

PRASAR BHARATI  
BROADCASTING CORPORATION OF INDIA  
ALL INDIA RADIO: NEW DELHI- 110001

NO. DEL- 1(4)/NBH/AMC/2008-09/E

DATED: 24/06/2008

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**Subject: Round the clock operation & maintenance of 2x200TR Air Conditioning system at New Broadcasting House, All India Radio, New Delhi- 110001.**

We would like to award comprehensive annual maintenance contract & Round the Clock Operation of the above mentioned A/C plant installed at NBH as per the enclosed qualifying criteria, scope of work and special conditions of contract. The price format is given in Annexure-A.

For accessing the quantum of work, interested parties may visit this office for inspection between 10.00 am to 5.00 pm on all working days. You may submit your most competitive offer along with the Bid Security Deposit of Rs. 35000/- (Thirty five thousand only) by way of account payee Demand Draft, fixed deposit receipt/ Banker's cheque or Bank Guarantee from any of the commercial banks in an acceptable form, payable in favour of DDO, All India Radio, Delhi payable at New Delhi to reach this office latest by 10/07/2008 before 3.00 pm. Your offer shall be valid for 60 days from the date of price bid opening for placement of order.

**PROCEDURE FOR SUBMISSION OF SEALED TENDERS:**

The tenderers must submit their tenders as required in two parts in separate sealed covers prominently super-scribed as Part-1/ Technical Bid and Part-11/ Price Bid, also indicating on each of the cover, tender no. and date and time as mentioned above.

**BID SECURITY (COVER-I)-** Bid Security of 35000/- (Rupees thirty five thousand only) as mentioned above shall be put in Cover-1. BS furnished by all unsuccessful tenderers shall be refunded normally within one week of acceptance of award of work by successful tenderer. BS shall not carry any interest. BS by the tenderer will be forfeited if the tenderer revokes his tender within the validity period or increases his earlier quoted rates or the tenderer does not commence the work within 15 days after award of the contract.

In the event of work order, Performance Security deposit shall be furnished by the tenderer @ 10% of the total contract value in the form of an Account Payee Demand Draft, Fixed Deposit Receipt from a Commercial bank, Bank Guarantee from a commercial bank in an acceptable form in favour of "DDO, All India Radio, Delhi. Performance Security should remain valid for a period of sixty days beyond the date of completion of all contractual obligations (i.e. 14 months)

**TECHNICAL BID (COVER-II) :** All technical details for the scope of work, the complete details regarding essential qualifications as asked for under qualifying requirements, deviations if any etc. shall be enclosed in Part-I/Technical Bid along with the copy of tender specifications and with other annexure duly signed and stamped as a token of acceptance of tender condition.

**PRICE BID (COVER-III):** Tenderers may please note that the price bid shall be submitted as per NBH, AIR Price Format enclosed. These three separate cover i.e.: Cover-I, II & III shall together be enclosed in a fourth envelope and this sealed cover shall be super scribed with tender no. due date and time and submitted to this office.

Envelope should have inscription as "Quotation for Round the Clock Operation & Maintenance of 2x200 TR A/C Plants installed at NBH, AIR,". Quotations not received in line with the above are liable to be rejected. Technical Bids shall be opened on 10/07/2008 At 3.00 pm in the presence of tenderers who may be present at that time. Price bids of the eligible bidders shall be opened at a later date in the presence of tenderers, which will be notified later.

Thanking you,

Yours faithfully,

(Rajiv Gupta)  
Asstt. Engineer  
For Suptdg. Engineer.

## **QUALIFYING REQUIREMENT**

The bidder must meet following conditions: -

1. The bidder must have experience of maintenance of 2x200TR capacity A/C plant.
2. Tenderer must have minimum 2 years experience of operation and maintenance of minimum 200TR capacity AC plant. The tenderers must submit proof of experience along with the tender in the technical bid.
3. Copy of PAN/TIN no. and Service Tax number to be furnished including Income Tax clearance certificate.
4. Tenderer should have PF and ESI registration number and same shall be indicated in the technical bid along with documentary proof.
5. The bidder should be financially sound and having a minimum turnover of not less than Rs.20 lakhs in any of the last three financial years and to this effect audited profit & loss account and balance sheet to be enclosed with technical bid.
6. Documentary proof regarding specified qualification for personnel to be deputed as per Sl. No. A (i) of scope of work.
7. Tenderer is to attach his tender document after signing each of the pages as a compliance of terms & condition of the contract. Conditional offer of any kind will not be acceptable.
8. Original in respect of above stated requirements may be got verified as and when required before price bid opening.

