

**Pre-bid Meeting dated 14.01.2019 for procurement of
11 numbers C-band Dual Pol.Doppler Weather Radars**
(Reference: Tender No CPU/53/1218/1525)

M/s LEONARDO Germany GmbH

**CHAPTER-1
INSTRUCTIONS TO BIDDERS (ITB)**

RFP Reference	Query/clarification of the firm	Reply/ IMD Comment
Page 6 3. Eligible Goods and Services: All goods and related services are to be supplied by the Indian Equipment Manufacturing Firms or the System Integrator companies based in India.	Why is not a global tender for international brands to get the best possible solution?	As per the policy of IMD & decision of the competent authority.
4. Suppliers of Imported Stores: Firms having regular arrangement with a particular foreign manufacturer for supply of equipment and who adapt/ tropicalize the equipment to suit Indian conditions and can prove the performance of the same at their premises in India shall also be considered as suppliers.	Does it mean that if no adaptation is needed/required for our equipment, we could directly deliver the good to the sites after successful FAT?	No change. To be followed as per TENDER
Page 9 J. IMD being a scientific department may provide custom duty exemption certificate for the items being imported for this tender. However IMD shall not be responsible for custom clearance. Prices quoted by the bidder shall remain firm and fixed during the period of the contract.	This also could mean that the exemption certificate could not be issued for any reason, and the supplier needs to calculate this risk in the price? Can two Indian companies bid with the same principle/ brand? and once the lowest bidder wins the order it can change the brand of equipment?	If Customs Duty Exemption is not provided, in such a case the custom duty charges will be reimbursed by IMD. More than one Indian company may bid with the same principle/ brand/ OEM. The brand of equipment cannot be changed after submission of bid(s).
Page 10	Should the customs duty be deducted from the price	As per TENDER.

<p>(C) Financial evaluation: The purchaser shall evaluate the technically qualified financial bids for deciding lowest bidder (L- I) on the basis of landing costs of the store including all applicable taxes/levies/duties etc.</p>	<p>evaluation, as IMD would issue the exemption certificate?</p>	
<p>CHAPTER-2 Conditions of Contract (CoC)</p>		
<p>RFP Reference</p>	<p>Query/clarification of the firm</p>	<p>Reply/ IMD Comment</p>
<p>Page 12 5. Price preference: Price preference shall be given to Micro and Small Industries registered as manufacturers for stores and services specified in this tender document with National Small Industries Corporation or any other government agencies as per the latest guidelines/orders from Government of India.</p>	<p>How much percent price preference</p>	<p>As per GFR 2017. MSME website may be visited.</p>
<p>page 17 17. Award Criteria and Tolerance Clause: The purchaser reserves the right to increase or decrease the quantity of required goods up to plus minus twenty five percent (+/- 25%) till the placement of supply order without any change in the terms & conditions and prices quoted by the bidder. b. Based on the purchaser's requirement, a repeat order may also be placed upto 06 years at the same price and with the same terms & conditions. These conditions are applicable for both the cases- Klystron and SSPA DWRs.</p>	<p>How can the prices be stable for next 6 years?</p>	<p>Within one Year after the installation and commissioning of first radar.</p>
<p>Page 18 20. Terms and Mode of Payment: c. If required, the payment for the foreign segment in favour of the foreign supplier shall be made through IRREVOCABLE LC Letter of Credit (LC) shall be established for a specific period depending on delivery schedule only after receipt of unconditional acceptance of</p>	<p>Can the FAT be considered at foreign factory for payment, if no adaption is needed?</p>	<p>FAT will be in India only. LC will be opened by the firm and the payment will be reimbursed by IMD.</p>

<p>supply/purchase order and performance security from the supplier. LC extension charges shall be borne by the supplier in case of extension of delivery period requested by the supplier and request agreed by the purchaser. 50% payment of the LC will be done after factory acceptance test (FAT) in India, 20% after complete installation and balance 30% on successful commissioning and acceptance of the system at site including the period of endurance test at individual sites.</p>		
<p>d. Payment towards Comprehensive Annual Maintenance Contract Charges shall be made as per "TENDER DOCUMENT - List of requirements/ technical specifications" section. The consignee will enter into CAMC if required with the supplier at the rates as stipulated in the contract after expiry of warranty period. The payment of CAMC will be made after satisfactory completion of said period as per TENDER DOCUMENT terms and duly certified by the consignee. The consignee shall deal this issue separately and directly.</p>	<p>If the CAMC is not part of the order from the beginning, then why considering it for the price evaluation?</p>	<p>As per TENDER</p>
<p>Page 22 27. Vendor Qualification Criteria: (a) The supplier must have manufactured, tested & supplied at least one Doppler radar during the last 5 years, and the system should be in successful operation as on date of opening of bid.</p>	<p>Please request for companies experience with Dual Pol. Doppler Weather Radar C band in the tender. Which is equivalent to your scope needed.</p>	<p>As per TENDER</p>
<p>CHAPTER-3 Special Conditions of Contract (SCC)</p>		
<p>RFP Reference</p>	<p>Query/clarification of the firm</p>	<p>Reply/ IMD Comment</p>

Page 23 Special Conditions of Contract (SCC) 2. The experience of the foreign principal will also be accepted for eligibility criteria.	Can two Indian companies bid with the same principle/ brand? and once the lowest bidder wins the order it can change the brand of equipment?	More than one Indian company may bid with the same principle/ brand/ OEM. The brand of equipment cannot be changed after submission of bid(s).
5. The firm shall have the manufacturing facilities in India, these facilities will be inspected by officials of IMD and ISRO team before awarding of supply order.	What is definition of manufacturing facilities in India? In What detail should it be, only Assembly line?	Facility for system integration and testing in India.
Page 28: Points 2.24 and 2.25	Points 2.24 and 2.25 could be a typo error, as you request different values for the Klystron and Solid state system.	Transmission loss 0.2 dB or better for both Klystron based and SSPA based radar systems Wind load upto 130 Kmph and in gusting condition upto 200Kmph for both Klystron based and SSPA based radar systems
Page 31: 2.9 Frequency Range 5.4 GHz – 5.7 GHz	This is normally the frequency range for Magnetron system, we recommend to change it to 5.6 – 5.65 GHz, as you need a Klystron system.	Frequency Range 5.6 GHz – 5.65 GHz is agreed for both Klystron and SSPA systems

M/S Polar Technologies India

CHAPTER-1 INSTRUCTIONS TO BIDDERS (ITB)

RFP Reference	Query/clarification of the firm	Reply/ IMD Comment
Page No-7. Documents Comprising the Tender: (A) Techno - Commercial Tender (Un-priced Tender): F. It is compulsory for manufacturing firms in India to quote in Indian currency, however, suppliers and integrators can quote partly in foreign currency for imported segment and partly in Indian currency for indigenous segment of equipments. They are required to submit a list of the items being imported along with the	F. For Integrator, 90% of payment should be released on imported goods on proof of dispatched documents from the country of origin. It is because foreign OEM will not supply without receiving part payment. Undertaking of satisfactory performance to be made compulsory for foreign items, to be submitted for part payment process.	As per TENDER

