



Office of the Director
INDIRA GANDHI INSTITUTE OF MEDICAL SCIENCES,

SHEIKHPURA, PATNA - 800 014 (Bihar, India)

Tel.: 0612 - 2297631, 2297099; Fax: 0612 - 2297225; Website: www.igims.org;

E-Mail: director@igims.org

(To be uploaded on websites)

(E-Tender Notice No: IGIMS / EC/ EW/ 03 / 2023-24)

Memo No. 238 /EC/EW/2023

Date 23.06.2023

TENDER NOTIFICATION

Rates of **Non-Schedule items** in two bid systems (Technical and Price Bid) are invited through e-tendering process from eligible and experienced firms registered in any government organization under which similar nature of works are carried out. Intending bidders must be registered with e-procurement cell on www.eproc2.bihar.gov.in. After registration bidders will get user ID, password and digital signature which will provide an opportunity and eligibility to take part in e-tendering process.

S I N O	Name of work	Estimated cost ₹	Tender Processing fee ₹	Cost of blank tender /BOQ ₹	Earnest Money Deposit ₹	Comple tion period of the work
1	Comprehensive Annual Maintenance of Water cooled Chillers with their low side equipments i.e Air Handling units, Cooling Towers, Pumps and related accessories at IGIMS Patna.	-	As per generated by www.eproc2.bihar.gov.in	Rs. 5,000.00	Rs.1,00,000.00	12 months
Date & Time for obtaining BOQ (Only on www.eproc2.bihar.gov.in)			11 / 07 / 2023 to 01 / 08 / 2023 up to 03:00 PM			
Date & Time of Pre-bid meeting for any Queries			17 / 07 / 2023 up to 3:00 PM in Conference Hall, IGIMS, Patna			
Reply of Pre-bid Queries (Only on www.eproc2.bihar.gov.in and www.igims.org)			11 Till 10 / 07 / 2023			
Last Date & Time for uploading of complete tender Document (on www.eproc2.bihar.gov.in)			02 / 08 / 2023 up to 03:00 PM			
Last Date & Time for submission of complete tender Document Hard copy at Director's Office IGIMS through Regd. /speed post/courier.			04 / 08 / 2023 up to 3:00 PM			
Date & Place of opening of Tender (Technical bid only on www.eproc2.bihar.gov.in)			Conference Room IGIMS, Patna 07 / 08 / 2023 at 3:00 PM			
Date & Place of Opening of Tender (Price bid only on www.eproc2.bihar.gov.in)			Date of opening of Price bid of Technically viable tender shall be intimated only through www.eproc2.bihar.gov.in and on Institute web site www.igims.org			

Details of the tender can be seen and downloaded from Institute website: www.igims.org and www.eproc2.bihar.gov.in. Undersigned reserve the right to accept/reject any or all tenders without assigning any reason. Prospective bidders are advised to regularly visit www.igims.org and www.eproc2.bihar.gov.in for Corrigendum/Amendments etc. if any will be notified on this portal only and no separate advertisement will be made.

1. Particulars in brief:

Authority to sanction the tender: Director, IGIMS, Sheikhpura, Patna-8000014.

Any Contractor with valid registered under, CPWD, BCD, Energy Department, Railway, autonomous bodies, PSUs or in any government organization under which similar nature of works are carried out.

Tender shall be carried out only through e-tender procedure at the website (www.eproc2.bihar.gov.in). For any information regarding e-tender procedure, bidder may contact at Help Desk **eProc2.0 Help Desk Address: mjunction services limited RJ Complex, 2nd Floor, Canara Bank Campus, Khajpura, Ashiana Road, P.S. - Shastri Nagar, Patna 800 014, Bihar** and may contact also on **Toll Free Number: 1800 572 6571, Email Id: eproc2support@bihar.gov.in**

Bidder desiring to participate in the tender shall have to get registered with e-procurement. Necessary registration forms are available at the website. Bidder will get user id and password by registration. Bidder shall have to obtain DSC (Digital Signature Certificates) also. Bidder shall be able to participate in tender using user id, password, DSC and internet.

