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

निविदा सूचना शुद्धिपत्र / CORRIGENDUM TO TENDER NOTICE

निम्नलिखित तालिका में विनिर्दिष्ट समसंख्यक निविदा सूचना द्वारा प्रकाशित विवरण हेतु निविदा प्रस्तुत करने की निर्धारित तारीख को बढ़ाया जा रहा है|

The last date of submission of bids for purchase of "items / description" published vide even number of Tender Notice are extended as tabulated below

क्रम सं. Sr. No.	निविदा सूचना सं. Tender Notice No.	विवरण/Description	ऑनलाइन बोलियाँ प्रस्तुत करने की बढ़ाई गयी समय सीमा / Extended timeline for submission of bids online	
			के पास से From	तक To
01.	पीएस/128/18/2018 PS/128/18/2018	मुंबई महानगर क्षेत्र में लघु परास एक्स-बैंड ध्रुवणमितीय स्कैनिंग रडार नेटवर्क, मात्रा 04 सेट्स Short Range X-Band Polarimetric Scanning Radar Network in Mumbai Metropolitan Region Qty - 04 Sets.	23 जनवरी 2019 1500 बजे से / 23rd January, 2019 1500 hrs.	13 फ़रवरी 2019 1500 तक 13th February, 2019 1500 hrs.
02	पीएस/125/18/2018 PS/125/18/2018	सी-बैंड द्विध्रुवीय डॉप्प्लर मौसम रडार प्रणाली मात्रा - 01 सेट C-band Dual Polarized Doppler Weather Radar System Qty – 01 Set.	31 जनवरी 2019 1500 बजे से / 31st January, 2019 1500 hrs.	13 फ़रवरी 2019 1500 तक 13th February, 2019 1500 hrs.
उपरोक्त दोनों निविदाओं के लिए तकनीकी बोलियाँ 13 फरवरी, 2019 को 1530 बजे खोली जाएंगी। **Technical Bids for aforesaid both the tenders will be opened on 13th February, 2019 at 1530 hrs.**				

दिनांक 7 जनवरी, 2019 को हुई निविदा-पूर्व बैठक का अंतिम कार्यवृत्त नीचे विनिर्दिष्ट वेबसाइट पर उपलब्ध है| अन्य निबंधन एवं शर्तें यथावत रहेंगी। 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 के सेंट्रल प्रोक्यूरमेंट पोर्टल (सीपीपी) http://www.eprocure.gov.in. पर भी उपलब्ध है।

Final minutes of Pre-Bid meeting held on 7th January, 2019 are available on websites as stated below. All other terms & condition shall remain unchanged. 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.

ह/Sd-
प्रशासनिक अधिकारी, कृते निदेशक
Administrative Officer, for Director
ईमेल/Email :psu.iitm@tropmet.res.in

Indian Institute of Tropical Meteorology, Pune – 411 008

PS/125/18/2018 23rd January, 2019

Sub: Minutes of Pre-bid meeting held on 7th January, 2019 for Supply, installation and commissioning of "C- band Dual Polarized Doppler Weather Radar System" - Qty. 01 set.

The pre-bid meeting for the subject mentioned above held on 7th January, 2019 at 1100 hrs. at IITM, Pune.

In response to our Tender Notice No. PS/125/18/2018, representatives of the following prospective bidders / firms / companies / OEM attended the meeting with their queries.

i) M/s. Actech Information Systems, Noida
ii) M/s. Data Patterns Pvt. Ltd. Chennai
iii) M/s. L & T Defense,
iv) M/s. Satcom Technologies, Hyderabad
v) M/s. SGS Weather, New Delhi
vi) M/s. BEL, Bangalore
vii) M/s. PEC, New Delhi
viii) M/s. Polar Technologies (India), New Delhi
ix) M/s. MicroStep MIS,
x) M/s. Astra Microwave Products, Hyderabad

Email queries received before and during the meeting from below companies were also considered by the Committee.

i) M/s. Mahindra Telephonics Integrated Systems Ltd, Palwal, Haryana

On 7th January, 2019, Committee decided to extend the timeline of inviting the queries for Pre-Bid up to 15th January, 2019 up to 1700 hrs. The decision of the committee was executed on the basis of approval of competent authority and a copy of **interim minutes** of the Pre-Bid Meeting was uploaded on MSTC E-Procurement portal and IITM Web portal.