<p>technical bid and have to produce documentary proof of import and certificate of origin at the time of supply. Joint inspection of the imported material will be done at the time of opening of the import consignment and JRI (as per format at Annexure V) will be signed by both the purchaser and the bidder. Use of the items mentioned in JRI will be verified later at the time of commissioning. However IMD will not make payment for the foreign components till the delivery of the complete radar system at site.</p>		
<p>Page No-8: (B) The following documents are to be furnished by the bidder along with Price Bid J. IMD being a scientific department may provide custom duty exemption for the items being imported for this tender. However IMD shall not be responsible for custom clearance. Prices quoted by the bidder shall remain firm and fixed during the period of the contract.</p>	<p>J. Custom duty exemption certificate should be provided by IMD for Indian integrator. Even in the case of IITM tender the custom duty is only 5% along with the exemption certificate. Therefore if the foreign equipment is directly consigned to IMD then the custom duty will be just 5% and no locking of funds will be there for either side.</p>	<p>As per TENDER</p>
<p>Page No-11: 15. Inspection, Testing and Factory acceptance test(FAT) Purchaser may not undertake any Pre dispatch inspection, unless mentioned, for imported stores in the suppliers country of origin and the equipment will be sent to the purchaser on the basis of suppliers own inspection at the premises and guarantee and warranty. The equipment will be accepted subject to final inspection and test on commissioning and before handing over the equipment to consignee at the site.</p>	<p>If imported stores from supplier country of origin shall be provided by integrator, then IMD should undertake any pre dispatch inspection at foreign OEM's factory or final inspection and testing on commissioning should be performed at site before final Site Acceptance. This is because the goods being imported will be very worthy packed for the final destination and may get damage if we will open at another location. The final inspection can be easily carried out at site location.</p>	<p>As per TENDER</p>
<p>CHAPTER-2 Conditions of Contract (CoC)</p>		
<p>RFP Reference</p>	<p>Query/clarification of the firm</p>	<p>Reply/ IMD Comment</p>
<p>Page No 13 6. Eligibility & Qualification criterion for Bidders: Firms in given below category are eligible to participate</p>	<p>What is meant by registration of the firm with the Government body ?</p>	<p>As per TENDER</p>

<p>in tender subject to registration of the firm with government bodies as per act /rules and also fulfilling of other specific qualification criteria, terms and conditions mentioned in technical requirement section and tender enquiry document.</p>		
<p>Page No-13: a) Indian Original Equipment Manufacturer (IOEM).</p>	<p>As it is not clear to assume that Indian OEM will be considered for technical bidding, if OEM have not supplied/installed a single Doppler weather Radar of frequency 5.6 GHz in past. All the tenders by government agency prerequisite for the bidder to have manufactured identical model of configuration or similar technical requirement of RFP, which should be working satisfactory. Qualification of OEM or integrator should be considered on the basis of exactly similar model of same frequency of C band RADAR system having been supplied and working satisfactory in past three/Five years. It should not be limited to just only Doppler weather radar because there are vast differences in specification and configuration of various frequencies of RADAR.</p>	<p>As per TENDER</p>
<p>Page No-13: b) Integrator companies / suppliers in India having full back to back maintenance support agreement for hardware & software with OEM. In this case the bidder shall have to submit authorization certificate from OEM, that they will provide inventory of requisite spares, accessories and service support after sale. Copy of agreement, with their foreign principal with the precise relationship between them, their mutual interest and nature of services which would be available from bidding firm from India, shall be submitted along with their tender. Strategy/ evidence of foreign principal agreed to provide spares and technical support after sale</p>	<p>The present bidder qualification criteria is not correct as the bidder should have supplied a proven C-Band Doppler weather radar of Frequency 5.6 GHz and the supplied Radar system should be satisfactorily working till date because the eligibility criteria of maintenance support is not enough for becoming an integrator. Therefore it should be joint bid between OEM and the integrator/maintenance support company, this is because in this case, OEM is not a part of contract or supply and tomorrow if they get acquired or merge with another organization then the bidder will no longer have any relevance. The maximum action against the bidder</p>	<p>As per TENDER</p>

<p>needs to be submitted and clearly specified.</p> <p>Firms having regular arrangement with a particular foreign manufacturer for supply of equipment and who adapt and tropical's the equipment to suit Indian conditions and can prove the performance of the same at their premises in India shall be eligible. They are required to produce documentary proof of import and certificate of origin at the time of supply. They are also required to have established facilities for after sales services for the equipment in India.</p> <p>The bidder should have turnover of 40 cores per annum, during last three years. The bidders should have earned profit for two years out of three years ending on 31st March, 2018. Turnover/ profit to be certified by authorized financial authority (CA). Documentary evidence for the same is to be submitted along with the technical bid. In case of Integrator companies in India the financial as well as technical eligibility of the parent company will be acceptable.</p> <p>Price may be quoted in Indian currency towards indigenously components supply, installation, commissioning, allied work and services and if required by the vendor the prices of foreign components will be paid in foreign currency. But this has to be clearly indicated in the technical as well as the financial bid. No change will be allowed after opening of the tenders. The complete name and address of the bidding firm in India and its permanent income tax account number (PAN) as allotted by the Indian Income Tax authority must be submitted.</p>	<p>will be the encashment of performance bank guarantee. These are long term project and certainly required tri-partite agreement, where OEM is also the part of agreement. We need IMD to consider this very important aspect. The equipment should meet the environmental standards of hostile conditions prevalent at the location since some of the locations are very remote.</p> <p>In case a company has an authorization from OEM but they have not developed any C Band klystron RADAR of Frequency 5.6 GHz then how they become qualified is not clear in guidelines of the tender because in this case undertaking from OEM and assembling indigenous component is not equivalent to having a proven system of specification being allowed.</p>	
<p>Page No-13</p> <p>7. Earnest Money Deposit (EMD): The bidder shall furnish along with its tender, earnest money for an amount as shown in the tender notice. The earnest money</p>	<p>OEM should be allowed to give the EMD and PBG:- The Indian integrator will be responsible for around 20% of complete requirement which includes all Indian component as well as installation,</p>	<p>As per TENDER</p>

<p>is required to protect the purchaser against the risk of the bidder's unwarranted conduct.</p> <p>The bidders who are registered as OEM on Tender submission date with Directorate General of Supplies & Disposals or with National Small Industries Corporation, New Delhi, shall be eligible for exemption from submission EMD. Micro and small Enterprises specified by Ministry of Micro, Small & Medium Enterprises (MoMSME) are exempted from earnest money deposit (EMD). The EMD shall be furnished in Fixed Deposit Receipt (FDR) or BankGuarantee (BG) (as per Annexure-III) from any commercial bank doing government business. FDR may be issued in the favor of "DDO, O/o DGM, IMD, New Delhi". Bank Guarantee issued from the foreign banks must be authenticated by STATE BANK OF INDIA or any other Nationalized Bank of India. The clause "encashment/ release of FDR/ BG requires clearance certificate from Purchaser i.e. DGM, IMD" must be mentioned in issued FDR/ BG by Bank. The earnest money shall be valid for period of sixty (60) days beyond the validity period of the tender.</p>	<p>commissioning of radars OEM will be responsible for providing the major components of around 80% which is RADARs. Therefore the OEM should be allowed to pay the EMD as they are the major component providers.</p> <p>Is foreign currency of EMD VALUE acceptable by IMD?</p>	
<p>Page No -14 10. Performance Security:</p>	<p>Will Performance Security of foreign currency be acceptable by IMD?</p>	<p>No</p>
<p>Page No-19: 20. Terms and Mode of Payment: Payment Terms: Payment, as per term mentioned below, shall be made subject to recoveries, if any, by way of liquidated damages /penalty clause /TDS or any other charges as per terms & conditions of contract if not specified elsewhere in the document. c. If required, the payment for the foreign segment in favor of the foreign supplier shall be made through IRREVOCABLE LC Letter of Credit (LC) shall be established for a specific period depending on delivery</p>	<p>For Integrator, 90% of payment should be released on imported goods on proof of dispatched documents from country of origin. It is because foreign OEM will not supply without receiving part payment. Undertaking of satisfactory performance to be make compulsory for foreign items, which should submit for part process payment.</p>	<p>As per TENDER</p>