Bidder shall have to obtain (download) tender papers and submit (upload) their bids at the website www.eproc2.bihar.gov.in

Prescribed forms filled up at specified places and necessary documents must (in hard copy) be submitted in office of the Director, IGIMS, Patna on or before the stipulated time by Regd./Speed Post/Courier. Information regarding tender opening or any corrigendum regarding tender shall be available at the website only. In case of non submission of tender documents in hard copy as per eligibility criteria and technical bid sheet the bidder will be non responsive.

The cost of tender document is non-refundable and **Earnest money to the tender may be submitted through bank guarantee / internet payment Gateway/ Internet Banking. All EMD should be pledged to Director IGIMS, Patna, as per provisions of EPROC2 of BELTRON. (Related site www.eproc2.bihar.gov.in) Any query regarding this may be clarified with To Free No. 18005726571 or E-mail ID eproc2suood@bihar.gov.in. All Original document Acknowledgement Of amount deposit towards value of Quantity Bill and original copy of BG (Bank Guarantee) to be deposited as EMD or receipt of amount deposited in online mode (Whichever is applicable) if is Mandatory to submit to the Accounts Section, Indira Gandhi Institute of Medical Sciences, Patna-14 before the scheduled, date and time of opening of technical bid. Otherwise tender will be not valid.**

The Bid validity period of 120 days from the date of submission of tender/quotation.

Tender/quotation processing fee (Non Refundable as per NIT- is mandatory to be paid through on line mode i.e. Internet payment gateway (credit/debit card, net banking, NEFT/RTGS).

Bids along with necessary on line payment must be submitted through e-procurement postal www.eproc2.bihar.gov.in before the date & time specified in the N.I.T. The department does not take any responsibility for the delay/non submission of tender, quotation/ non reconciliation of on line payment caused due to non availability of internet connection, network traffic /holidays or any other reason.

Regarding any information of the proposed work, bidder should contact the Executive Engineer (Electrical), IGIMS, Patna on any working day, before submission of bid.

The undersigned has right to extend or cancel the Bids without declaring any reason.

2. INSTRUCTION TO TENDERERS

Bidders has to submit hard copy of tender in sealed envelopes containing all related documents (hard copy) of Technical bid super scribed as "Technical Bid" and Price bid super scribed as "Price Bid" in two separate envelopes , both containing in third envelope super scribed as "Bid for **(E-Tender Notice No: IGIMS / EC/ EW/ / 2023-24)** This must reach to the office of the undersigned through Registered post/ Speed post/Courier Services only on or before the last submission day and time of tender as mentioned in Tender Notice . IGIMS takes no responsibility for the delay or loss in transit of any document related to this Tender.

IGIMS reserves the right to accept or reject any application without assigning any reason or incurring any liability whatsoever.

Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders on his own cost, to acquaint themselves from the nature of the work and nature of the ground and sub-soil, the form and nature of the site, the means of access to the site, the volume of work involved, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their work tender. The bidder shall be deemed to have full knowledge of the site, nature of work etc, whether he inspects it or not. It is to note that and no extra charges for complete work either in civil electrical or mechanical work, etc will be paid to the contractor. Any misunderstanding or otherwise shall be allowed.

The work to be awarded by this tender shall be treated as indivisible works contract.

IGIMS reserves the right to inspect the works intimated to have been completed by the applicant and reject any prospective application without assigning any reason.

The tender for the works shall remain open for acceptance for a period of 120 days from the date of opening of tenders.

3. Completion period

The completion period indicated in the tender documents is for the entire work of planning, designing, supplying, installation, testing, commission and handing over of the entire job to the satisfaction of the Engineer - in - charge or his authorized representative.

4. CAMC Period

All the items covered in the BOQ, shall carry minimum twelve months Onsite Comprehensive Warranty, commencing from the date of completion of entire job. The after sales service support / warranty services have to be provided at IGIMS, Patna-14. The repairing / rectification, if any of the items under comprehensive maintenance must be done at site only.

The bidder should submit along with the technical bid, the detailed plan for providing installation and warranty services at site. Prompt and efficient after sales service must be free within the warranty period.

The bidders must have name, signature , date & seal should appear on each page of the Tender Document which is required to be submitted with technical bid in the form of hard copy.

