

Ref: Procurement of C-band 'Dual Polarized Doppler Weather Radar

Tender Number: PS/TENDER/ 10/2012

Due date : 15 May, 2013

Minutes of pre-bid meeting held on 29 April 2013.

Prebid meeting for procurement of Transportable C-band Dual Polarimetric Doppler Radar – Qty 1 was held on 29 April 2013 1500 hrs at IITM. Queries from EEC, USA, Microcom (for ARC, USA), Pollution equipments and Controls (for Selex, Germany) and Data Patterns, India were received prior to this meeting. These queries were discussed and clarified before TEC and Radar experts.

The following bidders/representatives attended the pre-bid meeting in person.

1. BKC – New Delhi on behalf of EEC
2. Data Patterns
3. Microcomm representative on behalf of ARC

The general queries and answers are as follows

1. Q. Can IITM provide road regulations?
A. Indian Road regulations are available with trailer manufacturers. Please contact your local representative to get these regulations. Please comply with local driving / road regulations. (ie., As per current edition of Motor Vehicles act of India)
2. Page 8, Item 17(a)
Q. Can it be installed in drop deck?
A. It could be flat bed/low buoy trailer as per radar design.
3. Q. Does IITM have suitable vehicle for towing the radar trailer?
A. Yes, IITM will hire/own the truck suitable for towing this trailer during transport
But the trailer should have necessary 5th wheel coupling for towing.
The trailer should meet Indian road regulations and bidder should acquire necessary license / certificate for the trailer with competent authority
4. Q. Can the bid deadline be extended?
A. The bid deadline is already extended for 15 days. The new deadline for submission of bids is 15 May 2013.
5. Page 12, Item 26
Q. Can delivery time be extended to 12 months?
A. IITM has limited time line for this project. TEC has agreed to extend the delivery time to 12 months taking note of changes in design needed for transportability. 12 months will be counted from the date of issue of purchase order.
6. Page 8, Para 10.
Q. Is the radar trailer mounted or truck mounted?
A. The Radar will be trailer mounted and operated from trailer.

7. Page 9, Para 17(e)
Q. How many surveillance camera required?
A. No surveillance camera required.
8. Page 9, Para 17(f).
Q. Please clarify this item.
IITM will provide broadband/WAN/LAN connection. The radar should have necessary hardware, software and internal cabling to readily connect to the external line.
9. Page 13, Para 3 of GT&C.
Q. Pl. confirm that page numbering is required only for the price bid.
A. Page numbering is required in both commercial and technical bid documents, duly signed and stamped on each page.
10. Page 2, Para II-8.
Q. The requested operating frequency of the transmitter is 5.6-5.8 GHz. Worldwide there is only one manufacturer of C-Band klystrons (CPI) that offers a frequency of 5.6 - 5.65 GHz. Is this frequency acceptable to you?
A. Yes, Tunable from 5.6 to 5.65 GHz is acceptable.
11. Page 10 –Item 22(b).
Q. Please clarify the role of site engineer.
A. The radar would be operated in mission mode from June to September at a fixed location every year. Continuous radar operation during this intensive observation period (IOP) is very important because decisions on other experiments like aircraft cloud measurements / seeding operation will be based on radar measurements. In addition, the randomized cloud seeding experiment and its evaluation is based on simultaneous aircraft and radar observations. So any problem in radar operation will compromise entire experiment and will not give required deliverables. We need a suitable radar site engineer to quickly trouble shoot / rectify any problem during IOP. The site engineer is expected to work 8 hours a day and 7 days a week during IOP. Most IOP experiments are done during the day. However, the engineer must be available any time during IOP. There is no requirement during the rest of the year.
12. Operation downtime penalty
A. The proposed radar is to be used on a mission mode program during the CAIPEEX cloud seeding experiments where it is a requirement to have simultaneous observations from the radar and the aircraft. This Intensive Observation Period (IOP) is mission critical hence point No.22(g), 47(c) and 61 of the this RFP has been modified as below
(1) Penalties for Intensive Observation Period (June to September)
During the above period if the failure is more than 48 hours IITM reserve the right to impose the penalty of 2% of the order value per day maximum upto 10% of the order value. Such money will be deducted from any money due or which may become due to supplier or its agent.

(2) Penalties for rest of the period if the failure is more than 15 days IITM reserve the right to impose the penalty of 2% of the order value per week maximum upto 10% of the order value. Such money will be deducted from any money due or which may become due to supplier or its agent.

13. Acceptance/Installation delay penalty (Point No. 62): No change

14. Page 2, Para III-19

Q. Please clarify the need for radome.

A. TEC is of the opinion that a conical radome will suffice to withstand strong wind/gustiness. If a radar is provided without a radome for operation, then the vendor must provide proof that the radar would withstand the specified wind conditions. Specifically, CFD and finite element analysis should have been carried out with proper validation and this analysis should be submitted to IITM for verification. Exposure to specified wind conditions should not result in excessive deformations and/or fracture resulting in deficient functioning. Vendor should also provide evidence regarding functioning in high humidity conditions. The durability of antenna and pedestal should be guaranteed. IITM technical committee will carefully evaluate the results of this report. The decision of TEC on accepting/rejecting such proposals is final.