The queries received from all the participating bidders up to the extended timeline were referred to the Technical Evaluation Committee (TEC) of Radars. Committee discussed / deliberated thoroughly and the responses are prepared as per **Annexure-I**.

In addition to the replies to the queries of the bidders, TEC and Pre-Bid Committee on detailed deliberation suggested some amendment to the original tender requirement. These amendments are incorporated in **Annexure-II** and are available with this minutes.

The major change requests, clarifications agreed/recommended by the committee are as follows:

(1) **Submission of Bids:** Upon request from various bidders, the last date for submission of bids has been extended by three weeks from the publication of **final minutes** of Pre-Bid Meeting.
(2) Corrigendum relating to the final Pre-Bid Minutes and extension of bid submission period may be given wide publicity as it was given for the original tender notice.

Meeting ended with thanks to chair.

Annexure-I

Response to Pre-Bid queries to Tender for C-band Dual Polarized Doppler Weather Radar System Qty – 01 Set (PS/125/18/2018)

M/s. Astra Microwave Products Ltd				
Sr. No.	**TENDER Ref. No.**	**TENDER Description**	**Query**	**Response**
1	2.13	VSWR: 1.25:1	Please clarify the condition	VSWR is voltage standing wave ratio. Condition of TENDER (VSWR: 1.25:1) has to be met at Dual Directional Coupler point
2	2.22	Polarization: Horizontal and Vertical with simultaneous transmit and simultaneous receive mode and alternate mode.	Please clarify	In polarization configuration, we require two modes of transmission. One in LDR mode (H transmit and H & V receive). In second mode (STAR), simultaneous transmit and receive for dual-polarimetric measurements.
3	2.26	Radome: Transmission Loss: Two Way ≤ 0.2 dB.	Radome: Transmission Loss: Two Way ≤ 0.2 dB. This may be relax to one way 0.2 dB	**Changed to:** Radome Transmission Loss: two-way ≤0.4 dB
4	2.34	Minimum Discernible Signal: - 112 dBm or better for single pulse.	Please specify the bandwidth / pulse width.	1 micro second
5	2.45	Spares/Tools/Eqpt: Test equipment may be specified with model nos and make so that all vendors are at the	Whether L1 is decided on this price, please clarify.	List of the test equipment's is now included in the deliverables. Yes, the test equipment's cost

		common platform. These items are missing in the deliverables format.		will be considered for L1.
6	4.1a Digital data	System should be capable of archiving of raw data (I & Q) and generating Polarimetric Doppler Weather Radar Base data and products in BUFR, NETCDF, GRIB2, HDF5, KML, KMZ formats and NEXRAD-Level II formats.	GRIB2 data format to be provided by IITM, please confirm	GRIB2 data format is not required.
7	4.1b	Stand-alone BUFR, NETCDF, HDF5, GRIB2, NexRAD-Level II encoding and decoding software on Licensed Linux/MSWINDOWS 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.	GRIB2 data format to be provided by IITM, please confirm	GRIB2 data format is not required.
8	4.1e	The successful bidder shall provide all technical support during the concurrency of this contract as per IITM requirement for ingest of base product to an independent weather radar data analysis software which IITM may develop in future.	Please clarify	This requirement is removed.
9	4.1g	The successful bidder shall provide Raw Data	Exact ASCII string format to be	IITM will provide the