The bidder shall be responsible for the delivery of the spare/material/ equipment to site and shall include in his bid all the necessary arrangements for transport, loading and off-loading (including cranes, lifting tackles, wire rope, winches, slings, etc. All the necessary arrangement along with material for installation, testing and commissioning to complete the work will be contractor's responsibility. IGIMS will not accept any claims for additional costs in this regard.

If the contractor or his workmen or employees shall break, deface, injure, or destroy any part of a building, road kerb, fence, enclosure, water pipes, cables, drains, electric or telephone posts, wires, etc. The contractor shall make the same good at his own expenses. IGIMS may cause the same to be made good by other workmen and deduct the expenses of which IGIMS decision is final.

5. Safety

The successful bidder shall follow the Safety Code and Model Rules for the Protection of health and sanitary arrangement for Workers.

The quality of all the materials to be utilized by the successful bidder must be get approved by the Executive Engineer Electrical before utilizing it.

The successful bidder has to submit daily progress report of the work to the Executive Engineer Electrical while execution of the work.

6. Eligibility Criteria:

- a. Experience certificate of work done not less than 80% value of single work or two work of 50% value or three work of 40% value of estimated amount and IT Return in the last three years ending march 2021.
 - b. Bidder should be having all the necessary documents like eligible experienced contractors / firms registered under , CPWD , BCD, Energy Department, PESU, Railway or in any government organization under which similar nature of work has been carried ,GST, PAN, Registration, experience etc. He must enclose the Self attested photocopies with notarized of these documents.
 - c. Notarized copy of Valid Electrical License in the name of the bidder or its associate, issued from the competent government licensing authority.
7. This Notice Inviting Tender (NIT) shall form a part of the contract document. The successful bidder/contractor, on acceptance of his tender by the Accepting Authority, shall, sign the contract agreement within 15 days from the stipulated date of start of the work.
8. The contractor shall submit the program for execution of work, get it approved from the Electrical Executive Engineer and strictly adhere the same for the timely completion of the project work before start of the work.
9. The rate for all items of work shall include the cost of all labour, materials and all other inputs involved in the execution of the complete work and nothing extra on any account will be paid to the agency other than his quoted rates.
10. . While installing or commissioning the contractor or his authorized representative should always be available at the site of work to take instructions from department officers and ensure proper execution of work.
11. The contractor shall maintain in good condition all work executed till the completion of entire work allotted to the contractor. No payment will be made to the contractor for damages caused by rains, floods or any other natural calamity, whatsoever during the execution of the work. The contractor shall be fully responsible for any damage to the Owners property and to the work for which the payment has been advanced to him under the contract during the execution of the works.
12. The malba /garbage, removed from the site shall be disposed off by the contractor at any suitable place as directed by the Engineer-In-Charge.
13. Material must be properly packed against any damage and insured up to the destination. The material should be directly dispatched to the installation site at IGIMS, Patna -14.
14. All the expenses involved in delivering, unloading etc. the equipment at our site, shall be borne by the Bidder. All aspects of safe delivery shall be the exclusive responsibility of the Bidder. IGIMS will have the right to reject the component/equipment supplied, if it does not comply with the specifications at any point of installation, inspection and testing, EMD is liable to be forfeited and bid is liable to be rejected, if the bidder withdraws or amends impairs or derogates from the tender in any respect within the validity period of the tender.
15. If any equipment/material or part thereof is lost or rendered defective during transit, the supplier shall immediately arrange for the replacement of damaged equipment or part thereof, as the case may be, at no extra cost.
16. Rates should be quoted towards Supply at site, Unloading, Erection, Commissioning, Testing and Maintenance of Supplies / Materials given under BOQ, accordingly by giving the basic price, GST, Service Tax, etc. wherever applicable.

17. Along with slandered deduction, 1% labour cess will be deducted of the completed work as per prevailing Bihar state government rules.
18. IGIMS shall have the sole right to assess the performance of the tendered equipment(s) /components, primary / intermediate and or final, and reject the same without assigning any reason / explanation to the bidder if the performance is found to be unsatisfactory. The decision of IGIMS will be final and binding on the contractor.
19. Price basis should be FOR IGIMS Patna only. The quoted price will be considered firm and no price escalation will be permitted.

