
- i. Algorithm of Products: The algorithms used in product generation shall be supplied.
- j. It shall be the responsibility of the supplier to provide detailed parts list of modules sourced. List of items imported and incorporated in the system should also be provided separately. Only such items may be used in the system whose technical details are made available by the manufacturer.

#### **15. DELIVERY SCHEDULE:**

- a. Preliminary design review will be held after one month from the date of issue of supply order where in the design of hardware and software to be delivered as part of the system will be discussed.
- b. Critical design review will be conducted within three months from the date of issue of supply order where in the design along with performance parameters of the sub units will be discussed in detail to ensure that the system achieves the performance parameters to be delivered as per the tender document.
  - c. All the radars to be installed and commissioned in the form of network within 9 months from the date of clearance of critical design review. In this regard the firm will submit the actual schedule along with time line for execution of installation and commissioning work for each radar. All the radars have to be delivered within 6 months of from the date of clearance of critical design review

#### **16. COMPLIANCE STATEMENT:**

The supplier shall submit detail para-wise compliance statement in tabular form giving full details of each parameter along with reasons for compliance/non-compliance, if any. The supplier shall also submit the details of references, reports etc. for each compliance giving name of technical manual, chapter number, page number and para and shall provide a copy of referred documents along with the technical bid. Silence on any para or simply making a statement 'complied' without proper justification or reference will be considered as non-compliance. Also all the claims with respect to any specification shall be supported by document along with bid document otherwise same may be treated as non-compliance. Compliance matrix should be filled in at all points of the tender document individually. All pages should be signed.

#### **17. VENDOR QUALIFICATION CRITERIA:**

- a. The supplier must have manufactured, tested and supplied at least TWO Doppler weather radars during the last 5 years, and the system should be in successful operation continuously as on date of opening of bid. The bidder shall submit a certificate from the user indicating the successful operation of the radar, with contact details of user in case IITM needs to get the information as deemed necessary for the bidding process.
- b. The supplier shall submit a statement on his past experience in this field, with details of the type and locations of weather radars supplied.
- c. The bidder should furnish the information on all past supplies and their satisfactory performances in the proforma available in the tender document.

#### **18. COMPREHENSIVE ANNUAL MAINTENANCE CONTRACT (CAMC):**

The firm (OEM) shall quote for comprehensive AMC for seven years subsequent to completion of warranty period. The firm shall submit the year wise lump sum amount of CAMC charges. The amount charged for CAMC shall not be quoted as percentage of the tender cost / cost of equipment. The CAMC charges shall be included for price comparison. The terms and conditions for the CAMC are enclosed at [Annexure -II](#).

Table-1

**SHORT-RANGE X-BAND DUAL POL. DOPPLER WEATHER RADARS SPECIFICATIONS**

<b>GENERAL</b>		
1.	Range of Observation	60 km (typical)
2.	Range resolution	50 m or better
3.	Max. Unambiguous Range	60 km; 2 <sup>nd</sup> trip echo recovery necessary
4.	Unambiguous Velocity	40 m/s; dual PRF and staggered pulse repetition time techniques.
5.	Detection capability	10 dBZ or better at 60 km range
6.	Receiver sensitivity for single pulse	-110 dBm or better for 1 micro sec pulse width
7.	Polarization	Horizontal and Vertical with Simultaneous transmit and simultaneous receive mode and alternate mode
8.	Category of radar	Compact portable type Easy to mount on building rooftop and dismantle
9.	Mobility	The entire radar systems shall be transported to and fro to specific locations. Four radars have to be deployed in network for synchronized operation.
<b>TRANSMITTER</b>		
1.	Transmitter Type	Solid-state
2.	Frequency Range	Tunable from 9.2 GHz - 9.7 GHz, please specify
3.	Peak output power	100 W or higher which will meet 10 dBZ detection at 60 km range
4.	Pulse repetition frequency	To meet Range and Velocity requirement as per Points No. 2 & 3 in General Specification
5.	Pulse width	Variable pulse widths to meet variable range resolution including 50 range resolution
6.	VSWR	1.25:1
7.	System Phase stability	0.1 degree please specify
<b>ANTENNA AND RADOME</b>		
1.	Antenna	Prime focus parabolic antenna, please specify configuration; Diameter 1.2 m typical
2.	Side lobe	First side lobe better than -23 dBi. Analysis should be provided.
3.	Cross-pol isolation at peak of main lobe Integrated cross-pol	-30 dB or less
4.	Beam width	3° or less
5.	Azimuth steering	360° and 0-6 rpm
6.	Vertical Steering	-2° to +92° or better
7.	Polarization	Horizontal and Vertical with Simultaneous transmit and receive mode and alternate mode
8.	Pointing Accuracy	0.1° typical
9.	Scan strategy	Provision for automatic changeover between different scan strategies (PPI, RHI, Volume, Point mode, Sector, Sector blanking, and Manual) shall be possible.
10.	Radome	(1) Type: Random panel with non-hygroscopic coating; (2) Transmission Loss : two-way ≤ 0.2 dB
11.	Wind load	Upto 130 km/hr and in gusting condition upto 200 km/hr
12.	Lightening Protection	Lightening rod with dual ground wires.
<b>RECEIVER</b>		
1.	Type	Multichannel Digital receiver for Dual Polarization (H&V)
2.	Receiver Noise figure	4 dB or less
3.	LNA Noise Figure	<1 dB
4.	Linear dynamic range	90 dB or higher
5.	Minimum Discernible Signal	-110 dBm or less for 1 μs pulse width