		format as well as products conversion to ASCII.	provided by IITM upon contract award., please confirm.	ASCII string format.
		M/s. Bharat Electronics Limited		
Sr. No.	**TENDER Ref. No.**	**TENDER Description**	**Query**	**Response**
1	Appendix-1 1(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	Please clarify "both types of transmitters"	The word "both types of transmitters" is removed. Klystron transmitter is required.
2	2.5	Detection capability 3dBZ or better at 100 km range with 1 microsec pulse width and 3RPM operation	Indicates detection at 0dB SNR. Specification may please be revised to 6dBZ@100km, which corresponds to 13dBz at 250km (std spec)	No Change. As per TENDER.
3	2.6	Receiver sensitivity for single pulse -112 dBm or better for 1 micro sec pulse width	Requirement close to theoretical calculation of 0 dB SNR, considering NF of 2 dB. Considering the Tx/Rx losses for this configuration, it is preferable to have atleast 1 dB SNR. Revision requested	No Change. As per TENDER.

			for -110 dBm for 1 micro sec PW (SNR=1 dB, NF=3dB)	
4	2.7	Polarization Horizontal and Vertical with simultaneous transmit and receive mode and alternate mode	Please explain "alternate mode"	In polarization configuration, we required two modes of transmission. One in LDR mode (H transmit and H & V receive). In second mode (STAR), simultaneous transmit and receive for dual-polarimetric measurements.
5	2.26	Radome: Transmission Loss: two-way≤0.2 dB	Globally available Radome offers insertion loss of 0.2 dB min one way. Revision requested for 0.4 dB two way.	**Changed to:** Radome Transmission Loss: two-way ≤0.4 dB
6	2.32	Noise Figure: 2 dB or less	Considering the components available at C Band frequency, Revision in Noise Figure specification to 3.0 dB is requested.	No Change. As per TENDER.
7	2.34	Minimum Discernable Signal -112 dBm or better for single pulse	Revision to -100 dBm for 1 micro sec. as indicated in sl no. 2.0 requested.	No Change. As per TENDER.
8	2.41	Power: Capable of operating at 220 ± 10% V, 50 ± 2% Hz, in Single phase and or 400 V ± 10% V, 50 ± 2%Hz in	It is preferable that high power systems operate on 3-phase, since balancing in three phase is	**Changed to:** Power: Capable of operating at 220 ± 10% V, 50 ± 2% Hz, in Single phase or 400 V ± 10% V,

		Three phase.	required for the high current systems. 400V / 3-phase is better option. Confirmation required.	50 ± 2%Hz in Three phase.
9	2.45 (h)	Spares, Tools, and Test Equipments : Signal generator with narrow pulse modulation facility upto X band – Rhode & Schwarz/Keysight for C band operation and measurements (Bench mode) or similar	For C band operation 6 GHz Signal Generator will suffice. Confirmation may be provided for 6 GHz Signal Generator.	**Changed to:** Signal generator with narrow pulse modulation facility for C band operation and measurements – Rhode & Schwarz (Bench mode) or equivalent make.
10	5(e)	Setup of communication channels	Please explain	IITM will arrange suitable network link through a ISP. The supplier may specify the bandwidth requirement. The internal components in Radar site and Control center its configuration is to be provided by supplier.
11	5(m)	Automatic transmission of warnings (visual and text) to users via communication channels.	Please explain	The radar application software should have provision to issue automatic warnings alert to user would be according to Warning and forecasting products listed in 5.3.4a
12	5(o)	Simultaneous display of data having more than one parameter.	Please explain	Provision to map more than one products or variables in different windows.

