Government of India Bhabha Atomic Research Center Pulsed Power & Electromagnetics Division

Ref: BARC (V)/PP&EMD/2022-23/R&D-71/MF/RV/14

Date: 16.11.2022

<u>SUB:</u> Inviting quotations for Fabrication and Supply of "Parabolic Reflector Antenna Setup" as per provided specifications (Qty – 1 Set)

Dear Sir,

- 1. Quotations are invited for the fabrication & supply work, as per the enclosed specification
- 2. Bidder shall quote for fabrication & supply work.
- 3. Taxes shall be quoted separately.
- The quotation must reach the Head, Pulsed Power & Electro-Magnetics Division by date <u>28.11.2022</u> and must be sent in a sealed, printed envelope superscripted with reference number and the due date given above by 4pm, <u>28.11.2022</u>.
- 5. The address of the envelop should read -

Dr. Rishi Verma C/o Dr. Archana Sharma PP&EMD, PEB-1, Bhabha Atomic Research Centre Gandivanipalem Village, Atchutapuram Mandal, Visakhapatnam – 531011

- 6. Head, PP&EMD reserves the rights to accept/ reject any or all quotations without assigning any reasons.
- 7. Quotation must also indicate the validity of offer & required delivery time.
- 8. Quotations are to be in printed letter-head / quotation format only. Quotation received in computergenerated forms will be considered as invalid and rejected.
- 9. Quotation should consist of Sales Tax registration number (Registered with local ST / CST authority), PAN number of the firm, services tax registration number etc.
- 10. Claim preferred by the firms are also be in printed INVOICE format consisting of the above registration numbers.
- 11. No Free issue material will be given
- 12. Since the goods are to be supplied against the work order meant for research purpose of a research organization under DAE, the necessary GST will be exempted to the party.
- 13. In case of any query, the party can contact on rishiv9@gmail.com, ph. No 8374512797 between 10am to 5pm.

Approving Authority:

Aorhan 16-11-2022

(Dr. Archana Sharma) Director (BTDG) & Head (PP&EMD) BARC

> डॉ. (ओमती) अर्चना शर्मा / ARCHANA SHARMA निदेशक / Director किरणपुंज प्रौधोगिकी विकास वर्ग Beam Technology Development Group भारत सरकार / Government of India, भा.प.अ. केंद्र / B. A. R.C. ट्रॉम्बे, मुंबई / Trombay, Mumbai - 400 085.

Annexure-II

General Terms and Conditions

1. Quality surveillance, inspection and inspection report

- 1.0 All work covered by the inspections shall be subjected to quality surveillance by the purchaser or his authorized representatives for which purpose the fabricator shall allow access at all reasonable times during manufacture to
- 1.1 The premises in which the work is being carried out.
- 1.2 The drawings and or tooling involved.
- 1.3 Gauges, instruments etc. required for inspecting the work.
- 1.4 Inspection and tests shall be carried out by the fabricator as per the requirements detailed in the drawings and these specifications.
- 1.5 The fabricator shall submit three copies of inspection reports to the purchaser for approval.
- 1.6 Components found unsatisfactory as to workmanship or material shall be removed by the fabricator and replaced by the components which is satisfactory.
- 1.7 The finished components shall not be dispatched prior to approval by our Engineer.

2. Raw Material

- 2.0 Raw Material for all the components and hardware will be provided by the supplier.
- 2.1 Material test certificate with sample may need to be submitted if asked.

3. Delivery

- 3.0 The bidder shall deliver the finished components after approval by our Engineer within 5 weeks from the date of receipt of work order.
- 3.1 In case any extension in delivery is to be granted to the contractor, party's should make request for extension in writing justifying the reason for extension.
- 3.2 Any delay which is attributable to the contractor is liable for penalty @ 1/2% per week (max. 5%) to be imposed on the contractor.