<b>RADAR SIGNAL PROCESSOR</b>		
1.	<b>Doppler processing mode</b>	Pulse Pair and FFT/DFT
2.	<b>Clutter suppression</b>	Clutter Elimination for > 40 dB. Specify filter technique (IIR, FIR). The system shall have provision for identifying and filtering non-meteorological echoes based on polarimetric measurements.
3.	<b>Conventional and Polarimetric outputs</b>	Z, V, S, ZDR, KDP, $\Phi_{DP}$ , $\rho_{HV}$ , LDR
<b>CALIBRATION, DISPLAY AND DATA FORMAT</b>		
1.	<b>Calibration</b>	<p>GUI based BITE (Built-In Test Equipment)</p> <p>(I) Provision shall be made for programmable and auto run for absolute internal calibration to ensure reliability of polarimetric parameters at frequent intervals and display the current values to maintain the system health and accuracy of the product.</p> <p>(II) An external calibration through standard external equipment and validation of receiver linearity and dynamic range using standard coherent source and standard measuring equipment. There should be a provision for automatic update of radar parameters.</p> <p>(III) The calibration set up should be of part of the deliverables. Script based execution of such measurements and saving of results are expected as a part of such provision.</p>
2.	<b>Sun Calibration</b>	<p>Sun calibration in both software driven and manual mode operation for pointing accuracy <math>0.1^\circ</math>. The system shall be made to point towards sun for establishing the pointing accuracy of the antenna; stability and reliability of receiver chain using solar flux (sun) values known from other sources.</p> <p>Procedure shall be provided and to be demonstrated during SAT. Script based execution of such measurements and saving of results are expected as a part of such provision.</p>
3.	<b>Control and monitoring software</b>	<p>(i) Computer system for remotely controlling and monitoring the network of 4 radars, status of radar and for controlling the operational parameters of radar. Synchronized operation and control of all the 4 radars from a remote site.</p> <p>(ii) Industry standard GUI software for radar control/operation. Menu driven provisions to set scan strategies, repeated Volume/Sector scan, Data acquisition, Various Radar display options, Data storage in native binary and conversion to other formats etc. It shall include all weather radar operational products.</p>
4.	<b>Display system</b>	Display of radar data shall be available at site in real time. Display should also be available at IITM, Pune using available communication channels. One 55" (inches) UHD 4K LED display system.
5.	<b>Data Format</b>	System should be capable of generating Radar Base data and products in MDV, NETCDF, BUFR, GRIB2, HDF5, CFRADIAL formats (online & offline). Provision to record, store and playback of I & Q data.
<b>SOFTWARE</b>		
1.	<b>Application Software</b>	Using volume scan data, standard Met products such as PPI, RHI, CAPPI, Echo base and top, MAX, HMAX, VAD, VVP, HWT. Rainfall intensity by Z-R & Dual pol method, Hydrometeor Classification, wind shear detection, Support of single and multiple radar network, data correction (like rain attenuation, wet radome attenuation, beam blockage, non-uniform beam filling, Doppler velocity de-aliasing etc), dual Doppler analysis, data integration with rain gauges, disdrometer and satellite, correction of derived rainfall with rain