13	5.3.2(m)	Google Earth integration of gridded rainfall products.	Explanation requested	Provision to generate and display the Gridded rainfall at desirable vertical level and overlay on the Google Earth. The supplier will have to provide license for the Google Earth.
14	5.3.2(n)	Provision for generation of composite maps of rainfall.	Rainfall related products are SRI, RIH, RFA,PAC, etc., Please indicate the product for which composite is required to be generated.	Provision to estimate rainfall intensity and accumulation at different time scales (e.g., hourly, daily, weekly and monthly).
15	5.1(a)	Base Products The un-filtered I & Q data archival and playback facility to generate base products.	Please confirm that " unfiltered I/Q data" only to be provided.	**Changed to:** Base Products The I & Q data archival and playback facility to generate base products.
16	7	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 commanded and control centre shall be provided by the supplier. Necessary interface shall be provided for sending	The following queries may be answered, 1. Location of state server? 2. Function of state server may please be explained? 3. Underlined statement indicates the requirement of Hardware & Software at state center and control center (IITM, Pune). The list of	Changed to: 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 central server System at IITM, Pune. The internet connectivity will be provided by IITM. Necessary interface shall be provided for sending radar data through internet. The central server at IITM should

		radar data therough 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.	deliverables as per ANNEXURE -1 does not reflect this requirement. Please clarify.	able to monitor and control the functions of the radar. Data from radar will be utilized for near real time display facility (at IITM server) for monitoring the health parameters as well as the weather data acquired by radar in operational mode. The communication link will be provided by IITM. The supplier shall specify the bandwidth requirement.
17	Deliverables as per Annexure - 1 SI. No:7	Any other units/sub units/itmes not listed above, but required for functioning of DWR shall also be included.	Required to include 1 set of networking component and Work station/ Server for remote operation of the Radar and display of Data Products with GIS at IITM Confirmation required.	The requirement of radar application and operating software (one set) is now changed two sets, which will be installed at the servers (one radar site and other at IITM).
18	1(d)	Suitable 3-phase voltage stabilizer with 30 KVA diesel Generator (DG) with Auto ON & OFF facility along with at least 100 L capacity fuel tank. The DG would take up the load of all the essential components.	Considering the full system power requirement, the DG power id required at 35 KVA. Request to update TENDER specification	No Change. As per TENDER.
19	2.43	At least 30 KVA Suitable Diesel Generator Set	Considering the full system power	No Change.

		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.	requirement, the DG power is required as 35 KVA. Request to update TENDER specification	As per TENDER.
20	1(e)	Suitable 15 KVA online UPS along with batteries for at least 30 Minutes power back-up.	Considering the full system power requirement, the UPS power is required as 25KVA. Request to update TENDER specification	No Change. As per TENDER.
21	2.44	Appropriate enclosure to shelter all the equipment and sitting place for two duty officer with necessary provisions for power and cooling. The DG set should be silent with a separate canopy operatable in all weather conditions.	Should the enclosure/shelter accommodate UPS & battery Bank. Confirmation required.	Yes, the enclosure/shelter will have to accommodate UPS and battery Bank also.
22	2.40(a)	Two workstations in active-active configuration of latest suitable computer configuration of latest suitable computer configuration at the time of delivery in terms of mother board chipset, Processor, processor	Please explain active-active configuration	**Changed to:** Two workstations (one at radar site and other at IITM, Pune) of latest suitable configuration at the time of delivery in terms of mother board chipset, Processor, processor speed, RAM

		speed, RAM size and speed, Ethernet speed/usb speed,VGA/DVI card memory and hard disk storage with 32” (inches) Full HD resolution, color LED monitor. Both Workstations shall be used for operations, control of radar; product generation and display of the data and shall have Raid Storage of the data to avoid any loss of data.		size and speed, Ethernet speed/usb speed,VGA/DVI card memory and hard disk storage with 32” (inches) Full HD resolution, color LED monitor. Both Workstations shall be used for operations, control of radar; product generation and display of the data and shall have Raid Storage of the data to avoid any loss of data.
23	2.40(f)	Provision for recording and playback of offline data as well as storage of I&Q data.	Please clarify if the I/Q data needs to be recorded into NAS server.	Provision for recording and playback of I&Q data (typical ~5 min).

