

Tender Enquiry No: NEIGR/S&P/OT/18A/2018-19; Dated: 18/09/2018**F. No: NEIGR/ENGG/42/2017****e -TENDER /BID DOCUMENT**

ONLINE OPEN TENDER ARE INVITED BY DIRECTOR, NEIGRIHMS FROM ELIGIBLE MANUFACTURER /AUTHORIZED REPRESENTATIVE FOR SELECTION OF SERVICE AGENCY FOR OPERATION, RUNNING AND COMPREHENSIVE MAINTENANCE OF HVAC AND RELATED SYSTEMS AND SERVICES (2X4X100 TR) ALONG WITH THEIR ALLIED ACCESSORIES, AS WELL AS PROVISION OF MANPOWER FOR OPERATION AND DAY TO DAY WORK, FOR A PERIOD OF FIVE YEARS, SUBJECT TO RENEWAL AT THE OPTION OF THE INSTITUTE.

Bid Document Down loading Start Date:	14:00 hours of 18.09.2018
Pre-Bid Conference and Clarification Date:	16:00 hours of 28.09.2018
Last Date and Time for Submission of Bid Document Online:	14:00 hours of 11.10.2018
Last date and Time of Receipt of Earnest Money Deposit (Hard Copy):	14:00 hours of 11.10.2018
Date and Time of Opening of Techno -Commercial Bids:	14:30 hours of 12.10.2018
Cost of Earnest Money Deposit (EMD):	Rs 48,000.00
Tentative schedule after completion of Technical Commercial Evaluation subject to inputs from respective committee /authority:	60 days from the date of opening of Techno – commercial bid
Tentative schedule for awarding of contract including institutional requirement, justification of cost and on approval of the Competent Authority	60 days from the date of opening of e-Price Bid /BOQ

Bidders /Tenderers can download the tender /bid document from Central Public Procurement Portal website at www.eprocure.gov.in Bidders /Tenderers are required to submit their bid online by uploading all the relevant documents through www.eprocure.gov.in

Tender document can also be downloaded from the Institute's website at www.neigrihms.gov.in For further details regarding tender amendment /addendum /date extension please visit website: www.eprocure.gov.in



North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences

(An Autonomous Institute, Ministry of Health and Family Welfare, Government of India)

Director's Block, Mawdiangdiang, Shillong 793 018 (MEGHALAYA)

Website: www.neigrihms.gov.in /E-mail: storeneigrihms@gmail.com

Tele /Fax: (0364) 2538032

North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences

(An Autonomous Institute, Ministry of Health and Family Welfare, Government of India)

Director's Block, Mawdiangdiang, Shillong 793 018 (Meghalaya)

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SECTION I: NOTICE INVITING TENDERS (NIT)

Online tenders, in two-bid system, are invited by Director, NEIGRIHMS, Shillong for processing of stores /items for the Institute, as per enclosed specification and related terms and conditions.

1. Bidders /Tenderers would be required to register on the Central Public Procurement Portal at www.eprocure.gov.in, using a valid Digital Signature Certificate (DSC) and valid email address to be able to participate in the bidding process. On registration with the Portal they will be provided with a user id and password by the system through which they can submit their bids online.
2. Digital Signature Certificate (DSC) may be obtained from any authorized agencies registered with the Certifying Authority (CA), through National Informatics Center (NIC) in India. The bidders are requested to read the user manual available on website www.eprocure.gov.in before initiating the process of E-Tendering.
3. Bidders /Tenderers can download the bid document from Central Public Procurement Portal website at www.eprocure.gov.in Bidders /Tenderers are required to submit the bid online by scanning and uploading all the relevant documents through www.eprocure.gov.in
4. Tender document can also be downloaded from the Institute's website at www.neigrihms.gov.in For further details regarding Amendment /Addendum /Extension please visit website: www.eprocure.gov.in and www.neigrihms.gov.in
5. No tender fee is required for downloaded documents.
6. Earnest Money Deposit (EMD) in the form of Call deposit, Banker's Cheque, Fixed deposit or Demand draft, drawn in favour of Deputy Director (Admn.), NEIGRIHMS, Shillong or Bank Guarantee of any Scheduled Bank, shall be scanned and submitted online, along with the Techno-commercial bid (Un priced Bid), within the period of tender online submission date and time and the original (hard copy) should be submitted to Stores & Procurement Section, Director's Block, Mawdiangdiang, NEIGRIHMS, Shillong -793018 within the stipulated date and time.
7. In the event of the date being declared as a closed holiday for purchaser's office, the date for opening of bids online will be the following working day at the appointed times.
8. Bidders/Tenderers need to scan and upload the required documents like GST /Service Tax registration, PAN Number/Card, valid document regarding the existence and registration of the firm along with the with Techno-commercial bid.
9. **Qualification Criteria:**
 - The bidding agency should have an average annual financial turnover of Rs 36 lakhs or more in similar project /works during the last three years ending 31st March of the FY 2017 -2018, (which are at least 30% of the estimated cost /value of award)
 - Minimum 3 years of experience of having successfully completed /executing similar project /maintenance contract.
 - Experience of having successfully completed similar works /maintenance contract during last 7 years ending last day of month previous to the one in which applications are invited.