		gauge data.  Provide a detailed documentation on these weather products and algorithms used. This will help the scientists to improve or modify the algorithm in future.
<b>RADAR WORKSTATION</b>		
1.	<b>Computer Peripherals</b>	(a) Two Workstations with 32" (inches) color TFT monitor – one as main and one as standby, for operation, control of the radar and product generation and display of the data. (b) Two Workstations with 32" (inches) color TFT monitor – one as main and one as standby, for networking /communication purpose. (c) A portable computer (laptop) of latest version/ configuration capable to be configured as any of (a) & (b) above. (d) NAS storage catering space for 10 years of archival with search and retrieval
<b>POWER REQUIREMENTS</b>		
1.	<b>Power</b>	Capable of operating at 220±10% V, 50 ±2%Hz, in Single phase or 400V ±10% V, 50 ±2% Hz in Three phase.
2.	<b>Online UPS</b>	Suitable 10 KVA UPS to run the whole radar system for at least 30 minutes. Catering to required voltage stabilization with a power factor suitable for the system.
3.	<b>Diesel Generator</b>	At least 15 KVA Suitable Diesel Generator Set with AMF panel for automatic turn ON when mains fails and capable to takes up the load (of all the essential components and accessories of the Radar system required for operation). The DG set should be silent with a separate canopy operatable in all weather conditions.
<b>SPARES, TOOLS, AND TEST EQUIPMENTS</b>		
1.		(a) All spares and consumables required for installation and testing shall be provided by the supplier by their own cost.  (b) All spares used during the warranty maintenance period shall be replaced by the supplier at his own cost. These spares may be kept with IITM so as to avoid any delay. (c) The manufacturer shall also include any other recommended spares / test equipment's identified as critical item. A list showing all critical spares / test equipment's required for operation and maintenance of radar shall also be provided along with bid document.  (d) The supplier shall give an assurance for continued availability of spares and consumables for a period of 15 years from the date of commissioning of the system.  (e) A set of standard and specialized tools required for repair, disassembly and assembly of the system (like flat head and Philips head screw drivers, ratchet-action multipurpose tool kit, LAN cable crimper, Terminal log crimper, Nipper, Cutter, Adjustable wrenches, Pliers, Allen keys, Tool box, short range walkie-talkie and hand gloves etc.) should be supplied. Detailed tool kit list shall be provided by the supplier in the bid document.  (f) Digital storage oscilloscope-Tektronics 4 channel + High voltage oscilloscope probe or Capacitive High voltage divider probe (like Pearsons) + Current probe (AC/DC, 100A) to monitor Tx modulator pulse current like Pearsons or equivalent.  (g) Signal generator with narrow pulse modulation facility for X-band operation and measurements (Bench model) or similar.  (h) Power meter (Peak & Average) & Power sensor-Agilent or similar.

		<p>(i) Digital multimeter (5 &amp; ½ digit)-Fluke or similar.</p> <p>(j) Set of test cables &amp; adapters/ connectors.</p> <p>(k) Hard and soft copies of detailed manuals of all the test equipment's shall be provided.</p> <p>(l) The cost of spares, tools &amp; test equipment's will be included for price comparison.</p>
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**FORMAT FOR DELIVERABLES FOR SUPPLY OF 04 Nos. SHORT-RANGE X-BAND DUAL POL. DOPPLER WEATHER RADARS**