## **OPERATION AND MAINTENANCE OF 2X200TR A/C PLANTS INSTALLED AT NBH; AIR.**

### **A. SCOPE OF WORK:**

- i. Manpower requirement:- The contractor should engage at least the following manpower per shift of 8 (eight) hrs.
  - a) Operator (Diploma/ITI in AC or Mechanical with min. 3/5 year experience in this filed) - 1 no.
  - b) Helper – (with 3 years experience in relevant field) – 1 no.
- ii. Comprehensive maintenance of the plant. This includes regular preventive maintenance as outline in Annexure-B and any repair required during the AMC period. A list of major components of the plant is attached at Annexure-C. Any spare parts and refrigerant or any other material required for this purpose is to be arranged by the bidder.
- iii. Round the clock operation of AC plant as per requirement of AIR.
- vi. This tender is for efficient, smooth, uninterrupted maintenance & round the clock operation of 2x200 TR A/c plants installed at NBH for a period of 1 year. Any operation of maintenance work, though not specifically detailed out in this document, but needed for efficient and smooth operation and maintenance of the 2x200 TR A/C plants installed at NBH shall be deemed to be included in the scope of the bidder.
- v. Daily log shall be maintained to record observations of various parameters and services offered by the representative of the contractors, in the prescribed format and is to be reported to AIR authority.
- vi. Competent and efficient services shall be provided by the contractor to attend breakdown within the least possible time not exceeding 4 hours in any case, including Saturday, Sunday and Holidays.
- vii. The required temperature conditions inside studio are as under:  
Summer- 23<sup>0</sup> C degree DB  $\pm$  1<sup>0</sup> C  
Winter – 21<sup>0</sup> C degree DB  $\pm$  1<sup>0</sup> C

### **B. GENERAL DUTIES OF THE CONTRACTOR/OPERATING STAFF:**

- i. Safe, efficient and reliable round the clock operation of the 2x200TR A/C plants installed at NBH.
- ii. Starting and stopping of plant and accessories in proper sequence or as per requirements.

- iii. Checking of water level in cooling towers and expansion tank.
- iv. Checking of electrical equipments and controls.
- v. Cleaning of AHU/ Filters and cooling tower strainers on weekly basis.
- vi. Cleaning and dusting of plant equipments as covered in the equipment list on daily basis.
- vii. Leak testing of the system twice a day.
- viii. Maintenance of cooling tower including gear box, CT fans and motors. AHU including thermostat control system, motors, fans, blowers and pumps etc.
- ix. General routine maintenance as required.
- x. Quick action for stopping the equipment whenever abnormal sound and or vibrations are noticed.
- xi. Continuous monitoring, recording and maintaining of parameters at specified intervals, in the log sheets/books and submit the same to Engineer/Nominated officer from NBH for checking.
- xii. The preventive maintenance schedule (Annex.B) shall be implemented by the contractor.
- xiii. Maintaining proper record of preventive maintenance carried out and submission of the same to the Engineer/ Nominated Officers from NBH for checking.
- xiv. Taking all necessary precautions to ensure safety of the personnel and equipment.
- xv. Checking and maintenance of all ducting and valves on weekly basis.
- xvi. Checking and cleaning of AHU coil etc. once in a year.
- xvii. Descaling of the plant, including condenser, cooling coils to be carried out twice in a year.
- xviii. Over all annual maintenance of plant during winter is required to be carried out. A shut down of 20 days will be provided by AIR to facilitate this.
- xix. Maintenance of chiller line Nitrogen pressure system.