Similar contract of either of the following:-

- Three similar completed works /maintenance contract costing not less than the amount equal to 40% of the estimated cost of annual contract valued at Rs 24 lakhs or more. Certificate of award of contract for maintenance /service provision and successful implementation /completion should be submitted along with the offer
- Or*
- Two similar completed works /maintenance contract costing not less than the amount equal to 50% of the estimated cost of annual contract valued at Rs 24 lakhs or more. Certificate of award of contract for maintenance /service provision and successful implementation /completion should be submitted along with the offer
- Or*
- One similar completed work /maintenance contract costing not less than the amount equal to 80% of the estimated cost of annual contract valued at Rs 24 lakhs or more. Certificate of award of contract for maintenance /service provision and successful implementation /completion should be submitted along with the offer
 - Clarification: Similar works /maintenance contract means for maintenance, service provision, repair works, upkeep in respect of HVAC /Air Conditioning systems and allied works comprising of one or multiple work order from Government /Corporate/ Organisation, meeting major technical parameters of the current BOQ /specified services floated in the tender enquiry document.

10. Accreditation/certification from competent authority.

11. Authority letter(s) of various principals whose equipments/instruments the bidder is authorized to offer "after sales service".
12. The technical bids will be opened online by a committee of members duly constituted for the purpose at the time and date as specified in the tender document. All statements, documents, certificates, proof of EMD/ Affidavits, etc uploaded by the bidders will be verified and downloaded for technical evaluation and the result of technical bid evaluation will be displayed on www.eprocure.gov.in which can be seen by all bidders who participated in the tender.
13. The agency during the currency of the contract, shall comply with all the prevalent rules and regulation in force relating to EPF Act, Minimum Wages Act, ESI Act etc. and shall also comply with all relevant labour laws as may applicable or modified from time to time by the concerned authorities and in no case NEIGRIHMS, Shillong would compensate for the losses and damages of materials /manpower.
14. The bidders should download the **BoQ.xls** and filled in the blank spaces provided for mentioning the name of bidder and rates. Bidders need not modify any other text or background shown in the BOQ template or replace it with any other copy of same **BOQ in .xls format**. NEIGRIHMS /Central Public Procurement Portal (www.eprocure.gov.in) will accept the BOQ template only and hence the rate should not be quoted in any other place except BOQ template.
15. The Financial bid (price bid) i.e. Bill of Quantity (BOQ) of only technically qualified bidders will be opened online by a committee of members and the result will be displayed on the www.eprocure.gov.in which can be seen by all bidders who participated in the tender.
16. No work will be allotted to Non-tribal bidder, contractors, Suppliers, stockists, bonded warehouse, private carriage contractors, cooperative societies etc except under a valid trading license issued by the Khasi Hills Autonomous District Council, Shillong.
17. The firm has to give an affidavit duly attested by the Notary Public (in original) on a non-judicial stamp paper of Rs. 10/= that the firm is not supplying the same item at lower rates quoted in this tender to any Government/Private organization or any other institution during past one year, as per "FALL CLAUSE" adhered by DGS & D and other Government agencies.
18. The firm has to give an affidavit duly attested by the Notary Public (in original) on a non-judicial stamp paper of Rs. 10/= that there is no vigilance/CBI/FEMA case pending against the firm/supplier.
19. At any time prior to the date of submission of bid, Director, NEIGRIHMS may, for any reason, whether at his own initiatives or in response to a clarification from a prospective bidder, modify the bidding documents by an amendment.
20. With a view to encourage 'Make in India' and promote manufacturing and production of goods and services in India, preference will be given to domestically manufactured products, as per Ministry of Commerce and Industry, Department of Industrial and Policy and Promotion, Government of India Notification No: P -45021/2/2017-B.E.-II; dated: 15.06.2017.
21. The contractor shall be responsible to follow Environmental (Protection) Act 1986, Environment (Protection) Rules, 1986 and maintain noise level as per standard. Further, the contractor shall be responsible to follow Hazardous waste (Management, Handling and Transboundary movement rules,2008), take steps to handle hazardous waste management, selling/disposal of hazardous waste, maintenance of record of hazardous waste handled, packing, labelling and transport of hazardous waste ,reporting to state pollution control board in case of accident occurs while transportation, obtain no objection certificate from pollution control board, submit statutory/necessary compliance /annual returns/other obligations to state pollution control board.
22. The tendered rates and the validity of bids shall be for a minimum period of 120 days from the date, as the tender are finalized /awarded.
23. Settlement of disputes – Director, NEIGRIHMS or his authorized representative shall be the final authority in all disputes and decision will be binding on all concerned.