20. SECURITY DEPOSIT

- a. The amount of Security Money shall be 10% (Ten Percent) of the work order Value- and deduction/deposit shall be made in following manner.
- b. On acceptance of tender, it will be obligatory to deposit Initial Security money @ 5%, (EMD=2% and ISD =3%) of the amount of the approved tender. Five Percent of the accepted/agreed value, which has to be deposited by the contractor to IGIMS Patna and remain with IGIMS till expiry of warranty period. Balance 5% (Five Percent) Security Money shall be deducted from each running account bill of work done under this work order.
21. Security deposit shall be refunded after expiry of warranty period 12 months after the date of issue of work order and satisfactory performance provided there are no defects in work and removed all surplus material, rubbish, scrap from site. The Security deposit shall be totally non-interest Demand Draft, if furnished, shall also not entail any liability towards bank interest, money or bank charges etc. on IGIMS.

22. Payment

The payment will be released on quarterly basis for CAMC after submitting the bill with the copies of logbook registers and service reports. Complaints will be register through verbally, telephonically, social media, written etc. All complaints will be maintained in daily log book by the agency for the breakdown maintenance and service reports for the scope of work mentioned in the Annexur-1 shall be satisfactory carried out which should be duly signed by Engineer in charge..
Security deposit will be released after 12 months from the date of wok order. All the payment shall be made on actual measurement basis.

23. The contractor shall clear the site thoroughly of all scaffolding materials, rubbish and scrap etc. left out of his work and dress the site around the building to the satisfaction of the Engineer before the work is considered as complete.
24. The quoted rate shall be complete in all respects including the cost of all materials, labour, tools & plants, machinery etc. IGIMS shall not be supplying any material, labour, plant etc.
25. The contractor has to ensure co-ordination with Institute authorities to maintain the smooth functioning / operation of existing Institute timing without disruption during the execution of work. This may require working rescheduling the normal working hours, working in restricted period etc. Nothing extra shall be payable on this account.
26. Stacking of materials and excavated earth including its disposal shall be done as per the directions of the Electrical Executive Engineer. Double handling of materials or excavated earth if required shall have to be done by the contractor at his own cost.
27. In the case of any tender where unit rate of any item/ items appear unrealistic, such tender will be considered as unbalanced and in case the bidder is unable to provide satisfactory explanation such a tender is liable to be disqualified and rejected.
28. On account of security consideration, some restrictions may be imposed by the security staff on the working and movement of men and materials etc. The contractor shall be bound to follow all such restrictions/ instructions and he shall organize his work accordingly. No claim on this account, whatsoever, shall be payable.
29. The contractor shall be responsible for completing the work and for satisfying all terms and conditions of the Contract without any extra payment over his quoted rates unless otherwise specified. The contractor shall quote his rates for various items of work accordingly and no claim whatsoever shall be entertained for any incidental or extra work involved in the execution of the work as per nomenclature of the item and the specifications indicated in the tender documents.

Penalty Clause: Uptime Guarantee 350 days working of Chiller Plants with all its accessories, if the uptime guarantee fall behind 350 days then Penalty is one day equal to one week extension of Comprehensive maintenance period.To avoid these situation contractor are advised to deploy sufficient number of Plants, Tools, spares or any consumables necessarily in the Institute.

30. Technical Bid shall contain:

Non-Refundable cost of required B.O.Q. amounting to the respective Column as per NIT .

Refundable Earnest Money Deposit (EMD) amounting to the respective Column as per NIT .

Forwarding letter clearly indicating the documents attached therein submitted in the first cover

Notarize copy of experienced contractors / firms registered in appropriate class under, CPWD, BCD, Energy Department, PESU, Railway or in any government organization under which similar nature of work has been carried. Manufacturer/ Authorised dealers/distributers/Agent may also can submit their offer.

Notarize copy of Registered Partnership deed if the tenderer is a partnership firm and power of attorney.

Notarize copy Permanent Account Number.

Notarized copy of Annual Turnover certificate issued from the registered Chartered Accountant for last three financial Years.

Notarize copy of valid GST Certificate with updated Challan.

Notarize copy of Valid Electrical Contractor License/ supervisor license of the suitable class in the name of the bidder or its associate, issued from the competent government licensing authority, for electrical work. In case of bidder's associate holds the license, the contractor has to submit an affidavit that all the electrical work will be carried out under supervision of electrical license holder.