M/s. Mahindra TELEPHONICS

Sr. No.	**TENDER Ref. No.**	**TENDER Description**	**Query**	**Response**
1	Appendix-1 Overall System requirement 2.7	Polarization – Horizontal and Vertical with Simultaneous transmit and receive mode and alternate mode	Please clarify if the "Alternate" mode indicates the LDR mode or alternate transmission mode.	In polarization configuration, we required two modes of transmission. One in LDR mode (H transmit and H & V receive). In second mode (STAR), simultaneous transmit and receive for dual-polarimetric measurements.
2	2.14	System Phase stability – 0.1 degree	0.1 degree phase stability requires clutter suppression of 55 dB or better. Is it possible to reduce the requirement to	No Change. As per Tender.

			0.2 degree phase stability, which only requires 50dB clutter suppression?	
3	2.22	Polarization – Horizontal and Vertical with Simultaneous transmit and simultaneous receive mode and alternate mode	Please clarify what "Alternate" mode is.	In polarization configuration, we required two modes of transmission. One in LDR mode (H transmit and H & V receive). In second mode (STAR), simultaneous transmit and receive for dual-polarimetric measurements.
4	2.40	Computer/ Workstation/ Software/ Data storage k) Provision for TITAN interface, Lightning Location Network Data Overlay and any other external data overlay.	Lightning data overlay – Supported format is ASCII CSV, please verify. Sample files must be provided. Can the "other external data overlay" be individually identified? Once identified, we can then verify supported formats.	The sample data (e.g., LLN in ASCII format) will be provided by IITM. The provision for other external data overlay (e.g., satellite) is desirable.
5	4.1 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, HDF5, KML, KMZ formats and NEXRAD-Level II formats.	GRIB2 is not a recognized standard for exchange of radar data (mainly for NWP data). Please verify if ALL formats are required OR as normally, widely supported in international standards such as ODIM HDF5 and NetCDF CF/Radial.	Other than GRIB2 data format, all other data formats mentioned herein are required.

6	4.1 b)	System should have 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.	Please verify a stand-alone converter, like RadxConvert from NCAR/UCAR (related to TITAN/LROSE) is a viable solution.	Supplier is of liberty to use any third party ware, provided all terms and condition related to third party ware is met, and periodic Upgradation and support licensing, etc caters throughout the life time of the system.
7	4.1 f)	Data format if proprietary should be disclosed at byte level with software codes.	Question – Can a conversion utility to/from internationally recognized standard formats, along with an API that will permit the customer to access all details of the internal data structures, be used for proprietary data formats?	No Change. As per TENDER. If Data format is proprietary needs to be disclosed at byte level.
8	5.3.4.f	TITAN software running in real time should be available with appropriate data intake.	Can TITAN/LROSE be installed on a separate host that is accessible on the local network?	No Change. As per TENDER
9	14 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	Data formats and network protocol formats change from version to version. Is it possible to provide an API that will remain consistent between SW	No Change. As per TENDER. Whenever supplier upgrades the format he has to indicate appropriately prior with

		clarifications should also be supplied with relevant documentation during the period of warranty and CAMC thereof.	versions?	proposed changes documented and on mutual consent the changes can be incorporated.
M/s. Microcomm India Ltd				
Sr. No.	**TENDER Ref. No.**	**TENDER Description**	**Query**	**Response**
1	Page 34, Para 4.2	Specifications and allied technical details	Please specify exact Spares required.	IITM has asked for the CAMC, the supplier will have to ensure the replacement of radar Spares in case of any hardware failure.
2			Since IITM has asked for CMC and the same includes Spares to be supplied by the vendor, please confirm that Spares are still a mandatory requirement.	IITM has asked for the CAMC, the supplier will have to ensure the replacement of radar Spares in case of any hardware failure.
3			Will cost of Spares be included in determining the L1 vendor?	L1 will be decided on the basis of total cost including cost of all the deliverables as per tender document which includes CAMC as well.
4	Page 36, Para 4.5 :	Incidental Services	Request time to attend in case of failure be increased to 4 days instead of 24 hours.	**Changed to:** Down-time call attendance (offline/online) should be within 48 hrs in the