Sd/-
Biomedical Engineer,
For and on behalf of Director, NEIGRIHMS, Shillong

ANNEXURE: A: DETAILED TERMS AND CONDITIONS OF TENDERS

1. The **Two Tender System**, i.e. “Techno – Commercial Tender” and “Price /Finance Tender” prepared by the tenderer shall comprise the following:

A) Techno – Commercial Tender (Un priced Tender)

- i) Earnest Money Deposit (EMD)
- ii) Tender Form (Un -priced)
- iii) Documentary evidence, as necessary in terms of establishing that the tenderer is eligible to submit the tender and, also, qualified to perform the contract if its tender is accepted.
- iv) Tenderer /Agent who quotes for goods /services manufactured by other manufacturer shall furnish Manufacturer's Authorisation Form. While giving authorization to agent, to quote on their behalf, manufacturer has to give the reasons for not quoting directly against this tender.
- v) Power of Attorney in favour of signatory of TE documents and signatory of Manufacturer's Authorisation Form
- vi) Documents and relevant details to establish that the goods and the allied services to be supplied by the tenderer conform to the requirement of the TE documents.
- vii) Performance Statement along with relevant copies of orders and end users' satisfaction certificate.
- viii) Price Schedule as per BOQ (Financial Bid) with all the details including Make, Model etc. of the goods offered with prices blank (without indicating any prices).
- ix) Certificate of Incorporation in the country of origin.
- x) Checklist

B) Price Tender:

It is the responsibility of tenderer to go through the TE document to ensure furnishing all required documents in addition to above, if any.

1. Price bid as per BOQ format only to be submitted online
2. A tender, which does not fulfil any of the above requirements and/or gives evasive information/reply against any such requirement, shall be liable to be ignored and rejected.
3. Tender document sent by Speed Post /Registered Post /Courier /Fax /Mail or any other related mode, other than by online submission, through www.eprocure.gov.in shall be ignored.
4. The tenderers should give rates, showing taxes, if any, and levies, packing forwarding and insurance charges. Vendors/bidder may note that the Institute has obtained CDE certificate pertaining to Customs duty and therefore price consideration should be offered accordingly. Tender not confirming to these requirements shall be rejected and no correspondence will be entertained whatsoever.
5. The tendered rates and the validity of bids shall be for a minimum period of five years from the date, as the tender are finalized /awarded, till the finalization of next tender by the Institute, whichever is earlier.
6. Delivery prospects with definite date of delivery at destination taking into cognizance transit facilities must be indicated.
7. If the services is not effective, the Director, NEIGRIHMS, Shillong will have the right to impose penalty as indicated.
8. In case of non provision of services within the stipulated date, the Director, NEIGRIHMS, Shillong will have the right to impose penalty as deemed fit to resort to risk purchase in full or part thereof at his/her discretion, his/her decision shall be final and binding.
9. Excise Duty & other such levy imposed by the Govt. of India from time to time will be authorized extra on demand with adequate proof thereof.
10. The Director, NEIGRIHMS, Shillong shall be the final authority to reject full or any part of the service which is not confirming to the specification and other terms and conditions.
11. No payment shall be made in advance. The tenderer would remove rejected items within two weeks of the date of rejection at their own cost and replace immediately. In case these are not removed these will be auctioned at the risk and responsibility of the suppliers without any further notice.
12. Tenderers submitting tenders would be considered to have considered and accepted all the terms and conditions. No inquiries verbal or written shall be entertained in respect of Acceptance or rejection of the tender.
13. GST and other statutory levies should be shown separately and should not be included in the basic price. Otherwise it will not be considered.
14. The quantity shown in the schedules can be increased or decreased to any extent depending upon the actual requirement.

