

Government of India
Bhabha Atomic Research Centre
Atomic Fuels Division
Technical Services Section

Ref.AFD/TSS/BP/19/165437

Date 29/08/2019

Sub: Tender enquiry for Refurbishment of Public Address System at AFD, BARC, Trombay Mumbai.

Sealed offers are invited for and on behalf of the President of India, for Refurbishment of Public Address System at AFD, BARC, Trombay Mumbai.

This work includes replacement of refractory, fixing of fan units and testing of complete furnace.

Scope of Work:

Sr. No	Description	Specification and Qty.
1.	Refurbishment of Public Address System at AFD	As per Annexure -I

Terms and conditions:

1. Offer should be valid for minimum 90 days otherwise it will be rejected.
2. Only Lumsum prices to be quoted.
3. The completion period of this job should be within 6 months from the date of issue of work order.
4. Persons having valid PVC will only be allowed to enter BARC to execute the job.
5. Warranty period should be 12 months (Minimum) after completion of work.
6. The payment will be made after the satisfactory completion of the work.
7. Income Tax and GST IT as applicable will be deducted from the bill.
8. Any delay which is attributed to the contractor is liable for penalty @0.5 % Per Week (Max 5%).
9. Quotations are to be printed on letter head / quotation format which should consist of GST registration number registered with local authority, PAN of the firm. Computer generated quotation shall be considered as invalid & rejected.
10. a) Sealed offer with tender no and due date legibly written on the sealed envelope should reach **through speed/registered post** on or before 16/09/2019,

To,

Smt. Vaishali Patidar

Technical Officer (C)

Atomic Fuels Division

Bhabha Atomic Research Centre

Trombay, Mumbai 400 085.

- b) The past experience of the firm in similar nature in BARC/DAE shall be made available with Work Order copy and satisfactory completion certificate from the user.
- c) The contractor shall have to visit the site to comprehend the scope of work and equipment condition. The same will be arranged by the undersigned. The site can be visited between 04/09/19 to 06/09/19 on working days between 10:30 am to 4:00 pm. however prior intimation of at least three working days is necessary. (Tel: 022 25596426, email: bpatidar@barc.gov.in **The quotation submitted without site visit will not be considered.**
- d) Offer of those firms, who do not submit their quotation as per the details given in the technical specification and incomplete quotations in any respect shall not be considered.

Details and Confidentially & Publicity Clause

- I. No party shall disclose any information to any 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.
This clause shall apply to the sub-contractor, consultant, adviser or employees engaged by a party with equal force
- II. **“Restricted information” categories under section 18n of the Atomic Energy Act, 1962 and “Official Secret under Section 5 of the Official Secret Act, 1923: -**
Any contravention of the above-mentioned provisions by any contractor, sub-contractor, consultant, adviser or the employees of a contractor will invite penal consequence under the aforesaid legislation.
- III. Prohibition against use of BARC’s name without permission for the publicity purpose:
The contractor, sub-contractor, consultant, adviser or the employees engaged by the contractor, shall not use BARC’s name for any publicity purpose through any public media like press, Radio, T.V. or Internet without the prior written of BARC. Contractor shall obtain Police verification certificate for all his employees including his supervisors and workers engaged in the work.

(Vaishali Patidar)
TO/C, TSS/AFD

(Surendra Kumar)
SO/H, TSS, AFD
For & On behalf of President of India

Detail technical specification of Refurbishment of Public Address System at AFD, BARC, Trombay Mumbai.