				working day
5	Page 65 :	Appendix-1	Is the Shelter required for housing Diesel Generator, Fuel tank, UPS, Networking hardware etc. included in the deliverables?	Yes, the standard sea container is required. And, it will be included in the deliverables. Sea container to house UPS, Networking hardware's and AC etc.
6	Page 73 :	Networking and Communication System	Please specify the details of the Communication link that will be provided by IITM?	IITM will arrange suitable network link through a ISP. The supplier may specify the bandwidth requirement. The internal components in Radar site and Control center configuration is to be provided by supplier.
7	Page 76, Para 14 :	Documentation	It is not possible to give each and every part used in the system. Request please delete this clause.	No Change. As per TENDER
8	Page 34, Para 4.3		Will IITM follow an Acceptance Test Procedure for inspection and acceptance of goods?	No change, as per Tender
9	Page 36, Para 4.5		The warranty can be given for the system in full and not individually on parts for costing purposes. Request 3 year warranty on full system including all	The warranty is required for the System in full (including all parts).

			parts be accepted.	
10	Q9. Page 75, Para h)		The penalty Clause is very harsh. Request penalty may be changed to 0.2% of the equipment cost per week subject to a maximum ceiling of 5%.	No change, as per Tender
11	Page 79, para 7		Clause regarding downtime penalty in CAMC may be changed to 0.2% per week with a ceiling of maximum 5%.	No change, as per Tender

M/s. Polar Technologies (India)

Sr. No.	**TENDER Ref. No.**	**TENDER Description**	**Query**	**Response**
1	2.26	Radome: (2) Transmission Loss: two-way ≤ 0.2 dB	Please change to: Transmission Losses – one-way, dry surface 0.2dB	**Changed to:** Radome Transmission Loss: two-way ≤0.4 dB
2	2.32	Noise figure: 2 dB or less	Please change to: The noise figure of the total receiver including the digital section is < 2dB	No Change. As per TENDER
3	Appendix-1 (page No-67/2. OVERALL SYSTEM REQUIREMENTS:/2.26	(2) Transmission Loss: two-way ≤ 0.2 dB	Please change to: Transmission Losses – one-way, dry surface 0.2dB	**Changed to:** Radome Transmission Loss: two-way ≤0.4 dB

	Radome)			
4	Appendix-1 (page No-68/2. OVERALL SYSTEM REQUIREMENTS:/2.32)	Noise figure: 2 dB or less	Please change to: The noise figure of the total receiver including the digital section is < 2dB	No Change. As per TENDER
5		The Final Destination is: Silkheda, Sehore District (40 km from Bhopal, MP)	Require exact site location in Silkheda, Sehore District for site survey, Electricity, water, Soil testing and also to ensure road connectivity for tower and RADAR installation.	The information on the exact site location in Silkheda and logistics will be provided subsequently.
6			Can the Indian bidder quote on behalf of foreign OEM on high sea basis?	Yes subject to fulfilment of authorization from OEM.
7	Page-10/1.15.7.	Bid security /EMD is mandatory requirement and exemption is applicable to the firms registered with NSIC/MSME only or the manufacturer of the tendered goods and not for selling products manufacture by other companies.	If Indian bidder has only MSME certificate, are they exempted from EMD?	EMD is exempted for MSEs (Micro & Small Enterprises) with valid MSME / NSIC Certificate mentioning the status and name of item in the certificate for which the bidder is intended to bid.
8	Page No-26/ 2.21.	Terms of payment	In case of Indian authorized representative	Please refer the GCC Clause No. 2.21.1 available on page no. 31