15. Any action on the part of the tender to influence anybody in the said Institute will be taken as an offence and the tender submitted by the firm will subsequently be rejected.
16. If at any time, any question, dispute or difference whatever shall arise between the two parties (NEIGRIHMS on the one hand and vendor on the other hand) in relation to the purchase either of the parties may give to the other notice in writing the existence of such a question, dispute or difference and the same shall be referred to two arbitrators, one to be nominated by the firm. Either party shall serve such a notice of the existence of any question, dispute or difference in connection with this purchase within 30 days of the beginning of such dispute failing which all right or claims shall be deemed to have been forfeited and absolutely barred. Before proceeding with the reference the arbitrators shall appoint/nominate an umpire. In the event of the arbitrators not agreeing in their award the umpire appointed by them shall enter upon the reference and his award shall be binding on the parties. The venue of the arbitrator shall be at NEIGRIHMS. The provision of the Indian Arbitration and Reconciliation Act 1996 and of rules framed if under and any statutory modifications thereof shall be deemed to apply and be incorporated for the supply, installation, installation and commissioning etc.
- Upon every or any such reference the cost of any incidents to the reference and awards respectively shall be at the discretion of the arbitrators on in the event of their not agreeing of the Umpire appointed by them who may determine the amount thereof or direct the same to be fixed as between solicitors and client or as between parties and shall direct by whom and in what manners the same shall be borne and paid.
17. The courts at Shillong will have the jurisdiction to try any matter, dispute or reference between the parties arising out of the contract. It is specifically agreed that no court outside and other than Shillong court shall have jurisdiction in the matter.
18. Any failing of omission to carry out the provision of the contract by the supplier shall not give rise to any claim by any party, one against the either, if such failure of omission or arises from an act of God, which shall include all acts of natural calamities such as fire, flood, earthquake hurricane or any pestilence or from civil strikes, compliance with any stature and/or regulation of the Government, lookouts and strikes, riots, embargoes or from any political or other reasons beyond the suppliers control including war (whether declared or not) civil war or state or insurrection, provided that notice or the occurrence of any event by either party to the other shall be given within two weeks from the date of occurrence of such an event which could be attributed to force major conditions.
19. The tenderer/ bidder shall furnish a non-blacklisting certificate that the firm has not been blacklisted in the past by any government/ Private institution. The tenderer/ bidder has to give an affidavit on non-judicial stamp paper duly attested of Rs.10/- that there is no vigilance/CBI case pending against the firm/supplier and the firm has not been blacklisted in the past by any Govt. or Private Organization.
20. Tender by Tele-fax/telegram/fax/e-mail will not be accepted.
21. If the tenderer gives a false statement on any of the above information, the firm/supplier will not be considered and their quotation/tender shall be deemed to be rejected and the security deposited will stand forfeited.
22. It will be the prerogative of the Institute to place the supply order for the whole lot/item or in piecemeal basis depending upon the requirement of the Institute. The Institute shall have the right to reject any tender without assigning any reason thereof. No correspondence will be entertained in this regard. Only one best quality item (according to our specification) should be quoted against the item.
23. Payment of the approved vendor NEIGRIHMS shall be made through cheque or electronic clearing system. In case of cheque.
24. Bill for deputation of Manpower and that of CMC to be raised separately.
25. A) If the above-mentioned certificates/documents are not submitted along with the tender, such offers will not be considered and will be out rightly rejected.
B) Any tenderer /supplier giving false information shall be disqualified and removed from the rate contract. No business, henceforth, will be done with the firm/supplier.

TENDER FORM

Date _____

To

(Complete address of the purchaser)

Ref. Your TE document No. _____ dated _____

We, the undersigned have examined the above mentioned TE document, including amendment/corrigendum No. _____, dated _____ (if any), the receipt of which is hereby confirmed. We now offer to supply and deliver _____ (Description of goods and services) in conformity with your above referred document for the sum indicated in the price bid, attached herewith and made part of this tender.

If our tender is accepted, we undertake to supply the goods and perform the services as mentioned above, in accordance with the delivery schedule specified in the List of Requirements.

We further confirm that, if our tender is accepted, we shall provide you with a performance security of required amount in an acceptable form in terms of GCC clause 5, read with modification, if any, in Section - V – “Special Conditions of Contract”, for due performance of the contract.

We agree to keep our tender valid for acceptance as required in the GIT clause 20, read with modification, if any in Section - III – “Special Instructions to Tenderers” or for subsequently extended period, if any, agreed to by us. We also accordingly confirm to abide by this tender up to the aforesaid period and this tender may be accepted any time before the expiry of the aforesaid period. We further confirm that, until a formal contract is executed, this tender read with your written acceptance thereof within the aforesaid period shall constitute a binding contract between us.

We further understand that you are not bound to accept the lowest or any tender you may receive against your above-referred tender enquiry.

We confirm that we do not stand deregistered/banned/blacklisted by any Govt. Authorities.

We confirm that we fully agree to the terms and conditions specified in above mentioned TE document, including amendment/ corrigendum if any

(Signature with date)

(Name and designation)

Duly authorised to sign tender for and on behalf of

CHECKLIST

Check List of Certificates/ Documents required to be submitted with Techno -Commercial Bid: I

The tenderer are advised to submit the following certificates under the category of "Vital documents" invariably along-with Techno-Commercial Bid. If these documents are not submitted/ conditions not met, the quotation shall be summarily rejected and no further correspondence, in this regard, shall be entertained.

- Violation of two-bid system, Part-I.
- Tender Form
- EMD amount. (If applicable)
- GST /Service Tax registration certificate, any other certificates regarding the registration and existence of the firm and trading license on award of contract
- Fall clause declaration
- Non-black listing declaration

NEIGRITHMS

SCOPE OF WORK

The Scope of work as mentioned below are the minimum expected from the firm/ agency/ contractor apart from break down maintenance and any other work required for maintenance in proper way as per the maintenance manuals of respective equipment and as per good engineering practices will be required to be done under this scope of work. Successful bidder will make Proforma for recording the following minimum work schedule/ parameters to the entire satisfaction of NEIGRIHMS and to ensure proper accomplishment of these tasks.