<p>schedule only after receipt of unconditional acceptance of supply/ purchase order and performance security from the supplier. LC extension charges shall be borne by the supplier in case of extension of delivery period requested by the supplier and request agreed by the purchaser. 50% payment of the LC will be done after factory acceptance test (FAT) in India, 20% after complete installation and balance 30% on successful commissioning and acceptance of the system at site including the period of endurance test at individual sites.</p>		
<p>Page No-21 26. Terms & Conditions of Comprehensive Annual Maintenance Contract (CAMC): 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 0.5% 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.</p>	<p>7. Special clause should be added for Port Blair and Lakshadweep as these are remote location as compared to all other locations. Downtime should be double or near to two months as the communication process is a bit delayed than other site locations.</p> <p>8. Maximum uptime should be 93% for CAMC as practically it is difficult to achieve 95% after system depreciates.</p>	<p>Port Blair is well connected. Hence there may be no change in conditions of tender. However, for Lakshadweep, uptime is 93%</p>
<p>Page No 22: 27. Vendor Qualification Criteria:(a) The supplier must have manufactured, tested & supplied at least one Doppler radar during the last 5 years, and the system should be in successful operation as on date of opening of bid. The bidder shall submit a certificate from the user indicating the successful operation of the radar,</p>	<p>Why criteria is generalized ? As we are concerned that the criteria should be a reputed or proven identical C Band Weather RADAR system of klystron/solid state OEM or the clause should be the same as IITM RFP for C band RADAR qty-01 with Tender no:-PS/125/18/2018/CHAPTER 5/E.</p>	<p>As per TENDER</p>

<p>with contact details of user. In this regard, the required certificate as per Annexure XI furnished on the letter head by Head of the user Organization/ Department will be considered only.</p>	<p>Qualification Requirements/4) Experience and Technical Capacity:/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 (Clients certificate) in support of the satisfactory operation of the equipment / system." They should have credible Indian partner carrying on maintenance, service and storage of spares as well as assistance in installation and commissioning and contract should include the OEM to share the long term responsibilities. This is because till now there is no credible manufacturer of C Band Dual Polarization Klystron/Solid state Base RADAR in country.</p>	
<p>(b) The supplier shall submit a statement on his past experience in this field, with details of the type and locations of radars supplied.</p>	<p>IMD cannot consider a manufacture or integrator until and unless, they have assembled an identical C band Dual Polarization RADAR as per specification, which is supplied in the past and working satisfactorily.</p>	<p>As per TENDER</p>
<p>(c) Bidders who are system integrators and have recently established production line in India with transfer of technology for the product as specified in this TENDER DOCUMENT, can also be considered as meeting the criteria, provided, the parent company (principals) meets the above criteria in full and agrees to furnish either jointly with the bidder (Subsidiary) or separately a legally enforceable undertaking to guarantee quality, timely delivery, performance, warranty obligations and</p>	<p>Indian integrator should have supplied one C band Doppler weather RADAR , which is identical to the technical requirement for same configuration as IMD Tender and it should be a proven system that is in operation successfully till now.</p>	<p>As per TENDER</p>

maintenance services, as specified. Copy of the agreement with the principals to be provided along with technical bid.		
(d) Any Indian Manufacturer who satisfies all the technical requirements of the TENDER DOCUMENT shall be eligible provided that the technology adopted by them is based on R & D efforts as evinced by documentary proofs and presently engaged in radar manufacturing.	It should be an already manufactured solid/klystron based radar, because with just a R&D efforts or understanding from OEM will not augur for IMD in our opinion. In this prospective, R&D efforts should not be considered a proven and also it is definitely not comparable, if someone is building or developing the RADAR system and claims to have built C band radar.	As per TENDER
(e) The bidder should furnish the information on all past supplies and their satisfactory performance in the pro-forma under Annexure-VIII.	In case of integrator, Foreign OEM past experience should be considered.	As per TENDER Already specified under Point 27. Vendor Qualification Criteria:(c)
CHAPTER-3 Special Conditions of Contract (SCC)Page No-23:		
CHAPTER-4/SCHEDULE OF REQUIREMENTS AND SPECIFICATIONS & ALLIED TECHNICAL DETAILS/TABLE-1:		
Page No-27General:		
Page No-27 Antenna, Radome &Tower 2.16 Antenna Parabolic Dish Antenna	2.16. Antenna Reflector's aluminum ISO Standardization is not defined .	As per TENDER
Page No-30: 2.39 Peripherals: f) NAS storage with RAID with archival for 05 years of data. g) Provision for recording and playback of offline data as well as storage of I&Q data.	Refer to clause (f) and (g), are there requirement of two NAS ? Please describe the space of both the NAS.	As per requirement
Power Requirements		
Page No-31: .41 Online UPS Two UPS, in redundant mode and each capacity of 15 KVA on line UPS along with changeover facility for switching to standby UPS, to run the whole radar system for at least 60 minutes. Catering to required voltage stabilization with a power factor suitable for the system.	Will peripheral system depend on UPS backup during power cut?	Radar system including the computers required to operate it will be having the same UPS for back up power arrangement.
Page No-31: 2.43 Enclosure A double storey well-furnished porta cabin- size 20 X 20	20x20 feet of porta cabin size is for 400 sq feet ground space of total double storey enclosure. Need	As per TENDER

<p>feet is required to meet all operational requirements which includes operational room, Radar Officer room, UPS, stores, Kitchenette, Rest room, Washroom along with ACs, water cooler, RO, furniture and separate outside canopy housing for D.G. set etc. to make it convenient for operational staff to work round the clock as per Annexure-XII. The size of porta cabin may vary in size from location to location.</p>	<p>briefing regarding porta cabin size. Annexure-XII is not attached in published RFP.</p>	
<p>Page No-41 & 42: 8. INSTALLATION:</p>	<p>Water facility is also required from IMD for each location to check radome sealing at ground base and regular maintenance of earthing also.</p>	<p>As per TENDER</p>
<p>Page No-42: 9. LOCATION: The list of tentative sites for installation of 11 C-Band Dual Polarized Doppler Weather Radars are attached vide List-1 & List-2 at Annexure-IX.</p>	<p>2. Port Blair:- IMD office is situated down the hills and So actual radar site location is required for full 360 degree scanning and also for freight charges and installation costing. 4. Lakshadweep:- Particular Island location is required for freight charges and installation costing. Sambalpur location should not be consider for solid state radar and It should be Klystron . Because Sambalpur is near to costal area as compared to Raipur as per IMD prospective.</p>	<p>As per TENDER</p>
<p>Page No-43: 12. WARRANTY: i. During warranty period, the supplier is required to visit consignee's site at least once in four 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 at UAID, New Delhi along with satisfactory certification by the UAID (IMD).</p>	<p>i. calibration process should be done once/twice in a year.</p>	<p>As per TENDER</p>

M/sMicrocomm India Limited

CHAPTER-1 INSTRUCTIONS TO BIDDERS (ITB)

RFP Reference	Query/clarification of the firm	Reply/ IMD Comment
<p>Page 10 (C) FINANCIAL EVALUATION After Technical Evaluation, the Price Bids of only the technically qualified bidders shall be opened for further scrutiny and evaluation on a date notified after evaluation of the techno commercial tender. The purchaser shall evaluate the technically qualified financial bids for deciding lowest bidder (L- I) on the basis of landing costs of the store including all applicable taxes/levies/duties etc.</p>	Will the Customs Duty if paid be added in the Price of the bidder for determination of L1.	As per TENDER
<p>Page 9 (C) FINANCIAL EVALUATION For other duties and taxes like GST, exemption certificates may be provided by IMD, however if the same is not agreed to by any government agency, the amount will be reimbursed to the vendor on submission of original receipt.</p>	Will GST to be paid on the goods be included in the Price of the bidder for determination of L1.	As per TENDER

CHAPTER-2 Conditions of Contract (CoC)

RFP Reference	Query/clarification of the firm	Reply/ IMD Comment
<p>Page 21 Para 3: The CAMC will commence immediately after the expiry of the warranty period. The comprehensive service includes preventive and corrective maintenance and free</p>	Para 3 and Para 9 are contradictory. Please specify when CAMC will commence?	As per TENDER

replacement of all the defective parts/devices. The company should submit a detailed AMC plan including preventive maintenance schedule. Para 9: Date of commencement of Annual Maintenance Period of the individual radars shall be fixed by IMD.		
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CHAPTER-3 Special Conditions of Contract (SCC)

RFP Reference	Query/clarification of the firm	Reply/ IMD Comment
Page 23 The L1 bidder for the Klystron based Radar and SSPA based Radar shall be arrived at separately. Therefore, two purchase orders for each of these class of Radars viz: Klystron and SSPA shall be issued.	Do we have to submit two separate Price Bids, each complete in itself for Klystron based and SSPA based DWR's?	Yes