S.No	Items	Qty.	Make Name	Model No. / Part No.	Country of origin	Whether complied as per required specifications (Please tick mark properly)
1	<b>Short-range X-band dual polarized Doppler weather radar system including all units/sub units and accessories :</b>	<b>4 Sets</b>				
1.1	Transmitter	4 Sets				YES / NO
1.2	Receiver	4 Sets				YES / NO
1.3	Antenna control unit and Radar control unit	4 Sets				YES / NO
1.4	Radar signal processor	4 Sets				YES / NO
1.5	Radome, Antenna &Antenna Pedestal	4 Sets				YES / NO
1.6	Work Stations with Displays Servers for GIS	4 Sets				YES / NO
1.7	Radar Application and Operating Software	4 Sets				YES / NO
1.8	Built in Test equipment (BITE)	4 Sets				YES / NO
2	Laptop with radar control	4 Sets				YES / NO
3	Factory training and testing	4 Sets				YES / NO
3	Acceptance testing (Site)	4 Sets				YES / NO
4	Storage /Archival	4 Sets				YES / NO
5	Installation	4 Sets				YES / NO
6	Application software for product generation as listed in APPENDIX NO. - 1, Section 5	4 Sets				YES / NO
7	Any other unit/subunits/item not listed above but required for functioning of DWR shall also be included	4 Sets				YES / NO
8	Three years warranty services for radars System and central server	4 Sets				YES / NO
9	Installation material	4 Sets				YES / NO
10	Documentation (technical and manual) both hard copy and soft copy (1 Sets per Site)	4 Sets				YES / NO
11	Communication hardware/software for data transfer to central location.	4 Sets				YES / NO
12	UPS each of 10 KVA capacity	4 Sets				YES / NO
13	Suitable Diesel Generator	4 Sets				YES / NO
14	Voltage stabilizer	4 Sets				YES / NO
15	Training to IITM personnel at each site after completion of installation / commissioning for five working days. <b>Note:</b> Expenses for trainees such as travel, lodging and per diem to be borne by IITM	4 Sites				YES / NO
16	7 years (Year-wise) Comprehensive Annual Maintenance Contract (CAMC) after the expiry of 3 years warranty period	4 Sites				
	1 <sup>st</sup> Year CAMC					YES / NO
	2 <sup>nd</sup> Year CAMC					YES / NO
	3 <sup>rd</sup> Year CAMC					YES / NO
	4 <sup>th</sup> Year CAMC					YES / NO
	5 <sup>th</sup> Year CAMC					YES / NO
	6 <sup>th</sup> Year CAMC					YES / NO
7 <sup>th</sup> Year CAMC					YES / NO	

**\*Note:**

All the above items are to be supplied in quantities shown above. However, if a particular item is combined with another item the fact may be so stated against that item without dropping it.

If a particular item is not used in the radar system it may be so stated against that item.

If an item equivalent to the listed items is used in the radar details of same may be stated against that item.

Manufacturer shall also include any other recommended spares (one each) specific to their radar system and identified as critical item.



**Terms & Conditions of Comprehensive Annual Maintenance Contract (CAMC) 4 numbers of Short-range X-Band Dual Polarimetric Doppler Weather Radars**

1. The CAMC includes Control Center and Radar Site Material & Services inclusive of all Computer peripherals, Printers, Radar modules, spares, components, cables, connectors etc and radar related materials like UPS, DG, Radome, Tower, etc. and the removed/replaced defective material becomes the property of "The Contractor".
2. The CAMC clause will be applicable for control center and individual radar sites separately.
3. The CAMC will commence immediately after the expiry of the warranty period. The comprehensive service includes preventive and corrective maintenance and free replacement of all the defective parts/devices. The company should submit a detailed CAMC plan including preventive maintenance schedule.
4. The "Contractor" shall supply the details of its call center meant for booking the complaints along with the contact numbers like mobile nos., phone nos., mail address and names etc of its service engineers.
5. The radar shall be decommissioned for a period of two weeks for annual preventive maintenance and upkeep in a cyclic mode.
6. The "Contractor's" engineers attending to the system are required to make all entries of their work done and corrective measures taken by them with their signatures in the log book kept with the Radar.
7. Overall uptime of the system shall be at least 95%. If there is a failure of the system for more than the criteria stipulated then the CAMC amount of 0.25% per day, for days it is down will be deducted, subjective to an upper ceiling of 10% of CAMC charges for that quarter. If the failure duration extends beyond one month then the contract may be terminated and cost of its repair from alternate source will be recovered from the "Contractor" and performance security may be forfeited. Maximum two weeks shutdown for annual maintenance shall not come under the clause. Radar down time due to external factors and severe natural calamity beyond human control shall exempt the criteria.
8. Supplier shall ensure 95% uptime by supportive manpower if found necessary.
9. Period of CAMC for radar set will be started after expiry of three years standard warranty of each radar and the same will be informed by IITM to the supplier in writing. IITM reserves the right for awarding of CAMC after assessing of the services & its performance provided during the warranty period. .
10. The mode of payment will be quarterly and it will be made after end of each quarter on the basis of satisfactory performance certificate from user.
11. "The Contractor" will assist IITM for regular backups of all the software. The "Contractor" is also required to restore the existing Software from the Backups whenever required.
12. "The Contractor" will also be responsible for configuring the networking components.
13. CAMC contract will be signed for seven years. If required, contract may be extended by IITM. However, IITM reserves the right to terminate the contract at any time by giving three months' notice, if the performance of the system or the services rendered by the supplier is not found satisfactory.
14. The "Contractor" has to submit an undertaking that it will not use IITM data for any commercial purpose.
15. This contract shall be governed in all respects by Indian Laws.

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**ADMINISTRATIVE OFFICER**  
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