Comprehensive Maintenance Contract:

- i. Any breakdown will be attended immediately within 24 hours.
- ii. Cleaning/discleaning of condensers, cooling oil, cooling tower, maintenance of cooling tower etc. will be carried out as and when required.
- iii. All valves, fittings etc. requiring rectification/ replacement (from cooling tower to AC plant) are to be carried out immediately.
- iv. Compressor oil is to be changed as and when required.
- v. Repair/ servicing of components of the equipment including replacement of worn out parts are to be done immediately.
- vi. Replenishment of refrigerant required as a result of leak in the system arising out of fair wear and tear, are to be done as and when required.
- vii. All spares, components to be used/ replaced must be of genuine and necessary documentary evidence are to be submitted, prior to fitment of same.
- viii. The rates quoted for the CMC services shall include all taxes and duties as applicable inclusive of transportation, freight & insurance.
- ix. Overhauling of the components of the equipment of the site as and when required.
- x. Rewinding of motors as and when required.
- xi. Cleaning of "Y" strainer and Pot strainer of water lines.
- xii. Checking of terminal tightness at the panel end, cleaning of contact tips, inspection/ repairing/ replacement/ of all internal components to ensure healthiness and proper function of the AHU's after first main incoming switch.
- xiii. Cleaning of FCU and AHU filters and coils as and when required.
- xiv. All steam generator for humidification and dehumidification system.
- xv. Water should be drained out of each chiller and hot water circuit during shut down period.
- xvi. Machines/ Spares/ Systems which are needed to be repaired or replaced should be the same as existing. In case of changes required that should be done with the prior permission of the competent authority.
- xvii. Check the compressor oil level and reflashment and if not required submit the oil chemical testing report like viscosity/ toxicity/ flammability which are the properties of compressor oil.
- xviii. Cleaning of AHU room to be carried out on regular basis.
- xix. Cleaning of AHU drain line up to the end of the main drain to be carried out as and when required.
- xx. All replacement materials/ spares should be kept in the plant itself.
- xxi. Recording of set reading and evaluating them to ensure the overall healthy condition of the plant and same to be submitted to the competent authority.
- xxii. Changing of oil annually for open type compressor.

1. Work to be done on Monthly basis:-

- i. To check/ repair the gland/ seal, coupling of pumps and AHU's V-belt.
- ii. To check the solenoid valve, safety controls Mechanical, Electrical/ Electronics and the inter-locking of the various equipment.
- iii. To check and clean the nozzles of the cooling towers and to clean the basin and sump of cooling towers. Look for water escaping from sides or from overflow and take remedial measures.

2. Routine Services to be done Quarterly:-

- i. Cleaning/ Replacement of filter.
- ii. Checking operation of the controls of the air conditioners such as selector switch, thermostat, relays, etc.
- iii. Checking the air flow through the supply air grill, return air grill.
- iv. Checking operation of the drive motors and fans.
- v. Checking air temperature at the following location (Dry Bulb & Wet Bulb temp.):
 - a. Supply air grill.

- b. Return air grill.
- vi. Checking/ Repairing Firmness of the supporting arrangement for the compressor, motor of the air conditioners etc.
- vii. Replacement of any component of air conditioners found defective after the above checks and tests.
- viii. Changing of refrigerant gas during the period of contract if need arises.
- ix. To check the foundation bolts of the pumps and motors and to take necessary action if required.
- x. To check and reset the relays and controls, and to maintain the proper record. Carry out servicing of the main switches/ ACB's as required. To tighten all screws, nuts, bolts of the electrical power/ control system.
- xi. Check the quantity of air flow from various outlets in each room/ area and do adjustments of dampers etc. as and when required.
- xii. The AC plant will be checked and serviced periodically once in every three months (quarterly). Service report/ record duly signed, certified by the competent authority will have to be submitted.
- xiii. Lubricating the bearings of motors, pumps and fans are required to be carried out quarterly.
- xiv. Quarterly inspection of bolts/ couplings etc. for adjusting tension/ replacement is to be done.
- xv. Quarterly inspection / servicing of the MCC panel for low side of the HVAC system.
- xvi. Cleaning of the AHU pipe line "Y" strainer of chiller/ Hot water generator pipe line as and when required.

3. Work to be done Half Yearly :-

- i. Clean water strainer in chilled water circuit.
- ii. Check the overload by measuring the amperage, check anti-recycle timer and operation of the electrical interlock, and voltage across the compressor terminal.
- iii. To tighten the clamps of cooling tower blades.
- iv. Cleaning of starters of all motors during winter shutdown.
- v. De-scale the condensers.
- vi. Check the functioning of all controls and reset if required.
- vii. Clean the cooling tower fins.
- viii. Overhauling/ cleaning/ repairing/ changing/ replacement of cooling tower components (louvers, spray nozzles, water sump etc.) are to be carried out half yearly.
- ix. Repair/ servicing of all electrical starting gears (OCB, resistance, controllers, starters etc.) of all motors including pumps, compressors, AHU etc. related to AC plant are to be carried out half yearly.
- x. Checking/Cleaning/Repairing/Replacement of filters/float valves and the nozzles of the Cooling towers and to clean sump of cooling towers. Look for water leakages from sides or from overflow and take remedial measures.
- xi. Chemical cleaning of cooling coils twice in a year during winter shut down after six months.
- xii. Grill and diffuser cleaning to be carried out half yearly.
- xiii. Calibration of various analog sensors in every six months and submit the healthy condition report to the competent authority.