I. Technical Specification for Digital-IP EPABX System

a.	The communication System should be built on a universal slot architecture and modular in design to enable seamless growth, by adding the desired necessary cards as and when required. Any peripheral card can be inserted in any slot of the platform, whereby it is possible to increase or decrease the interface of the system as per the requirement in future as per mentioned maximum requirement. Fully Universal Slots architecture, where any cards can be plugged in any slots.
b.	The communication system should have VOIP and Voice mail server at its core .i.e. VOIP and Voice mail server should not consume any slot in system.
c.	The communication system shall have multiple port interfaces such as analog extension lines, digital key phone, IP Extension, C.O. Line, GSM/3G, E & M Line, PRI/E1 and VoIP. All interfaces shall be in the form of expansion cards and can be plugged into the universal slots of the system as and when require in the future. VoIP and Voice mail server should not consume any universal slot.
d.	System shall be converged communication with ability to run TDM and IP on the same platform, it should support Analog, Digital, IP Telephones, mobile smart clients, PC UC clients & SIP based video desk phones.
e.	It should be possible to reach the maximum capacity of system up to 200 extensions, 8 PRI and 80 digital extensions, 60 CO lines,90 SIP trunks,900 IP extension,15 radio ports & 30 E&M and 40 GSM trunk on the same platform without adding any cabinet and with single power supply
f.	Support 64 port Voice mail server, Voice mail server shall support features like call queuing, multi-language support, multiple MOH
g.	It should have built-in multi-party conferencing. It should have minimum 15 conference possible of 3-party. The maximum number of participants required in single conference would be 20 or better.
h.	The system shall have the inbuilt auto attendant facility and shall be able to answer minimum 9 or better calls simultaneously and should support dial-by-name.
i.	The system should have inbuilt Power failure transfer functionality on card. No external devices for Power failure required. CO card should have power fail transfer facility, min 2 no's of CO ports shall have power fail transfer features and should function even if system in in Power off state.
j.	System shall support centralized management of multiple IP PBX over CMS software
k.	IP PBX shall support integration with Door access system over API
l.	System shall support bifurcation of E1 channels for voice and data. It should be possible to terminate fiber patch cord for connecting 2MB on any of the E1 ports. E1 over OFC option is there to put direct E1 fiber in the exchange.
m.	It should be Single Chassis and single power solution till 240 Analog and 999 IP Ports.
n.	System shall support IPv6 from day 1. Support of SIP over TLS and SRTP without any licenses
o.	SMS and Email notification should be sent of all Activity and Fault logs
p.	System shall support 128 VMS extensions over QSIG
q.	System should support dial form the directory. There shall be minimum 900 numbers possible and shall also possible to dial it as an abbreviated number.
r.	The E&M card shall be available for interfacing either 4 wire E&M or 6 Wire E&M
s.	System shall support features like RCOC (Return Call to Original Caller), SIM Balance Check, BHCC selection, SMS notification on faults etc.
t.	System shall support UC client application for Android/IOS and windows platform for extension mobility on smartphones and computers. It shall have features like Outlook Integration, BLF, Drag and Drop Conference and other Telephony Features.

u.	System shall support SMS to Email and Email to SMS Feature without use of any additional software. System shall support SMS on NO reply.
v.	Voice Message to be broadcasted can be recorded from telephone. It should not mandate recording the broadcast message on a PC. Voice Message can be broadcasted on mobile number of the users and also to the users of the networked systems.
w.	It shall support Call Back- trunk on Missed call feature. If an external user makes a miss call on trunk port, system should auto dial call to the caller
x.	It shall support feature RCOC – return call to original caller.
y.	Assistance beeps feature support while operator is on conversation.
z.	It shall support features such as CLI based Routing, CLI based DISA, Call back on Mobile port, Call Budget on Trunks etc. is built-in to the system
aa.	The system shall integrate in-skin voice mail module on CPU with 2000 hours of storage capacity and dedicated mailbox for each extension. The Voice mail server support 64 channel expansions; VMS shall support features like call queuing, multi-language support.
bb.	Support 16 different AC impedances on CO line to tune to any CO line for best speech performance.
cc.	It shall support Notification of a new voice mail to email. Voice message should be sent in the email attachment
dd.	The system shall have a conversational recording in the mail box should be available with voice mail system card of System. Conversation recording should be possible on Analog/Digital/IP (Android/iPhone). It shall support Conversation Recording up to 2100 Hours.
ee.	It shall support Unlimited voice call recording in network drive
ff.	Unified Communication platform built in especially with E-mail to SMS, Voice Mail to E-mail, Bulk SMS, and Computer Telephony Integration etc.
gg.	It shall support CTI interface for integration of third party software's like CRM, Call center software.
hh.	The OEM of the EPABX system quoted by bidders should have certified with ZED Certification by MSME and QCI authority. Certificate in this regards is required to submit along with bid.
ii.	The OEM of the product must have ISO 9001:2015 for quality management system. Certificate in this regards to be submitted along with a bid by bidder.