For above mentioned services in respect of 2x200TR A/C system (i.e. regular operation, routing checkups, preventive and predictive maintenance, testing as required), the contractor shall deploy necessary resources including tools and tackles in order to ensure safe, efficient and smooth operation and maintenances of the said systems.

**C. SPECIAL CONDITIONS OF CONTRACTS:**

- 1. The Contract shall be valid for a period of one year (12 months) or part thereof from the date of award of the work and Sg. Engineer, NBH, AIR may extend at its discretion the contract further for a period of one year on the same terms and conditions. Sg.E, NBH, AIR reserves the right to terminate the contracts without assigning any reason during the currency of the contract period by giving 30 days notice to the contractor in writing.
- 2. The contractor shall mobilize and place in position necessary resources within 07 (seven) days of the receipt of the Letter of Intent (LOI)/ or work order which ever is earlier. He shall also give actual details of competency of persons being deployed (Qualifications, Experience on similar systems, License/Permit to work or supervise etc.) within 5 days from the receipt of the letter of Intent (LOI)/ Work Order.
- 3. The successful tenderer shall make a Performance Security deposit for an amount of 10% of the contract value with DDO, AIR with in 7 days from the date of receipt of LOI/Work Order which ever is earlier. The security deposit may be in form of Bank Guarantee/fixed deposit valid for 14 months. The Performance Security deposit shall be refunded only when the contractor has obtained completion certificate from Sg.E., NBH , AIR, New Delhi.
- 4. The Contractor shall operate 2x200 TR A/C system and maintain this system as a whole and hand over the same in good operating condition after completion of the contract period. Any deficiency or damage to the equipment found, at the time of taking over the system back will be charged to the contractor's account and will be deducted from the security.

5. Water and Electricity will be provided free of cost to the contractor for the operation and maintenance of the system.
6. In case of breakdown in the system, the contractor shall immediately take up the rectification work and start/stop the other Unit(s), as the case may be and thereafter re-arrange and replace the damaged items, if any, so as to make the system ready within shortest possible time not exceeding a maximum period of 4 hours.
7. All the operation and maintenance check sheets/log sheets shall be submitted for approval of Sg.E, NBH, AIR before hand. The check/log sheets and tests required/specified are for general guidance. The same are subject to modification, as and when necessary for efficient functioning of equipment, keeping in view the recommendations of the equipment manufacturer, experience on the equipment and the actual requirements. Such modifications in the documents shall have prior approval of Sg.E, NBH, AIR Delhi.
8. The Contractor shall quote for total annual fee for the entire job contract, as per Annexure-A.
9. The Contractor shall plan/workout, well in advance, the requirement of resources like technical hands, special tools, tackles, spares, consumables and any other material required for smooth, safe and efficient operation and maintenance of the system.
10. The Contractor shall arrange all repairs, and spares necessary to run the system smoothly. (like bearing, seals, nut, bolts, gaskets, contactors, switches, relays fuses etc.). The cost of arranging all repairs as well as spares and their transporting shall be an integral part of lump sum fee (as per annexure-A) and no extra payment, whatsoever shall be made by NBH, AIR on this account.
11. Rewinding of all electric motors of pumps and fan units shall be done by the contractor as and when required. All materials and jobs involved in making the electric motors functional and refitting the same. i.e. replacement of bearing, bushes and plate, cooling fan, balancing of rotors etc. shall be responsibility of the contractor and no extra payment, whatsoever shall be made by NBH, AIR on this account.
12. The Contractor shall provide all tools, tackles accessories, equipments and normal consumables like grease, Gland Packing, PVC tape, Small Screws, Nut Bolts, Cleaning cloths and cleaning liquid (ie. CRC, CTC) acid, "C" Shield etc. for carrying out the subject job as instructed by the Sg.E, NBH, AIR Delhi from time to time. This office will make no extra payment, for all these items.
14. The Contractor shall be wholly responsible for theft, burglary, breakdown or any mischief done by their staff, and any loss to NBH, AIR shall be recovered from the immediate bill of the contractor, balance of any from securities or otherwise to be paid by contractor.
15. The Contractor shall abide by the rules and regulations of the security and safety laid down and prevalent in NBH, AIR from time to time
16. Any material brought inside the premises or taken out from the premises shall have necessary prior permission from the security personnel/ competent authority of NBH, AIR, Delhi.
17. The job/works carried out shall confirm to relevant standards, codes and practices. The workmanship shall confirm to sound engineering practices and standard norms of the industry.
18. If the contractor fails to attend / to rectify within a reasonable time limit (duly approved by NBH, AIR) the fault of A/C plant system or any equipment and points / works related with the