4. Annual Maintenance Services :-

- i. Descaling of all water pipe lines to be carried out yearly.
- ii. Cleaning the condenser and evaporator coils with suitable detergent / chemical solution and flushing with high pressure jet of water.
- iii. Greasing of motors and all moving parts
- iv. All pump motors and AHU a motor has to be greased and burnished including rewinding of motors has to be done as and when required.
- v. Check dampers operation for freeness in operation clean and lubricate.
- vi. Check for obstructions loose boards fallen insulation on air ducts.;
- vii. Clean all wirings for loose contacts and rectify.
- viii. Drain all water from pipe lines and fill fresh water. Do not keep water lines without water.
- ix. Change the oil in oil sump. Renew filter and check oil temperature control.
- x. Inspect starter contracts are shield, transformer and motor terminals, check/repair connection in starter, tighten motor terminal control circuit terminals.
- xi. 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 temperature control.

- xii. Meggar all the motors & electrical panels during winter shutdown and the report of the same to be submitted to the competent authority.
- xiii. Overhauling of compressor/ chillers to be carried out yearly.
- xiv. Annual changing of the oil for open type compressors.
- xv. Log book for recording of parameters related to HVAC plant system should be provided and maintained by the firm/agency/contractor showing the complete working and maintenance done on the HVAC plant system and it should be made available to the Engineer-in-charge of NEIGRIHMS, such as chiller log book, hot water generator/ pump motors log book and individual room/ area temperature log sheet/ stock register/ maintenance register/ 2 No's of thermometer one as standby/ anemometer for measuring CFM in various areas of the hospital.
- xvi. Room temperature of all the departments, rooms, laboratories and other areas of the hospital should be taken on every four hours by the operator/ helper and the same required to be submitted to the Engineer-in-charge.

5. Special Requirements :-

- A specialized HEPA filters has been used in the inlet air systems of the HVAC plants. Special Maintenance and clearing has to be done on it. These filters have to be changed as per schedule/System requirement, as and when required.

6. Other Works :-

- i. Oil/ refrigerant to be provided as and when required for proper functioning of HVAC Plant systems.
- ii. Check/ repair of complete electrical system.
- iii. Any other requirement to keep the whole HVAC plant systems in proper, healthy running condition as per operation and maintenance manual of various equipment.
- iv. Validation/ Calibration Certificates of all instruments to be submitted to the Institute.
- v. Overhauling/ repairing/ changing/ replacement of compressor/ chillers as and when required.
- vi. Repairing/ replacement of hot water generator components will be carried out as and when required.

7. On Call Services :-

On call services shall include attending to any complaint at any time of the year, on receipt of verbal/ written complaint from coordinating officer of NEIGRIHMS. The down time for attending to and rectification of defects/ complaint shall not exceed 48 hours.

8. List of Spares /Consumables which are to be kept in stock by the Contractor at NEIGRIHMS site :-

1. HRC fuses of various rating.
2. Contactors, overload relays, contract points, lamps, etc.
3. V-belt of various sizes as per site requirement.
4. Indicator lamps including holders for various electrical panels/ DB's etc.
5. Grease and lubricating oil required for lubrication of mechanical parts of the equipment are covered in this scope.
6. Replacement of Hepa filters has been done as and when required.
7. A minimum stock of the refrigerant R-22 to be required at site.
8. Different sizes of ball bearings for the motors, blowers etc. to be mentioned at site.
9. Lugs/ thimbles/ brass compression glands/ cable jointing kits etc. are required for the cables of any size.
10. CTC/ contact cleaning compounds required for cleaning periodically.
11. Handle/ Knobs of the switch fuse / fuse switch units.
12. Toggle switches of the panels, Isolator of motor or pump
13. Motor terminal , Desk panel star delta terminal, PLC relay, auxiliary contractor

NOTE: This list of consumables/ spares can be extended based on experience during operation and maintenance of services as per site requirement.