CHAPTER-4

**SCHEDULE OF REQUIREMENTS AND SPECIFICATIONS & ALLIED TECHNICAL DETAILS
C-BAND DUAL POLARIZED DOPPLER WEATHER RADAR SYSTEM SPECIFICATIONS**

RFP Reference	Query/clarification of the firm	Reply/ IMD Comment
Page 25 Para ix: Tower shall have electric lift reaches one floor below the antenna and radome.	Please specify the size and specifications of the electric lift required.	Industrial lift with the load capacity of 1500 Kgs.
Page 28 TABLE-1 2.24 Please specify different scan strategies required?	Please specify different scan strategies required?	As per TENDER

M/s Actech Information Systems Limited

NOTICE INVITING TENDER (NIT)

RFP Reference	Query/clarification of the firm	Reply/ IMD Comment
Page No. 01 Para 5 Earnest Money Deposit (EMD)	Does it means, in case of if prime bidder is	EMD in INR only

<p>Rs.2,00,00,000/- (Rupees Two Crore only) or equivalent Foreign Currency as on date (US Dollar/Euro) should be submitted by the bidder in the form of Bank Guarantee or FDR only.</p>	<p>Integrator company of OEM then EMD (Earnest Money Deposit) in equivalent foreign currency also will be acceptable? And same criteria will be applicable for performance security? Kindly Confirm.</p>	
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**CHAPTER-2
Conditions of Contract (CoC)**

RFP Reference	Query/clarification of the firm	Reply/ IMD Comment
<p>Page No. 13 Para 06. B. Eligibility & Qualification criterion for Bidders: The bidder should have turnover of 40 crores per annum, during last three years. The bidders should have earned profit for two years out of three years ending on 31st March, 2018. Turnover/ profit to be certified by authorized financial authority (CA). Documentary evidence for the same is to be submitted along with the technical bid. In case of Integrator companies in India the financial as well as technical eligibility of the parent company will be acceptable.</p>	<p>Dose it means, in case of if prime bidder is Integrator company of OEM then financial and technical eligibility of OEM is acceptable? Kindly Confirm.</p>	<p>As per TENDER</p>
<p>Page No. 17 Para b. Award Criteria and Tolerance Clause: Based on the purchaser's requirement, a repeat order may also be placed upto 06 years at the same price and with the same terms & conditions. These conditions are applicable for both the cases- Klystron and SSPA DWRs.</p>	<p>As per the general standard practice, there is cost escalation of 8-10% of radar cost every year, will IMD would be paying as per the cost escalation to the successful bidder? If in case IMD decides to buy more radar during next 6 year from the same successful bidder. Ideally this clause should be scrapped to have more flexible option for IMD in terms of buying more radars incoming years or at maximum this clause of the same pricing should be restricted to one year from the date of supply order of existing tender.</p>	<p>As per TENDER</p>

CHAPTER-3 Special Conditions of Contract (SCC)

RFP Reference	Query/clarification of the firm	Reply/ IMD Comment
Page No. 23 Para 05 The firm shall have the manufacturing facilities in India, these facilities will be inspected by officials of IMD and ISRO team before awarding of supply order.	If prime bidder is integrator then what kind of facilities will be inspected by IMD before awarding of supply order? Since integrator company cannot establish manufacturing facility for Radar technology on very short notice period.	As per TENDER

CHAPTER-4
SCHEDULE OF REQUIREMENTS AND SPECIFICATIONS & ALLIED TECHNICAL DETAILS
C-BAND DUAL POLARIZED DOPPLER WEATHER RADAR SYSTEM SPECIFICATIONS

RFP Reference	Query/clarification of the firm	Reply/ IMD Comment
Page No. 24 Para 1. General Requirement The specifications described herein refer to C-band (5400-5700 MHz) Polarimetric Doppler Weather Radar, hereafter referred to as "The System".	The industry standard C-Band klystron tube has an operational range from 5600-5650 MHz . Kindly Confirm if 5600-5650MHz is an acceptable frequency range inside the 5400-5700MHz.?	Frequency Range 5.6 GHz – 5.65 GHz is agreed for both Klystron based and SSPA based radar systems.
Page No. 24-25 Para 1. A. ix General Requirement Tower shall have electric lift reaching one floor below the antenna and radome.	Is it passenger lift of required for carrying of equipment/heavyload ? Kindly give us more details.	Industrial lift with the load capacity of 1500 Kgs.
Page No. 42 Para 3 Walk/inspection space of about a meter width all around the radome base with a safety railing of 1.5m height is recommended for servicing of Radom.	This railing will cause some RF obstruction to the antenna and reduce system performance during operation. Confirm if the railing and walkway is necessary?	As per TENDER

M/s Bharat Electronics Limited

CHAPTER-4
SCHEDULE OF REQUIREMENTS AND SPECIFICATIONS & ALLIED TECHNICAL DETAILS
C-BAND DUAL POLARIZED DOPPLER WEATHER RADAR SYSTEM SPECIFICATIONS

RFP Reference	Query/clarification of the firm	Reply/ IMD Comment
TABLE-1	Relaxation requested on the transmission loss	As per TENDER

2.24 Radome (2) Transmission Loss : better than 0.2 dB one way		
TABLE-1 2.8 Transmitter Type Tunable Power Klystron	Tunable in terms of power or frequency? Please explain.	Tunable in terms of frequency.
TABLE-2 2.8 Tunable Power Solid State Power Amplifier based system	Tunable in terms of power or frequency? Please explain.	Tunable in terms of frequency.
TABLE-1 2.4 Unambiguous Velocity 60 m/s or better with ambiguity resolver	S. No. 2.4 shows a specification of 60 m/s with ambiguity resolution. S No 2.35 resolution is +/- 30 m/s. Please clarify the actual resolution.	As per TENDER
TABLE-1 2.35 Radial velocity(V_H) (max): +/-30 m/s		
TABLE-2 2.4 Unambiguous Velocity 60 m/s or better with ambiguity resolver	S. No. 2.4 shows a specification of 60 m/s with ambiguity resolution. S No 2.35 resolution is +/- 30 m/s. Please clarify the actual resolution.	As per TENDER
TABLE-1 2.35 Radial velocity(V_H) (max): +/-30 m/s		
TABLE-1 2.2 Range resolution: 75m or better	Resolution will be commensurate with pulse widths. Please confirm.	As per TENDER
TABLE-1 2.12 Pulse width: 0.4 to 2.0 μSec.		
TABLE-1 2.25 Wind load: Up to 130 km/hr and in gusting condition up to 230 km/hr	For Klystron system, the wind load requirement is 130 km/hr & 230 km/hr gust and for SSPA system the wind load requirement is 150 km/hr & 200 km/hr gust. Please clarify the difference	Wind load upto 150 Kmph and in gusting condition upto 200Kmph for both Klystron based and SSPA based radar systems
TABLE-2 2.25 Wind load: Up to 150 km/hr and in gusting condition up to 200 km/hr		
TABLE-1 2.43 A double storey well-furnished porta cabin- size 20 X 20 feet is required to meet all operational requirements which includes operational room, Radar Officer room, UPS, stores, Kitchenette, Rest room, Washroom along with ACs, water cooler, RO, furniture and separate	Annexure-XII not available in the document. May please be made available.	Annexure-XII attached

outside canopy housing for D.G. set etc. to make it convenient for operational staff to work round the clock as per Annexure-XII. The size of porta cabin may vary in size from location to location.		
TABLE-2 2.43 A double storey well-furnished porta cabin- size 20 X 20 feet is required to meet all operational requirements which includes operational room, Radar Officer room, UPS, stores, Kitchenette, Rest room, Washroom along with ACs, water cooler, RO, furniture and separate outside canopy housing for D.G. set etc. to make it convenient for operational staff to work round the clock as per Annexure-XII. The size of porta cabin may vary in size from location to location.		
4 DATA FORMATS 4.1 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 and KMZ formats and NEXRAD-Level II formats.	Will these formats be provided by IMD?	Yes
5 (e) Setup of communication channels.	Explanation required	Standard communication channels with broadband, GSM.
5 (m) Automatic transmission of warnings (visual and text) to users via communication channels.	What are the warnings?	As per TENDER
5 (o) Simultaneous display of data having more than one parameter.	Display of how many data required simultaneously? What data?	
5.3.2 (k) Google Earth integration of gridded rainfall products.	Explanation required	Rainfall data in cartesian co-ordinates to be overlaid on GIS
5.3.2 (l) Provision for generation of composite maps of rainfall.	Explanation required	Rainfall data in cartesian co-ordinates to be merged into a single rainfall data set having multiple radar data.
7 Provision shall be made with suitable communication	1. 9 states indicated as per Annexure-IX.	1. One set required at each site and one