maintenance for efficient operation of the plant or system, the same shall be got attended by specialized agencies at the risk and cost of the contractor, for which necessary deduction shall be made from the contractor's bill. This point shall be independent of the penalty clause and the deductions for service charges / attending maintenance points shall not have any ceiling.

19. Any damage caused by the contractor or his team to the premises & its equipment shall be repaired / replaced by the contractor at his own cost. If the repair / replacement job is not done by the contractor, within a reasonable time, Sg.E, NBH, AIR shall get it done and the cost so incurred without any ceiling will be deducted from the contractor's bill.
20. The contractor on the expiry of his contract shall assist the next contractor to understand the operation and maintenance points of the system in total. The contractor shall continue to depute / deploy and the necessary resource in general shift for one week after expiry of the previous contract without any extra claim for the same.
21. For the purpose of major repairing work required at service centre and major overhauling etc. the facilities for lifting, handling, transportation, transit insurance etc. of the equipment of any appliances shall be provided by the contractor without any claim for the same.
22. Contractor shall arrange ladders, scaffolding, shuttering etc., for all the works at his cost and risk, if required.
23. The operator & / or team on duty shall not leave the premises during duty hours to procure the material or for any other work. The contractor shall depute separate resources for such work without any extra charges.
24. In case of the routine maintenance jobs which can not be completed / carried out during normal working hours, it shall be the responsibility of the contractor to carry out such jobs either after normal working hours on working days or on Sundays / Holidays. No extra payment shall be made to the contractor on this account. Contractor shall also take the necessary permission for overstaying and for Sundays / Holidays from Sg.E, NBH, AIR for such purposes, well in advance.
25. The contractor shall have the responsibility to co-ordinate and supervise the operations & technical experts / external party called by him to carryout maintenance job. Therefore, the supervisor of the contractor may have to come even on holidays/ Sundays and may be required even after the normal office hours as per instruction of Sg.E, NBH,AIR at no extra cost to NBH, AIR. Contractor shall also take the necessary security passes from NBH, AIR for such purposes well in advance.
26. The contractor shall ensure all his workmen deployed for undertaking contractual obligations.
27. The Contractor shall ensure that only competent staff is engaged by him for NBH, AIR, work and he shall remove the person whom Sg.E, NBH, AIR considers unsuitable for any reason whatsoever.
28. Any material to be replaced or to be freshly procured shall be of similar type as already in use in the system.
29. RATES : The tenderer should quote lump sum annual rates, which shall remain firm throughout the one year contract period. No separate payment shall be made for providing services on holidays and for the work specified in the tender.
30. All disputes arising in connection with the contract shall be settled in mutual consultation. If no agreement is reached the dispute shall be settled in accordance with the provisions of the

Arbitration and Conciliation Act'1996 and the rules made there under. The dispute shall be referred for arbitration to any arbitrator to be appointed by the head of the organization. The award of the arbitrator shall be final and binding on both the parties. The venue of the Arbitration shall be Delhi / New Delhi in India. The award to be given by the Arbitration shall be a speaking award. All questions, disputes, differences arising under, out or in connection with this contract shall be to the exclusive jurisdiction of Delhi Courts.

**D. CONDITIONS RELATED TO MANPOWER DEPLOYMENT:**

- a) The operators and helpers will not be permitted to work beyond their 8 hrs. working shift in any day. In case of absence of any one, the contractor shall make equivalent grade arrangement. The operators & helpers will not be permitted to work beyond 48 hrs. in a week. The manpower deployed for operation and maintenance is to report to nominated officer of AIR.
- b) The contractor himself or his representative of at least Manager / Engineer level shall meet with Sg.E, NBH, AIR or his nominated officer once a week and attend the office whenever called by him.
- c) The final manpower to be deployed should be duly approved by Sg.E, NBH, AIR.
- d) Copy of Educational Certificate of manpower to be deployed should be submitted along with tender.
- e) Police verification of the staff deployed for O & M of the A/C Plant is the responsibility of the bidder. The report of the police verification is to be submitted by the firm before deploying the staff.