Annexure A - List of Stores /Items of HVAC system for one time Repairing

Sl. No.	Description of Equipment	Quantity
1.	100 TR CAPACITY WATER COOLED CHILLING PACKAGES WITH RECIPROCATING COMPRESSOR WATER COOLED CONDENSER AND CHILLER LOCATED IN THE PLANT ROOM (All spares requiring replacement should be original company made)	4 Nos.
2.	CHILLED WATER PUMP (20HP) WITH MOTOR	5 Nos.
3.	CONDENSER WATER PUMP (20HP) WITH MOTOR	5 Nos.
4.	HOT WATER GENERATOR (600KW) (Hot Generator's Display should be replaced with original company made)	3 Nos.
5.	HOT WATER PUMP WITH MOTOR (15HP)	3 Nos.
6.	FCU -1.5TR(only thermostat)	12 Nos.
7.	AIR HANDLING UNITS OF DIFFERENT CAPACITIES INSTALLED IN VARIOUS FLOORS & PAN HUMDIFIER ACCESSORIES OF OT AHU'S	10 Nos.
8.	MCC PANNEL STARTER DESK FOR PUMP MOTOR	10 Nos.
9.	DIRECTOR BUNGALOW HOT GENERATOR SYSTEM (150 KW)	1 Nos.
10.	ACTUATOR FOR AHUs	5 Nos
11.	AUDITORIUM AHUs	2 Nos
12.	CHANGING OF COMPRESSOR OIL	50 tr *8 and 100 tr*8

Annexure: B - List of Stores /Items of HVAC Plant to be covered under 5 years (five) Comprehensive Maintenance Contract (CMC)

Sl. No.	Description of Equipment	Quantity
1	ELECTRICAL MAIN PANEL	2 Nos.
2	PLC	1 No.
3	100 TR CAPACITY WATER COOLED CHILLING PACKAGES WITH RECIPROCATING COMPRESSOR WATER COOLED CONDENSER AND CHILLER LOCATED IN THE PLANT ROOM	8 Nos.
4	200 TR CAPACITY INDUCED DRAFT FRP COOLING TOWERS	4 Nos.
5	CHILLED WATER PUMP (20HP) WITH MOTOR	8 Nos.
6	CONDENSER WATER PUMP (20HP) WITH MOTOR	8 Nos.
7	HOT WATER GENERATOR (600KW)	4 Nos.
8	HOT WATER PUMP WITH MOTOR (15HP)	5 Nos.
9	CONTROL DESK	2 Nos.
10	FCU -1.5TR	65 Nos.
11	AIR HANDLING UNITS OF DIFFERENT CAPACITIES INSTALLED IN VARIOUS FLOORS & PAN HUMDIFIER ACCESSORIES OF OT AHU'S	74 Nos. (approx.)
12	STARTER PANEL FOR AHU	74 Nos. (approx)
13	MAIN CONTROL PANEL FOR AHU BLOCK WISE	12 Nos. (approx.)
14	DUCTING LINE	1 lot
15	PIPING NETWORK FOR WATER CIRCULATION WITH NECESSARY FITTINGS	1 lot

Annexure: C - List of Stores /Items of HVAC Plant to be covered under 5 years (five) Comprehensive Maintenance Contract (CMC)

Sl. No.	Location	Description of Stores /Items	Quantity
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1.	Guest House	Hot Water Generator (150 KW)	01 no
		Air Handling Units	12 nos
		FCU 1.5 TR	12 nos
		Hot Water Pump with Motor (3 HP)	02 nos
2.	Director's Bungalow	Hot Water Generator (50 KW)	01 no
		FCU 2.0 TR	08 nos
		Hot Water Pump with Motor (2 HP)	02 nos

Annexure: D - Deputation of Manpower for operation and day to day work of HVAC Plant 24 x 7

Sl. No.	Designation	Number of Workers	Working Experience
1	Skilled Operator	2 (two) Nos. Skilled Operator	<p>Certificate holder in AC & refrigeration for complete operation of the HVAC Plant (He must be able to repair/ replace components such as, HP/LP cut-outs, thermostats, oil seals, filters etc. and shall be able to carry out gas charging etc.)</p> <p><u>Experience :</u> Minimum 3 years experience in HVAC system.</p> <p>Note: - Required educational qualification & experience certificates should be submitted to the Competent Authority.</p>
2	Un-skilled Helper	3 (three) Nos.	<p>For operating valves etc. and noting down readings. Also he will be assisting the operator at the time of repairs/ replacement of minor components, gas charging etc.</p> <p><u>Experience :</u> Minimum 3 years experience in HVAC system and certificate for the same should be submitted to the Competent Authority.</p>

Microvee and Hepa Filters

Sl. No.	Description	Unit
1.	<p>Hepa Filter –</p> <ul style="list-style-type: none"> • Size in mm – 610 X 610 X 305 • CFM/CMH – 1000 • Micron rating - 0.3μ • Efficiency – 99.97% • Pressure drop – 15mm WG 	Each
2.a.	<p>Microvee Filter –</p> <ul style="list-style-type: none"> • Size in mm – 610 X 610 X 150 • CFM/CMH – 1000 • Micron rating - 5μ • Efficiency – 98% • Pressure drop – 6.5mm WG 	Each
2.b.	<p>Microvee Filter –</p> <ul style="list-style-type: none"> • Size in mm – 610 X 610 X 300 • CFM/CMH – 2000 • Micron rating - 5μ • Efficiency – 98% • Pressure drop – 6.5mm WG 	Each
2.c.	<p>Microvee Filter –</p> <ul style="list-style-type: none"> • Size in mm – 610 X 610 X 305 • CFM/CMH – 2000 • Micron rating - 5μ • Efficiency – 98% • Pressure drop – 6.5mm WG 	Each