<p>hardware & software for real time transfer and networking of digital radar data and images through all networking components to control and monitoring centre in respective state and central server System installed at IMD HQ, New Delhi which is based on Vaisala IRIS software for generating various products and data formats from RAW data. All networking components required at radar site as well as command and control centre shall be provided by supplier. Deliverables for control and command centres are to be provided as per Annexure-II.</p>	<p>Communication hardware and software requirements works out to be 21 sets. Please clarify.</p> <p>2. Annexure-II is “Tender terms and conditions acceptance form”.</p> <p>3. Hardware requirement for Command and control centre not included in “Format for deliverables” Annexure-VI A and VII B</p>	<p>set at central location at New Delhi.</p>
<p>17 First radar to be installed and commissioned within 15 months from the date of issue of supply order. All the ordered systems shall be delivered, installed and commissioned within 30 months from the date of issue of supply order in a staggered manner. In this regard the firm will submit the actual schedule along with time line for execution of installation and commissioning work for each radar.</p>	<p>First radar to be installed is SSPA type of Klystron type?</p>	<p>To be decided in along with supply order.</p>
<p>Annexure - VII-A : FORMAT FOR DELIVERABLES FOR SUPPLY OF 07 Nos. KLYSTRON BASED C-BAND DUAL POL. DOPPLER WEATHER RADARS Communication hardware/software for data transfer to central location.</p>	<p>Please specify the hardware required.</p>	<p>As per requirement of the radar system.</p>
<p>Annexure - VII-B :FORMAT FOR DELIVERABLES FOR SUPPLY OF 04 Nos. SOLID STATE POWER AMPLIFIER BASED C-BAND DUAL POL. DOPPLER WEATHER RADARS Communication hardware/software for data transfer to central location.</p>	<p>Please specify the hardware required.</p>	<p>As per requirement of the radar system.</p>

M/s ICOMM Tele Limited

RFP Reference	Query/clarification of the firm	Reply/ IMD Comment
<p>A) Tender notice dated 18.12.2018: EMD of Rs 2 crore to be furnished in the form of Bank Guarantee or FDR</p> <p>B) Chapter-3, Para-1: Supplier can submit their bids for 11 number of Doppler Weather Radars(7 Klystron based + 4 solid state) or for only one type of DWR (either Klystron based or solid state type)</p> <p>C) Chapter-3, Para-6: The L1 bidders for Klystron based radar and SSPA based radar shall be arrived at separately. Therefore two separate purchase orders for each of these type of radars viz. Klystron and SSPA shall be issued.</p>	<p>Vendor has been asked to submit EMD amount of Rs 2 crores for procurement of 11 Nos of C-Band DWRs, which is 2% of tender value stated at CPP portal.</p> <p>However as per Para-1 of Chapter-3</p> <p>Case 1 Vendor can submit their bids for 11 Nos of DWR (7 Klystron based and 4 Nos of Solid state type).</p> <p>Case 2 Can also submit their bid for 7 Nos of DWR (Klystron based).</p> <p>Case 3 Can also submit their bids for 4 Nos of DWR (Solid state type).</p> <p>Please calrify, if EMD value will remain same in all of the above cases. If 'Yes' will the value of tender even in the partial participation case remain same. If 'No' what will be the value of the respective partial number of radars in each of the above cases.</p>	<p>EMD for 11 radars is Rs 2 crores. EMD for 7 radars is Rs 1.28 crores EMD for 4 radars is Rs 0.72crores</p>
<p>Chapter-3 Para-8 Technical evaluation will consist of presentation by bidder (Presentation must include point to point details as per Schedule of Requirements and Specifications & allied Technical Details(Chapter-4) of the tender document.</p>	<p>Please advise how many days of notice will be given for the presentation?</p>	<p>15-16 March 2019 (Two days) for the Technical presentation by bidders for evaluation.</p>
<p>Chapter-4 Para 1(a)(ix) Tower shall have electric lift reaching one floor below the antenna and radome.</p>	<p>Please clarify, whether the lift required at the radar tower will be open industrial type or closed cabin type.</p>	<p>Open industrial type with load capacity of 1500 kgs.</p>

<p>Chapter-4 Para 1(a)(viii) Eleven such systems are proposed to be purchased in this tender. The tentative location for installation of the systems is mentioned in Annexure-IX</p>	<p>1. Does the sites mentioned in Annexure-I are existing sites of IMD with adequate infrastructure with water supply and electricity availability which will be required during the civil works, installation and commissioning. 2. Do these sites have the security fencing and storage space for the construction material, radar and its peripherals or it has to be built by the contractor.</p>	<p>1. Yes 2. Security guard of IMD may be available at all sites with IMD. However few sites which are new, firms are recommended to arrange for security.</p>
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M/s Data Patterns India Pvt Ltd

CHAPTER-2 Conditions of Contract (CoC)

RFP Reference	Query/clarification of the firm	Reply/ IMD Comment
<p>Page No 13 7.Earnest Money Deposit The bidders who are registered as OEM on Tender submission date with Directorate General of Supplies & Disposals or with National Small Industries Corporation, New Delhi, shall be eligible for exemption from submission EMD. Micro and small Enterprises specified by Ministry of Micro, Small & Medium Enterprises (MoMSME) are exempted from earnest money deposit (EMD).</p>	<p>A) IMD should provide EMD exemption benefits to Micro & Small Enterprises specified by MoMSME and same should be registered as an Indian Manufacturer only for above stores(i.e. Doppler RADARS) after independent verifying the MSME certificate under National Industry Classification Code before bid submission. B) IMD-CPU had decided INR 2 Cr as an EMD for all 11 RADARS. IMD should mentioned separately EMD value for different types of RADARS procurement (i.e. Klystron-7 Nos & SSPA-4 Nos)</p>	<p>As per TENDER. Only EMD will be exempted.</p>

CHAPTER-4 SCHEDULE OF REQUIREMENTS AND SPECIFICATIONS & ALLIED TECHNICAL DETAILS C-BAND DUAL POLARIZED DOPPLER WEATHER RADAR SYSTEM SPECIFICATIONS

RFP Reference	Query/clarification of the firm	Reply/ IMD Comment
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<p>TABLE-1 2.2 Range Resolution: 75 m or better</p> <p>TABLE-2 2.2 Range Resolution: 75 m or better</p>	<p>Whether 75 m of range resolution to be maintained throughout the detection range i.e. 250 km?</p>	<p>Yes</p>
<p>TABLE-1 2.4 Unambiguous Velocity 60 m/s or better with ambiguity resolver</p> <p>2.35 (b) Radial velocity (V_H) Max : ± 30 m/s</p>	<p>Unambiguous velocity is mentioned as 60 m/s. But in section 2.35 (b) the radial velocity to be measured maximum is ± 30 m/s. Both are contradictory in values. Kindly clarify.</p>	<p>Max ± 30 m/s is typical value</p>
<p>TABLE-1 & TABLE-2 2.35 Parameters to be measured and displayed</p> <p>(a) Reflectivity (Z_H) Dynamic range : -30 to 65 dBZ Resolution : 0.1 dB Accuracy: ≤ 1 dB @ SNR > 10 dB; $r < 230$ Km; $\Delta r < 1$ Km</p> <p>(b) Radial velocity (V_H) Max : ± 30 m/s Resolution: 0.1 m/s Accuracy: ≤ 1 m/s @ SNR > 10 dB; $\sigma_v = 4$ m/s ; $r = 125$ Km; $\Delta r < 250$ m</p> <p>(c) Spectrum Width (σ_H) Max : ± 15 m/s Resolution: 0.1 m/s Accuracy: ≤ 2 m/s @ SNR > 10 dB; $\sigma_v = 4$ m/s ; $r = 125$ Km; $\Delta r < 250$ m</p> <p>(d) Differential reflectivity (Z_{DR}) Dynamic range : -5 to 8 dBZ Resolution : 0.1 dB Accuracy : ≤ 0.2 dB @ SNR > 10 dB ; $r < 125$ Km; $\Delta r < 1$ Km</p> <p>(e) Differential phase (Φ_{DP}) Dynamic range: -180 to 180 deg</p>	<p>What are the methodology for validating the accuracy and resolution for the parameters mentioned in Klystron and SSPA version?</p>	<p>To be explained in detail as to the methodology adopted to achieve. All mathematical calculations to be provided along with the bids.</p> <p>Firm to provide simulation studies of the system and its sub modules.</p>