**E. PENALTY CLAUSE:**

All possible efforts shall be made to minimize the down time of any equipment and in no case it shall exceed a breakdown of more than 4 hrs in a week time. The breakdown of more than 4 hrs. in a week time will attract penalty as below:-

- i. If fault is rectified with in 48 hrs, a penalty calculation rate basis on double the pro-rata basis will be imposed.
- ii. For other cases penalty calculation is triple the pro-rata basis will be imposed. And if the faults persists beyond the 5 days the work will be carried out by AIR through third party at the risk and cost of the firm.

**F. PAYMENT TERMS:**

- i) The total lump sum charges for round the clock operation and day to day maintenance as per Annexure A will be divided into twelve equal monthly installments to workout the monthly charge and payment will be made post monthly on satisfactorily completion of the service.
- ii) The monthly bill for the operation and maintenance shall be raised for the services rendered during the previous month to the Sg.E NBH, AIR.
- iii) Necessary deductions towards Security Deposit, Statutory deductions like income Tax, Work Contract Tax etc. shall be deducted from the monthly bills.

## **G. STATUTORY OBLIGATION:**

1. The contractor (which shall include the Contracting Firm / Company) shall be solely liable to obtain and to abide by all necessary licenses / permissions from the concerned authorities as provided under the various Labour Law legislations including labour license from the competent authority under the Contract Labour (Regulation and Abolition) Act,1970. The contractor shall also be bound to discharge obligations as provided under various statutory enactments including the Employees Provident Fund and Miscellaneous Provisions Act, 1952, ESI Act, 1948. Contract Labour (Regulation and Abolition) Act, 1970. Minimum Wages Act, 1948. Payment of Wages Act'1936. Workmen's Compensation Act'1923. Payment of Gratuity Act'1972. Payment of Bonus Act'1965. Income Tax Act. Service Tax Act and other relevant Acts, Rules and Regulations in force from time to time.
2. Contractor shall indemnify NBH, AIR against all claims and losses under various labour laws, statutes or any civil or criminal law in connection with employees deployed by him.
3. The liability for any compensation on account of injury sustained by an employee of the contractor will be exclusively that of the contractor.
4. Contractor to obtain insurance cover for his employees / equipment tools and tackles etc. and take third party risk insurance converges at his own cost. NBH, AIR shall not be responsible for any loss, damage and pilferage of his property and / or his employees.
5. Over and above the daily wage rate, payment shall be made for leave with wages to the deployed manpower from O & M.
6. Contractor shall observe provisions of the factories act in respect of working hours, holidays, rest intervals, leave and over time of the employees.
7. The contractor shall ensure regular and effective supervision of the personnel deployed by him
8. After the expiry of the contract or in case of the contract is terminated, the contractor shall hand over the systems as a whole in good running./operating conditions. The cost of any item found defective or not in running condition shall be charged to the contractors account.

## **H. TERMINATION OF THE CONTRACT**

The Sg.E, NBH, AIR, New Delhi reserves the right to terminate AMC at any stage without assigning any reason by giving 30 days written notice.

**SCHEDULE OF ANNUAL FEE**

DESCRIPTION	TOTAL ANNUAL FEE (RUPEES)
1. Lump sum annual fee for the work of operation and Comprehensive annual maintenance of the 2x200 TR A/C Plants system installed at NBH, AIR, New Delhi. The visiting charges for the services for supervisors and with necessary resources and spares on round the clock basis, as per the terms and conditions laid down in the tender document.	
2. Statuary duties/service tax payable extra, if applicable (Please note that no other taxes/duties levies etc. shall be payable except taxes mentioned above).	

Date:

Signature:

Place:

Name &amp; Designation:

Stamp of the firm:

END OF TENDER DOCUMENT.