II. BOQ:

Sr. No.	Description	Qty
1.	Supply, installation, wiring, integration and commissioning of Matrix Eternity GENX12S AC system with 08 CO Line and 200 Extension and 2 Nos.of Console Key phone.	1 No.
2.	Supply, installation, wiring, integration and commissioning Paging unit interface.	1 Set
3.	Supply, installation, wiring, and testing of wall mount sound projector type speakers. The speaker shall be complete with mounting bracket suitable for mounting on any hard surface. Input Power:30 W RMS Frequency Response:120-15,000Hz	6 Nos.
4.	Supply, installation, wiring, and testing of wall mount box type speakers with mounting brackets. Rating: 6 W/100 Vwith power tap selection on 100 V through female	34 Nos.

	receptacle (push fit) 6" Full Range.	
5.	Supply, installation, wiring, and testing of wall mount box type speakers with mounting brackets. Rating: 30 Watts 2-Way Compact PA Wall Speakers Frequency Response:75-20,000 Hz	10 Nos.
6.	Supply and laying of 2.5 sq. mm 2 core, PVC Sheathed unarmoured Loudspeaker cable with PVC Conduit.	500 mtrs
7.	Supply, installation and wiring of Microphones and its accessories with shielded cable 200 mtrs approx.	3 Sets
8.	Preferred make of Speakers: Ahuja/Bosch/Philips Speaker Cable:	

III. General conditions

1. The scope of work includes dismantling of old EPABX system and Horn type/box type speakers and its wiring and all it's useless component. All materials, consumables, labour etc. required for accomplishment of the work shall be in Contractor's scope of work. Hence, the Contractor shall take comprehensive responsibility for the execution of work. Contractor shall arrange all tools and safety switchgears requires for execution of this work.
2. All the components used for this work shall be of reputed make.
3. Contractor has to submit list of bought-out items indicating their specification, make, source, and calibration certificates.
4. Contractor must mention make & model no. of the equipment offered by them, with detailed specification (on separate sheet). Otherwise their tender will not be accepted.

The Contractor shall at minimum have the following test equipment available onsite during installation and testing: -

- a) Cable insulation and continuity tester;
 - b) Pink noise generator;
 - c) Sound level meter;
 - d) Oscilloscope
 - e) Calibrated microphones
5. Care shall be taken to separate the line level signal with the speaker circuit, and with the mains cable.
 6. Two sets of prints of shop drawings for construction and/or installation shall be submitted to the departments engineer in charge for approval. The Contractor shall prepare and submit shop drawings for the whole work or parts of the work at least two weeks before the work begins.

The shop drawings shall include and show the following: -

- a) Co-ordinated dimensioned general arrangement, layouts and positions of loudspeakers, accessories, equipment racks and all others necessary for the complete installation;
- b) Schematic line diagrams of the installation;
- c) The dimensioned general arrangements, layouts and routes of final circuits.

The cost of all these shop drawings, whether or not provided in the Bill of Quantities, is deemed to be included in the Contract.

7. As Built Documents and Tools shall consist of but not limited to the as installed drawings, manuals, certificates, catalogues, inventories and parts lists should be submitted by Contractors.
8. Manual and documents for the P.A System installation shall be supplied. It shall comprise of: -
 - a) Installation manual;
 - b) Operation manual;
 - c) Service and maintenance manual;
9. Pre-delivery inspection at Contractor's works should be arranged.
10. On receipt of the purchase order, Contractor has to get approval for Speakers, cables, mics by BARC.
The Contractor should initiate the work ONLY AFTER OBTAINING APPROVA FROM BARC.