<p>Resolution : 0.1 deg Accuracy: ≤ 2deg @ SNR>10dB; $r < 125$Km; $\Delta r < 1$Km</p> <p>(f) Correlation Coefficient at zero lag (ρ_{HV}) Dynamic range : 0 to 1 Resolution : 0.005 Accuracy: ≤ 0.05 @ SNR>10dB ; $r < 125$Km; $\Delta r < 1$Km</p>		
<p>TABLE-1 2.21 Polarization Horizontal, Vertical and STAR mode</p> <p>TABLE-2 2.38 Base Parameters to be measured Linear Depolarization Ratio (LDR)</p>	<p>A) Whether separate mode is required for horizontal and vertical polarization?</p> <p>B) With only Horizontal, Vertical & STAR polarization, it is not feasible to achieve Linear Depolarization Ratio (LDR). Kindly elaborate.</p>	<p>Vertical, horizontal, STAR modes with compatibility for LDR mode of operations.</p>
<p>TABLE-1 2.24 Radome(2) Transmission Loss : better than 0.2dB one way</p> <p>TABLE-2 2.24 Radome(2) Transmission Loss : 0.15dB one way</p>	<p>Why the RADOME transmission loss specification is different for Klystron & SSPA version? Please elaborate.</p>	<p>Both are same. 0.2 dB or better one way</p>
<p>TABLE-1 2.39 PeripheralsNAS storage with RAID with archival for 05 years of data.</p> <p>TABLE-2 2.39 PeripheralsNAS storage with RAID with archival for 05 years of data.</p>	<p>Please mention specifically file format for the data storage.</p>	<p>Format is specific to OEMs. Suitable space as per RFP to be provided.</p>
<p>5.PRODUCT GENERATION 5.1 Base Products a) The un-filtered I & Q data archival and playback facility to generate base products.</p>	<p>What is un-filtered I & Q? Please elaborate.</p>	<p>I and Q to be provided.</p>
<p>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</p>	<p>What is the maximum range for pseudo CAPPI?</p>	<p>As per TENDER.</p>

height and display the same pertaining to user selectable data form Z, V and σ .		
5.3.2 Hydrological Products (k) Google Earth integration of gridded rainfall products.	What is google earth integration of gridded rainfall products? Please elaborate.	Rainfall data in cartesian coordinates to be overlaid on GIS
5.3.3 Aviation Products (b) The system shall also be able to generate warning product on microburst, meso-cyclones and wind shears beyond adaptable threshold levels.	Micro-burst and meso cyclones warning generating are not feasible with one RADAR only. Please elaborate.	As per TENDER
5.3.4 Warning and Forecasting Products (g) Storm Relative Helicity Product	Kindly elaborate.	Standard algorithms are available
TABLE-1 & TABLE-2 2.43 Enclosure A double storey well-furnished porta cabin- size 20 X 20 feet is required to meet all operational requirements which includes operational room, Radar Officer room, UPS, stores, Kitchenette, Rest room, Washroom along with ACs, water cooler, RO, furniture and separate outside canopy housing for D.G. set etc. to make it convenient for operational staff to work round the clock as per Annexure-XII. The size of porta cabin may vary in size from location to location.	1. Please provide Annexure-XII cum structural/civil drawings for cost estimation before bid submission. 2. Can suitable containers are acceptable in place of porta cabins? Please elaborate.	1. Annexure-XII attached. 2. No.

M/s SGS Weather & Environmental Systems Pvt Ltd

CHAPTER-2 Conditions of Contract (CoC)

RFP Reference	Query/clarification of the firm	Reply/ IMD Comment
15. Comprehensive Annual Maintenance Contract (CAMC) for Equipment and Software The ranking of the bidders will be done with CAMC cost	Kindly confirm while deciding L1 bidder, Net Present Value (NPV) as per Govt of India rules will be applied on the AMC charges or not.	Yes. ERV as 7% .

i.e. while deciding the L1 bidders cost of CAMC will be added.	If yes, kindly confirm the ERV applicable rate of percentage.	
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CHAPTER-4
SCHEDULE OF REQUIREMENTS AND SPECIFICATIONS & ALLIED TECHNICAL DETAILS
C-BAND DUAL POLARIZED DOPPLER WEATHER RADAR SYSTEM SPECIFICATIONS

RFP Reference	Query/clarification of the firm	Reply/ IMD Comment
1 (a) (xiii) Central server at Delhi for processing the data from all eleven radars to be provided.	If we are offering both types of radars - Solid state and Klystron based from one manufacturer, can we supply one central server for both types of radars.	One each for Klystron based and SSPA based radar systems to be provided.

M/s Mahindra Telephonics Integrated Systems Ltd

CHAPTER-1
INSTRUCTIONS TO BIDDERS (ITB)

RFP Reference	Query/clarification of the firm	Reply/ IMD Comment
Page No 10 Technical Evaluation	Committee must seek clarification from the bidder in case there is any case there is any ambiguity on technical compliance.	Presentation in the presence of committee members will be held during evalutaion.
Page No 10-11 Financial evaluation	DCF technique may be used for determining lowest bidder (L- I).	No

CHAPTER-2
Conditions of Contract (CoC)

RFP Reference	Query/clarification of the firm	Reply/ IMD Comment
27. Vendor Qualification Criteria Para (a)	Please confirm supplier's foreign principal can supply certificate(s) and statement of past experience.	Yes

Page No 17 17.Award Criteria and Tolerance Clause	A repeat order may be placed upto 06 years after mutually negotiated terms & conditions.	As per TENDER
CHAPTER-3 Special Conditions of Contract (SCC)		
RFP Reference	Query/clarification of the firm	Reply/ IMD Comment
Page No 23 S No 10	Duration to supply the additional systems under the same technical specification and terms and conditions to any organisation functioning under Ministry of Earth Sciences, Govt. of India, may be reduced to 6 months with effect from the date of installation and commissioning of the last radar system	As per TENDER
CHAPTER-4 SCHEDULE OF REQUIREMENTS AND SPECIFICATIONS & ALLIED TECHNICAL DETAILS C-BAND DUAL POLARIZED DOPPLER WEATHER RADAR SYSTEM SPECIFICATIONS		
RFP Reference	Query/clarification of the firm	Reply/ IMD Comment
Page No 29 Table 1 2.36 Calibration	Automatically updating the parameters could introduce erroneous updates and to prevent these possible erroneous updates, it's better to have someone investigate the issue, rather than adjust the calibration and carry on. Can the IMD agree that automatic application of calibration is not desirable?	Provision for manual and automatic update to be provided.
Page No 29 Table 1 2.37 - Sun calibration	What does the IMD intend to do with V, W, KDP, PHIDP and RHOHV data while pointing at the sun? It is not clear to us what the objective is.	Data only relevant to sun cal will be used.
Page No 30 Table 1 2.39 Peripherals	Please clarify the meaning of "active-active configuration".	As hot standby mode
Page No 31 Table 2 2.1 Range of observation,	Please verify these requirements are correct for SSPA systems and pulse compression.	As per TENDER