Details of day to day work including rendering routing services round the clock

Scope of operation will be as follows:-

Daily:-

1. Day to day (round the clock) starting and stopping of the plant as per requirement.
2. Housekeeping of plant room and AHU rooms and maintaining the general cleanliness.
3. Daily checking the water level including tower.
4. Daily checking of water level at chilled water expansion park,
5. Leak testing of refrigeration systems.
6. Checking for proper operation of the plants.
7. Attending of user call within 15 minutes and initiating required action.
8. Operation of AHUs as per the requirement.
9. Recording the abnormalities observed in the equipment and informing the same to the competent authority of the hospital as well as the vendors.
10. Checking of cooling tower water level as per requirement.
11. Attending any type of complaints related to air conditioning system and taking necessary action to rectify the problem.
12. The operators will obey by the discipline of establishment and follow the instructions of competent authority.
13. To check and clean the outer surface of all the equipments.
14. To check the oil levels and refrigerant pressures of the chiller.
15. To check room temperatures of all departments of all floors and maintain a log book in every interval of 6 hours.
16. To check overall performance of the plant.
17. To maintain a daily "Log book" of the hot generators chillers in use.
18. To purge the chilled/ hot water circuit to eliminate air from the system.
19. To check and replenish the water level of the pressure tank/ water reservoir/ expansion tank.
20. To check the motor bearing noise.
21. To check and rectify the motor terminal in MCC panel as and when required.
22. Operation and checking of HVAC system line pump motors, AHU as per requirement.
23. Record the operational data like pump pressure/ motor amps etc.

Weekly:-

1. To clean all the air filters of the AHU of all floors either by compressed air or by soap water solution depending on the make of filters.
2. To check drainage system of all AHUs. If it is observed that the drainage system is clogged then the inside dirty water is to be cleaned.
3. To check and adjust the belt tension of all AHUs belts of all floors.
4. To clean all the grills and diffusers in the entire hospital area by soap water solution/ chemical if required.
5. To lubricate bearings whenever it is applicable.
6. To lubricate the chilled water pump and check the pump gland.

The operators will have to report to the undersigned on the day they start operating the chiller/ hot water generator units.

Additional requirement:

1. The Tenderer shall comply with all existing labour legislations and Acts, Provisions, such as Contract Labour Regulation Act, Workmen's' Compensation Act, Minimum Wages Act, Payment of Wages Act, Provident Fund Act, ESI Act, etc. For any lapse or breach on the part of the Tenderer in respect of non-compliance of any Labour legislation in force during the validity of the contract, the Tenderer would be fully responsible and would indemnify the Institute, in case the Institute is held liable for the lapse if any, in this regard.
2. Police verification and worker's identity cards will be compulsory before taking the charge of services. Employees will be in proper uniform provided by the contractor, medically found fit, hygienically suitable, nails trimmed, haircut and shave taken.
3. The bearer /staff (not below the age of 18 years) employed by the contractor shall have to be medically fit and kept neat and clean. The contractor shall not employ young children as prohibited under the law / rules / regulations.
4. All the workers engaged by the Tenderer for carrying out tasks under this contract, shall be deemed to be the employees of the Tenderer only. The tenderer shall be solely responsible for their wages, fringe benefits, conduct, duty roster, leave-records, relievers, etc. The tenderer shall also provide its Workers photo-identity cards which shall be checked by the NEIGRIHMS, SHILLONG, as and when necessary.
5. The Successful service agency/contractor shall maintain a complaint book in a prominent place in the premises and in such a way that it is easily accessible to any person who wishes to record any complaint and the said book shall be open for inspection by the concerned officer of NEIGRIHMS, Shillong.

6. The Contractor shall maintain and provide all necessary documentation, registers and records in connection with the performance and other related documents including for complying with any statutory requirements and provisions of applicable laws.
 7. The premises shall not be used for residential purposes. No additions or alterations of the premises will be made without permission of the Institute.
 8. The contractor shall maintain the Institute premises in good condition and shall not cause any damage thereto. If any damage is caused to the premises by the contractor or his workers, employees or agents the same shall be rectified by the contractor at his own cost either by rectifying the damage or by paying cash compensation as may be determined by the Institute.
 9. The contractor shall be responsible for ensuring safety and maintenance of all the equipment/fixtures installed /provided by the Institute, during the entire period of the contract. If any damage/loss of equipment /fixtures found then the same will be recovered from the contractor. The contractor shall take adequate fire pre-cautions.
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NEIGRITHMS