			bidding on behalf of OEM, will the payment for the foreign exchange component be paid directly to the OEM?	under Special Conditions of Contract of the tender document.
9	Page no-8/1.11.8.	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. Understanding is that IITM would transport the equipment from the port (CIP) to site destination. Therefore the bidder should not calculate the price bid? 2. Any delay of arising from the delivery of goods by IITM from the foreign port to the site in India for installation beyond two months of dispatch should enable the successful bidder to receive the balance 30%.	1. Yes, as per Tender 2. Please refer the GCC Clause No. 2.21.1 A (b) available on page no. 31 under Special Conditions of Contract of the tender document.
10	Page No-31/GCC 2.21.1 A .	On Shipment: Sixty (60%) percent of the Contract Price of the Goods shipped shall be paid through irrevocable letter of credit opened in favor of the Supplier in a bank in its country, upon submission of documents specified in GCC Clause 2.15. Successful bidder / supplier must have to submit the detailed FAT report before shipment	Any delay of arising from the delivery of goods by IITM from the foreign port to the site in India for installation beyond two months of dispatch should enable the successful bidder to receive the balance 30%.	Please refer the GCC Clause No. 2.21.1 A (a &b) available on page no. 31 under Special Conditions of Contract of the tender document.

		of the goods to the buyer.		
M/s. Data Patterns				
Sr. No.	**TENDER Ref. No.**	**TENDER Description**	**Query**	**Response**
1	Page 69, Para 2.45	Spares, Tools and Test Equipment's	Requesting to provide Make with Model number of test equipment's mentioned in points F to J	List of the test equipment's is now included in the deliverables.
2	Page 69, Para 2.44	Enclosures	Kindly provide the dimension of enclosure and its type with Cooling mechanism and its quantity, same also reflect in Price bid also.	The standard sea container is required with AC cooling system. And, it will be included in the deliverables.
3		Tender Submission Date	Requesting to extend the tender submission date by 4 weeks extra (i.e Upto 28th Feb, 2019)	As per Pre-bid minutes
4		MSTC E-Commerce Event Transaction Fee	Requesting to exempt Transaction fee (i.e. INR 17,700) for Indian Bidders or allow them to submit techno-commercial proposal through CPPP portal/Website without any cost.	Not accepted

5	Page No. 8, Para 1.11.7	Custom Duty	a. Is 100% CDEC will be provided by the IITM, Pune b. Will Custom duty will be given to Indian Manufactures for import components/Sub-modules/LRUs etc.	a) As per Tender b) CDEC will be issued to Indian bidders willing to enter into High Sea Sales Agreement only for goods being imported.
6	Page 10, Para 1.15.7	EMD Exemption	a. Will EMD exempted for Medium Enterprises/Firms registered with MSME under MoMSME? b. Please clarify, about EMD exemption clause for Indian Agents/Distributor of foreign OEMS, if any.	a) EMD is exempted for MSEs (Micro & Small Enterprises) with valid MSME / NSIC Certificate mentioning the status and name of item in the certificate for which the bidder is intended to bid. b) As per Tender
7		CAMC	Kindly provide Discounted Rate in percentage to calculate Net Present Value (NPV) for 7 year CAMC during L1 calculation process	No change, as per Tender

Annexure-II

Amendments made to Tender for C-band Dual Polarized Doppler Weather Radar System Qty – 01 Set (PS/125/18/2018)

Owing to the prevailing technology, market availability and based on the pre-bid requests & survey, the following amendments to the C-band Radar Tender (vide PS/125/18/2018) are made by the committee. Note that the other terms and conditions of the Tender would remain same.

Page 36, CHAPTER-4

a. **4.5 : Incidental Services:** Down-time call attendance (offline/online) should be within 48 hrs in the working day

Page 37, CHAPTER-5

a. **4(b) Experience and technical Capacity:** The bidder (OEM/Direct Distributor/Dealer) should have supplied and installed during past 5 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 5 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.

Page 65, APPENDIX-1

a. **General 1(h):** The option of user selectable Single polarization mode of radar operation is not required. Dual polarization mode of operation is only required.
b. **General 1(o):** Only Klystron transmitter is required.