<p>2.3 Max. Unambiguous Range, and 2.4 Unambiguous Velocity</p>		
<p>Page No 36 4.DATA FORMATS 4.1 Digital Data</p>	<p>(a) Please verify if ALL formats are required OR as normally, widely supported in international standards such as ODIM HDF5 and NetCDF CF/Radial.</p> <p>(b) Please verify a stand-alone converter, like RadxConvert from NCAR/UCAR (related to TITAN/LROSE) is a viable solution.</p> <p>(c) Will the IMD provide full specification documentation for the customer-specific IMD data model? Can you verify that ODIM HDF5 is a viable alternative to ODIM (OPERA) BUFR, as this is now the preferred OPERA format?</p> <p>(d) --- Nil--</p> <p>(e) It is preferred to export data in ODIM HDF5, or NetCDF CF/Radial (or some other international standard) that the SIGMET system(s) can import. Please provide a complete list of the radar data formats that the central server.</p>	<p>As per TENDER</p>
<p>Page No 44 14. DOCUMENTATION</p>	<p>Data formats and network protocol formats change from version to version. Is it possible to provide an API that will remain consistent between SW versions?</p>	<p>Yes</p>
<p>Tables 1 & 2 2.24 Radome</p>	<p>Concerning the “adequate space for maintenance personnel to enter” the radome, are you requiring access from the “side of the radome” or is access from the bottom adequate?</p>	<p>As per OEMs requirement</p>
<p>Tables 1 & 2 2.35 Parameters to be measured and displayed - Items a–f</p>	<p>A “normal” claim of accuracy uses a SNR >20dB. Recommend changing the SNR >10dB to SNR >20dB for all the variables.</p>	<p>As per TENDER</p>

M/s S S Micro Electronics Technology Pvt. Ltd.

CHAPTER-2 Conditions of Contract (CoC)

RFP Reference	Query/clarification of the firm	Reply/ IMD Comment
<p>Page No 13 7.Earnest Money Deposit (EMD)</p>	<p>Will EMD be same even if the bidder who wants to bid only for Solid State Radar, Klystron Radar or both?</p>	<p>EMD for 11 radars is Rs 2 crores. EMD for 7 radars is 1.28 crores EMD for 4 radars is 0.72ccrores</p>
<p>Terms and Mode of Payment Payment Terms 20. a) Fifty percent (50%) of contract value of stores will be paid after receipt of goods, balance 20% payment towards stores after successful installation and rest 30% on commissioning and acceptance of the system at site including the period of endurance test of individual site. b) Hundred 100% payments as value of services such as FAT, Training, SAT, Installation & commissioning charges etc if any after their executions and successful completion. c) If required, the payment for the foreign segment in favour of the foreign supplier shall be made through IRREVOCABLE LC Letter of Credit (LC) shall be established for a specific period depending on delivery schedule only after receipt of unconditional acceptance of supply/purchase order and performance security from the supplier. LC extension charges shall be borne by the supplier in case of extension of delivery period requested by the supplier and request agreed by the purchaser. <i>70% payment of the LC will be against proof of dispatch and</i></p>	<p>Pl clarify this because 50% of the total stores will be done after delivery and 50% of foreign segment will be made after FAT in India what does it means? Does FAT means successful working of radar after integrating the radar with foreign components and Indian components? Will it also includes the accessories to be given from India such as UPS, DG sets, workstations etc.?</p>	<p>Full working radar with all accessories</p>

30% after successful acceptance at sites		
Other queries	<p>1. What will the tentative month for presentation to be given to the TEC committee so that our foreign principals can apply for visa?</p> <p>2. As per eprocurement portal other important documents required: Affidavit regarding correctness of bid, Affidavit regarding no near relative is required. Pl give the draft of the certificates. Pl also clarify the amount of stamp paper to be used for submitting affidavit.</p> <p>3. As per eprocurement portal other important documents required: Bank solvency certificate is required. Pl give draft. Does it required for both foreign and Indian partner or any of them?</p> <p>4. Is Udhog Aadhar Memorandum or Udhog Aadhar Certificate issued by MSME just by applying online is sufficient for EMD exemption and to avail all the other SSI benefits or a proper registration certificate from NSIC is required?</p>	<p>After one month from opening of bids.</p> <p>Only valid MSME/NSIC/SSI certificate is acceptable</p>

M/s. Larsen & Toubro Limited

CHAPTER-1 INSTRUCTIONS TO BIDDERS (ITB)

RFP Reference	Query/clarification of the firm	Reply/ IMD Comment
<p>Page No 6 3.Eligible Goods and Services</p>	<p>Request confirm that only (a) Indian Equipment Manufacturing Firms and (b) Indian Integrator companies are allowed to bid. As understood Indian suppliers of fully imported equipment are not allowed to bid. The same may be kindly clarified. Further, understand that “Certificate of</p>	<p>Indian Equipment Manufacturing Firms / Indian Integrator companies can only bid.</p>

	Incorporation” issued by Indian “Registrar of Companies” would be required to be furnished by all bidders. The same may be kindly clarified.	
Page No 8 Para 9 a) f) Bid Currency	Manufacturers are not allowed to quote in Foreign Currency even though some part may be imported. However, suppliers and integrators can quote partly in foreign currency for imported segment and partly in Indian currency for indigenous segment of equipment. Request clarify that the above criteria for bidding in FE is same for all bidders. Kindly also confirm if Foreign Exchange Rate Variation (FERV) is being granted.	Bid currency in INR only
Page No 8 Para 9 a) k) Pre Contract Integrity pact	Kindly confirm if Pre Contract Integrity pact only is required or the IPBG is required.	As per TENDER
Page No 8 Para 9 b) d) Price Bid Format	Request forward the Price Bid Format detailing all the headings under which the Bid is to be submitted so as to commonality for all bidders.	Annexure VII-A and VII-B
Page No 8 Para 9 b) g) CAMC	Request confirm that CAMC is to be quoted in Indian Rupees only.	CAMC in INR only
Page No 8 Para 9 b) j) CDEC	Custom Duty Exemption Certificate – Kindly confirm if this is being provided.	Will be provided as per rules, if applicable.
Page No 9 Para 9 b) i) Delivery Terms	FOR delivery term is ambiguous and not defined in INCOTERMS 2010 issued by International Chambers of Commerce, Paris, which are the accepted standard worldwide. It is recommended that Delivery Duty Paid (DDP)	Not applicable

	<p>as per International Commercial Terms 2010(INCOTERMS 2010) be used so as to have all bidders on a common platform.</p> <p>DDP is defined at following website:https://iccwbo.org/resources-for-business/incoterms-rules/incoterms-rules-2010/</p> <p>Extract of above website is as follows:</p> <p><input type="checkbox"/> DDP Delivered Duty Paid</p> <p>“Delivered Duty Paid” means that the seller delivers the goods when the goods are placed at the disposal of the buyer, cleared for import on the arriving means of transport ready for unloading at the named place of destination. The seller bears all the costs and risks involved in bringing the goods to the place of destination and has an obligation to clear the goods not only for export but also for import, to pay any duty for both export and import and to carry out all customs formalities.</p>	
<p>Page No 9 Para 9 b) j) Custom Duty Exemption</p>	<p>Understand that Custom Duty exemption rules. Kindly clarify further, if CDEC is allowed, then please inform the notification under which the certificate will be provided.</p>	<p>As per rules</p>
<p>Page No 10 Para 13c) Financial Evaluation</p>	<p>As understood, the L1 bidder evaluation criteria is as under: Basic Cost of Equipment including custom duty (no CEDC will be provided) + Cost of Services +AMC + All Taxes.</p> <p>Further if Custom Duty is reimbursed, does it affect L1 determination? Request clarify</p>	<p>Total landing cost will be considered for deciding L1</p>
<p>Page No 11 Para 13c) GST Exemption</p>	<p>What is the exemption available for GST? Please inform the notification under which GST exemption shall be provided.</p>	<p>No GST exemption shall be provided</p>