4. Sub Contract

- 4.0 The fabricator shall not sub-contract any or all the work without written consent from the purchaser. The fabricator shall be responsible to the purchaser for all of the sub-contractor of the fabricator, if at all allowed by the purchaser.
- 5. Taxes
- 5.0 GST @ 18%

6. Payment

- 6.0 Payment will be made only after satisfactory completion of work and on production of Invoice with details of location of supply, separate tax components, GSTN and PAN, receipt cum issue voucher from stores, advance stamped receipt, and guarantee certificate (4 nos.) and Bank details.
- 6.1 Advance/ part payment or against delivery cannot be made.
- 6.2 It may be noted that Income Tax at 2% and surcharge on IT at the rate applicable will be deducted from the bill.
- 6.3 TDS @ 1% will be deducted on payments made to the supplier of taxable goods and/ or services where the total value of such supply, under an individual contract, exceeds 2.5 lakhs.

7. Confidentiality:

- 7.0 No party shall disclose any information to third party concerning the matters under this contract generally. In particular, any information identified as "PROPRIETARY" in nature by the disclosing party shall be kept strictly confidential by the receiving party and shall not be disclosed to any third party without the prior written consent of the original disclosing party.
- 7.1 "RESTRICTED INFORMATION" categories under section 18 of the Atomic Energy Act, 1962 and "OFFICIAL SECRETS" under section 5 of the Official Secrets Act, 1923:-

Any contravention of the above-mentioned provisions by any contractor, sub-contractor, consultant, advisor or the any employees of a contractor will invite penal consequences under the aforesaid legislation.

7.2 Prohibition against use of BARC's name without permission for publicity purpose: -

The contractor or sub-contractor, consultant, advisor or the employees engaged by the contractor shall not use BARC's name for publicity through any public media like press, radio, T.V., or internet without the prior written approval from BARC. (vide circular ref: 2/Misc-9/Lg1/2001/92 dated April 30, 2001).

16-11-2022

(Dr. Archana Sharma) Director (BTDG) & Head (PP&EMD) BARC

> ा. (श्रामती) अर्चना शामी / ARCHANA SHARMA निदेशक / Director किरणपुंज प्रौशोगिकी विकास वर्ग Beam Technology Development Group भारत सरकार / Government of India, भा.प.अ. केंद्र / B. A. P. C टॉम्बे. मंतर्ट / Toron

Scope of Work Order

Fabrication and Supply of 'Parabolic Reflector Antenna Setup' as per provided specifications:

Frequency	:	3GHz
Reflector diameter	:	5 meter
Reflector Type	:	Prime focus, Parabolic
Reflector material	:	Aluminum Alloy
F/D Ratio	:	0.6
Reflector Gain @ 3GHz	:	41.5dB (typ.)
Aperture efficiency	:	70% (typ.)
3dB Beam width	:	1.4° (typ.)
Elevation maneuverability (manual)	:	0° to 15°
Azimuth maneuverability (manual)	:	0° to ±15°
Pedestal pole height	:	3.5 meter (adjustability ±50cm)
Aluminum reflector sheet thickness	:	~2mm (typical)
Reflector surface finish (RMS)	:	<500μm
Pedestal Pole Material/ Diameter	:	Galvanized Steel/ 100mm (typ.)
Outdoor wind speed sustainability	:	100 km/hr (typ.)
Compatible Feed Horn type	:	Pyramidal
Feed Horn Antenna material	:	Stainless Steel (SS304)
Surface finish of feed horn	:	<50µm
Antenna aperture window material/thickness	:	Acrylic/ 30mm

Quantity: 1 Set

NOTE:

- 1. Feed to parabolic reflector will be Pyramidal horn antenna in prime focus arrangement and it must be optimally designed by the fabricator to ensure dish gets fully illuminated and maximum gain is obtained with parabolic reflector antenna.
- 2. Installation and testing of full setup at BARC, Atchutapuram site is in the scope of fabricator.
- 3. Interfacing and integration of existing waveguide structure with pyramidal feed horn antenna will be in the scope of fabricator and they can visit BARCV site to explore the requirements.
- 4. All necessary nut-bolts, hinges, insulted support etc required for making/ integrating the assembly is within the scope of supply of fabricator.
- 5. Fabricator must share finalized dimensional drawings and expected radiation patterns of feed horn and parabolic reflector dish with the Indenter prior to its fabrication. Only after receiving the clearance from Indenter from BARC, Vizag fabrication work shall start.
- 6. Pre-dispatch inspection will be done by BARC representative.
- 7. Transportation and safe delivery of setup up to BARC, Athutapuram (BARCV) site is in the scope of fabricator.