15. Q. Can IITM specify maximum wind/gust?

A. All the mounts, trailer, shelter, radome and supporting infrastructure should be designed to withstand sustained winds of 135 kmph and gust winds of 160 kmph.

16. Q. Is UPS required for entire operation of radar system?

A. Yes. The TEC has recommended for 15 minutes backup (it was specified as 1 hour earlier). The whole system is already supported by suitable Diesel generator with AMF panel for automatic turn ON when mains fails. UPS is needed during switching over time and for systematic shutdown, if required.

17. Page 7, Para 2.

Q. Will IITM accept 2 trailers with 2 shelters? One for the antenna, pedestal and other for radar?

A. Yes

18. Page 9, Para 22(a)

Q. Is comprehensive warranty for 3 years to be included in the main price of the system?

A. IITM is asking for 3 years comprehensive warranty, which should be quoted as a separate item. This will be counted for the evaluation of L1. In addition, IITM also requests to quote comprehensive warranty for 2 years on completion of initial 3 years. This two year warranty price will not be used to calculate L1. IITM will decide whether to enter into such warranty after initial 3 years is over. Please quote this separately as well.

19. Page 11, Para 25 (g) :

Q. It is not possible to give the Parts List of all the electronic components used in COTS items like the Computers etc. We recommend that this condition may kindly be deleted.

A. This is an item is related to documentation. Please provide **detailed documentation on major and critical components.**

20. Q: Ambiguity resolution upto 3 times is possible. Will it be OK?
A: No
21. Q: -6dBZ at 100kms for 1Micro sec pulse width is rather tough. What is the relaxable spec?
A: 0dBZ or better at 100 km for 1 micro sec pulse width
22. Q: Would require at least 4.2M dia. dish, It is not directly road transportable.
We will split it and transport and reassemble. Is it OK?
A: OK
23. Q: -28dB can be design goal. Acceptance spec can be -26dB. Cross Pol of -30dB can be design goal. Achieving it across op frequency range is tough. -26dB can be acceptable spec.
A: -28dB is required. Vendors should show detailed test results, over the operating frequency range, with increments of 10MHz steps, based on measurements carried out at a standard antenna test range, duly certified by the test range authorities, and plots should be enclosed.
24. Q: Why do you need 182 degree elevation for weather radar? It is OK for tracking radar?
A: -2 to 92 or -2 to 182 is mentioned in the tender document.
25. Q: 1024 point FFT is too much unrealistic for a scanning radar. Please confirm.
A: It should be no less than 32, but upper limit is selectable up to 1024. It is possible to have 1024 points while vertically pointing mode.
26. Q. For sphere calibration etc the necessary infrastructure needs to be provided by IITM. Pl confirm.
A: Yes, but sphere should be light enough, conforming to the available facilities at IITM.
27. Q: Satellite Data with data format, Ground registration etc to be provided by IITM. Same for lightning data and rain gauge info. Please confirm.
A: Satellite overlaying is one of the essential part of any commercial radar software. The necessary information may be found elsewhere.
28. Q: We can provide Binary and Net CDF formats. Details of other formats to be provided by IITM for effective conversion. Please confirm.
A: MDV and CFRadial are very common format of radar data and information may be found from elsewhere.
29. Q: Licence will be given for all application software. But third party software procured for Data Products etc IP will be with the vendor. Please specify the max no. of simultaneous users for such software, which has cost implications.
A: We believe all software are part of OEM and it is your responsibility to get sufficient license.
30. Q: Diesel generator & UPS to be interfaced on the trailers are vendor supplied items or IITM will supply it, Please confirm?
A: The vendor has to provide all these items

31. Q: 15 years is a long period. Spares cost may vary. Please clarify. Maintaining spares may increase the total system cost.
A: Parts availability must be guaranteed for a period of 15 years so as to ensure that the equipment will work for 15 years with suitable maintenance and repair.
32. Q: Time for setting to work at a new site is given as 3days. Please confirm.
A: Yes, 3 days dismantle and 3 days to re-assemble. Transportation time is not included.
33. Q: Is there any preferred GPS devices from IITM?
A: IITM has no preference.
34. Q: What are the probable destinations for maintenance?
A: Probable locations are Hyderabad and Ganges Valley for next three years. But this is not limited to these locations.
35. Q: What will be the measurement criteria for the cause of failure? Will there be any relaxation on this, in case of complexities in problem or unavailability of critical or bought out item?
A: A failure is what a usual Radar operator or an expert understands it to be. Typically, IITM will consider it to have failed when the equipment provides no useful data. There is no relaxation.
36. Q: Since system is very complex; is it ok if we submit AMC quote later?
A: No