Page 66, APPENDIX-1: 2 OVERALL SYSTEMS REQUIREMENTS

a. **2.7/2.22 Polarization:** In polarization configuration, we require two modes of transmission. One in LDR mode (H transmit and H & V receive). In second mode (STAR), simultaneous transmit and receive for dual-polarimetric measurements.
b. **2.26 Radome:** Transmission Loss: two-way ≤0.4 dB
c. **2.34 Minimum Discernible Signal:** - 112 dBm or better for single pulse of 1 micro second
d. **2.40 Computer/Workstation/Software/Data Storage:** 2.40a. Two workstations (one at radar site and other at IITM, Pune) of latest suitable configuration at the time of delivery in terms of mother board chipset, Processor, processor speed, RAM size and speed, Ethernet speed/usb speed,VGA/DVI card memory and hard disk storage with 32" (inches) Full HD resolution, color LED monitor. Both Workstations shall be used for operations, control of radar; product generation and display of the data and shall have Raid Storage of the data to avoid any loss of data.
e. **2.41 Power:** Capable of operating at 220 ± 10% V, 50 ± 2% Hz, in Single phase or 400 V ± 10% V, 50 ± 2%Hz in Three phase.
f. **2.44 Enclosure:** Appropriate enclosure to shelter all the equipment's (UPS, AC and battery Bank etc) and sitting place for two duty officer with necessary provisions for power and cooling. The DG set should be silent with a separate canopy operatable in all weather conditions.
g. **2.45 Spares, Tools, and Test Equipment's:**

Lists of Test Equipments

Sr. No.	Equipment	Make	Model
1	Oscilloscope	Rohde & Schwarz	R&S®RTB2000 Bandwidth 70 MHz to300MHz Sample rate: up to 2.5 Gsample/s
2	Handheld Spectrum analyzer	Rohde & Schwarz	R&S® FSH8 model-28 Frequency range- 9 kHz to 8 GHz
3	Peak Power meter	Rohde & Schwarz	R&S®NRP2 Power Meter Level range: -67 dBm to +45 dBm Frequency range: DC to 110 GHz
4	Peak Power sensor	Rohde & Schwarz	R&S®NRP-Z211 Two-Path diode power sensor Measurement range: -60 dBm to +20 dBm Frequency range: 10 MHz to 8 GHz
5	Vector signal generator	Rohde & Schwarz	R&S®SMW200A Variant- R&S®SMW-B112 Frequency range- 100 kHz to 12.75 GHz
6	Digital Multi-meter	Fluke	Fluke 289 (with Industrial Test Lead)

Page 70, APPENDIX-1: 4. DATA FORMATS

a. **4.1a Digital data:** GRIB2 data format is not required.
b. **4.1b Digital data:** GRIB2 data format is not required.
c. **4.1e Digital data:** This requirement is removed.

Page 70, APPENDIX-1: 5. PRODUCT GENERATION

a. **5(o):** Provision to map more than one products or variables in different windows.
b. **5.1(a) Base Products:** The I & Q data archival and playback facility to generate base products.

Page 73, APPENDIX-1: 7. PROVISION FOR NETWORKING & COMMUNICATION SYSTEM FOR DATA TRANSFER TO CENTRAL LOCATION

a. 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 central server System at IITM, Pune. The internet connectivity will be provided by IITM. Necessary interface shall be provided for sending radar data through internet. The central server at IITM should able to monitor and control the functions of the radar. Data from radar will be utilized for near real time display facility (at IITM server) for monitoring the health parameters as well as the weather data acquired by radar in operational mode. The communication link will be provided by IITM. The supplier shall specify the bandwidth requirement.

Page 77, APPENDIX-1: 17. VENDOR QUALIFICATION CRITERIA

17a. The supplier must have manufactured, tested & supplied at least TWO similar equipments/systems as mentioned in Chapter-4 during the past 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.