<p>Page No 11 Para 15 FAT</p>	<p>As understood FATs of complete equipment will be in India. The system would be required to radiate. IMD will provide necessary clearances from WPC for import of components and for radar radiation during testing & tuning and FATs. Kindly confirm.</p>	<p>FAT in premises of Indian supplier. WPC clearance shall be the responsibility of the supplier</p>
<p>CHAPTER-2 Conditions of Contract (CoC)</p>		
RFP Reference	Query/clarification of the firm	Reply/ IMD Comment
<p>Page No 12 Para 4 Tender Fee</p>	<p>Understand Tender Fee is not applicable. Request clarify.</p>	<p>Tender fee is not applicable</p>
<p>Page No 12 Para 5 Price preference</p>	<p>a. Price preference Policy was initiated by GoI to compensate the Micro & Small Enterprise sector on account of non-availability of economies of scale, poor resource base, poor access to raw- material etc. as compared to the large scale sector. All these benefits are only applicable to Micro & Small Enterprise if it is an OEM. If the Micro & Small Enterprise is not an OEM, but an Integrator/supplier, will it still be eligible to take advantage of the price preference policy? b. How much price preference (in %) shall be given to Micro & Small Enterprise over the lowest quotation of the large scale units? c. If the Micro & Small Enterprise is eligible forgetting price preference. What part of the order shall be awarded to him (in %)? d. Further, as per recent Price Purchase Preference Policy issued by GOI, minimum Indigenous content requirement is 50% to qualify for Purchase Preference.</p>	<p>As per TENDER</p>
<p>Page No 13 Para 7</p>	<p>a. We request for waiver of EMD for firms registered with DRDO / other Indian</p>	<p>a. Not acceptable as per rules b. EMD for 11 radars is Rs 2 crores.</p>

EMD	Government organisations. b. Further understand that EMD amount is INR 2Crores, if EMD not exempted.	EMD for 7 Klystron based radars is 1.28 crores EMD for 4 SSPA radars is 0.72crores
<p>Page No 15 Para 11 Terms of Delivery</p>	<p>FOR delivery term is ambiguous and not defined in INCOTERMS 2010 issued by International Chambers of Commerce, Paris, which are the accepted standard worldwide.</p> <p>It is recommended that Delivery Duty Paid (DDP) as per International Commercial Terms 2010 (INCOTERMS 2010) be used so as to have all bidders on a common platform.</p> <p>DDP is defined at following website: https://iccwbo.org/resources-for-business/incoterms-rules/incoterms-rules-2010/</p> <p>Extract of above website is as follows: <input type="checkbox"/> DDP Delivered Duty Paid “Delivered Duty Paid” means that the seller delivers the goods when the goods are placed at the disposal of the buyer, cleared for import on the arriving means of transport ready for unloading at the named place of destination. The seller bears all the costs and risks involved in bringing the goods to the place of destination and has an obligation to clear the goods not only for export but also for import, to pay any duty for both export and import and to carry out all customs formalities.</p>	Not applicable
<p>Page No 16 Para 15 CAMC</p>	CAMC is being considered for L1, however whether CAMC will be awarded or not is not certain. This creates ambiguity and a non-level	CAMC cost to be included for deciding L1

	playing field. If CAMC is not certain kindly delete this from L1 calculation.	
Page No 17 Para 17 Award Criteria and Tolerance Clause	Request an escalation clause may be built in for repeat orders as Six years is a long time.	As per TENDER
Page No 17 Para 19 Taxes and Duties in India	Kindly clarify which all tax exemptions are being granted as this will affect L1 determination.	Landing cost includes all taxes
Page No 18 Para 20 Terms and Mode of Payment	Would all payments be in INR. Kindly clarify.	Yes in INR only
Page No 20 Para 23 Arbitration clause	We propose the following changes "in case of any disputes arising out of this Agreement, the matter shall be referred to Arbitration in accordance with the Arbitration & Conciliation Act, 1996 with any amendments and modifications thereto. The Arbitrator shall be mutually appointed by both the Parties. The proceedings shall be conducted in English Language. The award passed by the Arbitrator shall be final and binding on Parties."Request to incorporate the same in the corrigendum to RFP.	As per Indian Laws
Page No 20 Para 23 List of Deliverables	The Price Bid format may be more detailed with regard to information to be provide.	As per TENDER
CHAPTER-3 Special Conditions of Contract (SCC)		
RFP Reference	Query/clarification of the firm	Reply/ IMD Comment
Page No 23 Point 3 & 4	The quantity required may be frozen prior to financial bid submission. Request confirm.	As per TENDER

Annexure-I

Page No 48 Para 1 Registration Certificate	Understand that “Certificate of Incorporation” issued by Indian “Registrar of Companies” would be required to be furnished by all bidders. The same may be kindly clarified.	As per checklist
Page No 48 Para 6 EUC / PO	Understand that only the contact details of “End User” are required to be furnished and IMD will verify performance of Radar directly from End User. The same may be kindly clarified.	As per TENDER
Page No 48 Para 13 Integrator /Supplier	The clause is silent on Indian Manufacturers. Request clarify.	As per TENDER

CHAPTER-4

SCHEDULE OF REQUIREMENTS AND SPECIFICATIONS & ALLIED TECHNICAL DETAILS C-BAND DUAL POLARIZED DOPPLER WEATHER RADAR SYSTEM SPECIFICATIONS

RFP Reference	Query/clarification of the firm	Reply/ IMD Comment
TABLE-1 2.6 & 2.15	Please clarify if the VSWR specified 1.25:1 is at the input of circulator after Klystron?	Yes
TABLE-1 2.8 & 2.9	Please clarify if the frequency is required to be tuneable for the entire range 5.4 to 5.7 GHz.	Frequency Range 5.6 GHz – 5.65 GHz is agreed for both Klystron based and SSPA based radar systems.
TABLE-1 2.12	For 75 m resolution minimum pulse width 0.5 micro-second is sufficient. Please clarify if 0.5 micro-second can be considered as minimum pulse width?	As per TENDER
TABLE-1 & 2 2.25	The wind load specifications for the Klystron based radars was mentioned as "Up to 130km/hr and in gusting condition up to 230 km/hr" Whereas same for the SSPA based radar is "Up to 150 km/hr and in gusting condition up to 200km/hr".	Wind load upto 150 Kmph and in gusting condition upto 200Kmph for both Klystron based and SSPA based radar systems

	Please clarify	
TABLE-1 & 2 2.24	Radome one-way losses mentioned as <0.2 dB in Klystron based radars and <0.15 dB in SSPA based radars. Can we consider <0.2dB as loss in both the cases? Please clarify	Transmission loss 0.2 dB or better for both Klystron based and SSPA based radar systems
TABLE-1 & 2 2.32	Please specify what would be the bandwidth and measurement node for MDS	To verify the MDS over the complete receiver channel, external signal is used to measure. Receiver output signal is equal to MDS.
TABLE-1 & 2 2.35	Please mention the RPM of the antenna at which the accuracies are specified. Can this be considered as 2 rpm?	Yes
TABLE-1 & 2 2.43	Please share the referred Annexure-XII which is not provided with the RFP.	Annexure - XII attached
2.OVERALL SYSTEM REQUIREMENTS	Please mention the environmental requirements such as operating temperature and humidity	Operating temperature: -5°C to +45° C. RH upto 95% inside the equipment room
1.General Requirement a) ix)	Please specify the required capacity of lift in kg	1500
1.General Requirement a) ix)	Please confirm if tower is required to be provided with staircase as back up of lift.	Yes
TABLE-1 & 2 2.28	Please confirm the list of sites where towers will be installed.	Will be confirmed along with supply order

Amendments made to Tender for C-band Dual Polarized Doppler Weather Radar System Qty – 11 Systems

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

Page - 27, Table - 1

For four no of radars with Solid-State Transmitter, following additional criteria is to be complied with:

- i) Range/time side lobes suppression should be better than 50 dB
- ii) Demonstrating MDS throughout the range of observation as per tender specifications incorporating multiple hetero pulse integration and also fulfilling the minimum range resolution.