**PREVENTIVE MAINTENANCE SCHEDULES**

**Monthly**

1. Test for leaks with soap solution, check all flanges,
2. To check conditions of belt, replace, it if found worn out.
3. To check and set right the alignment.
4. To gather the pulleys of blower & motor.
5. To check the condition of filter & louvers of blower and clean if found dirty.
6. To check smooth flow of water through the condensate drain and to rectify it if required.
7. Check for the leakage in seals/glands, and rectify.
8. to check for any abnormal noise/vibration & take corrective action.
9. To check the alignment of coupling of motor and pump.
10. To check the current drawn by motor.
11. To check for any leakages and repair, if required.
12. To check the water spray in cooling towers & take corrective action, if found improper.
13. To check for any leakages in cooling towers and repair, if required.
14. To check for smooth working of float valve.
15. To check proper operation of drain and overflow.
16. To inspect blower shaft for any wear & tear.
17. To tighten all nuts & bolts.
18. To tighten all electrical connections and motor terminals electrical panels feeding to A/C equipment.
19. To check working of all switches.
20. Blow out motor dust.
21. Check and clean contact points in starters.
22. Clean the cooling tower basin.

**Quarterly**

1. Check motor winding and connection wiring for continuity, meg. Motor and connection wiring on each lug.
2. Inspect starter contacts arc shield, transformer, and motor terminals, check connection in starter, tighten motor terminal control circuit terminals.
3. Greasing of bearing.
4. To check the shaft, sleeve and impeller for any wear & tear and take corrective action.
5. Cleaning of water basin on quarterly basis of cooling tower.
6. Greasing of blower bearings.
7. To check setting of overload & set it correctly.
8. Check setting and test operation of all safety controls and operating devices.
9. Overhaul motors and pumps.
10. Check & tighten hold down bolts of the equipments.
11. Check the interlocking of plant with pumps, CT and other safety switches.
12. Blow off dust in electrical panels.

**Half Yearly**

1. Clean water strainer in chilled water circuit.
2. Check the overload by measuring the amperage, check anti-recycle timer and operation of the electrical interlock, and voltage across the compressor terminal.

3. To tighten the clamps of cooling tower blades.
4. Cleaning of starters of all motors during winter shutdown.
5. De-scale the condensers.
6. Check the functioning of all controls and reset if require.
7. Clean the cooling tower fills.

**Yearly**

1. Check dampers operation for freeness in operation clean and lubricate.
2. Check for obstructions loose boards fallen insulation on air ducts.
3. Clean all wirings for loose contacts and rectify.
4. Clean baskets of pot strainers and “Y” strainers for AHU’s.
5. Drain all water from pipe lines and fill fresh water. Do not keep water lines without water.
6. Change the oil in oil sump. Renew filter and check oil temperature control.
7. Inspect starter contracts are shield, transformer, and motor terminals, check connection in starter, tighten motor terminal control circuit terminals.
8. Inspect, calibrate and adjust to original specification all safety and operating controls including low temperature and high- pressure cut outs, motor protector, oil pressure control, and fan temp. control.
9. Chemical cleaning of cooling coils twice in a year during winter shutdown after six months.
10. Meggar all the motors & electrical panels during winter shutdown.

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**ANNEXURE-C**

**DETAILS OF THE SYSTEM INSTALLED:**

Major Equipment covered under 2X200 TR A/C Plants (TRANE Make) installed and NBH

S. No.	Description	Nos.
1.	Screw chilling machines of 200TR capacity excluding compressors.	2
2.	Condenser Water Pumps with mechanical seals	3
3.	Chilled Water Pumps with mechanical seals	3
4.	Pressurized Expansion tank of 1000 Ltrs.	1
5.	AHU with controls	20
6.	Main Electrical Panel	1
7.	Wall Mounted Electrical Panel	5
8.	Remote Control Console Panel	1
9.	Variable frequency Drives	2
10.	AHU's distribution panel	1
11.	Cooling Towers	2
12.	Water Softening Plant(Under Warranty upto Feb, 2009)	1

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