Notarize copy of experience certificate/s of similar nature and magnitude of work carried out by the Contractor in Last 5(Five) Years in any government department only. The last five years will be counted from the month of publish of this Tender.

Notarize copy of technical personnel to deploy at site for smooth functioning during maintenance period.

Notarize copy of List of Tools, Plants, Machineries, Spares immediately available for use on the respective work.

Notarize copy of Character certificate issued from Govt. of Bihar.

Notarized copy of P.F and E.S.I registration Certificate with updated challan.

The Bidder should submit original Notarized certificate on Rs.1000.00 non-judicial stamp that it has not been blacklisted, debarred, declared non-performer or expelled by Union Govt/State Govt / PSU's during the last 5 years,

The Bidder should submit original Notarized certificate on Rs.1000.00 non-judicial stamp that "In case any ambiguity is noticed in the documents submitted at any stage, we shall be entirely responsible and liable for any action as deemed fit under the law" shall be submitted by the Firm/Agency with Technical bid. The absence of Certificate, the Bid is liable to be rejected.

Note:

Similar nature of work means "AMC/ CAMC/ Operation & Maintenance/Repair including SITC for Centralized Water cooled Chillers with their low side HVAC Plant Systems.

Quoted rate by the agency must include all complete works including deputing sufficient manpower having experience at working in Water Chillers Plant, Supply, Installation of spare parts, freight taxes, contractor profit etc. all inclusive.. If extra manpower/s is/are required as per the instruction of Executive Engineer (Electrical) then the agency will have to make available depending upon the work loads. **Agency has to comply with the provision of contract Labour (Regulation and Abolition) Act 1970 and contract labour (Regulation and Abolition) central rules 1971 and minimum wages act and rules thereof central and state Governments** The interested agency is advised to visit the site at IGIMS, Patna before quoting their rate, so that to understood the scope of work at site. Accommodations for manpower will be the responsibility of contractor and Institute will not provide these facilities The interested agency is advised to visit the site at IGIMS, Patna before quoting their rate, so that to understood the scope of work at site. Accommodations of manpower will be the responsibility of contractor and Institute will not provide these facilities.

Details of installations and Scope of work is enclosed at Annexure -1.

Special Terms and Conditions

- a) FR wiring shall be used everywhere inside/outside all panels/equipment/building.
- b) Copper material (strip, plate, etc.) shall have conductivity greater than 95% in all applications.
- c) Each Earth conductor (for earthing) shall not left bare it will be through ISI mark PVC pipes to avoid corrosion & mechanical injuries.
- d) Failure on the part of the client to inspect or to reject after inspection any work, which later proves to be defective, shall not relieve the Contractor from warranties, commitments and obligations, which he undertakes under this contract. The Contractor is solely responsible for the accuracy, quality and completeness of his work and supply.
- e) The Contractor shall include and provide for securely protecting and packing the equipment in accordance with the best established practices so as to protect the contents from damage during transit, storage, exposure to heat, moisture or rain. Notwithstanding the above, the Contractor shall be entirely responsible for loss, damage or deterioration to the materials occasioned by faulty, defective or insecure packing.
- f) If required obtaining approvals from Electrical Inspector, Local Electricity Supply Authority and all other statutory authorities for the complete scope of work is contractor's responsibility. It is not the intent to specify completely here in all aspects of design constructional and constructional features of equipment and details of the work to be carried out nevertheless, the equipment and work shall conform in all respects to high standards of engineering, design and workmanship and shall be capable of performing and continuous commercial operation in a manner acceptable to the owner who are interpret the meaning of the specifications and drawing and shall have right to reject or accept any work or material which in his assessment is not complete to meetings requirement of these specifications and or applicable codes and standards mentioned elsewhere in these specifications.

g) All sundry fittings, accessories, hardware items, foundation bolts, termination lugs for electrical connections as required, and all other sundry items is included in the quoted price. The materials/spares parts, tools and equipment required during the work are not in the BOQ that will have to be provided by the agency

h) The Contractor shall arrange all the materials and labour required for inspection of equipment or for any testing to be carried out at his works or at site/Facory. Notice for such inspection/presence for testing shall be given to the Electrical Executive Engineer by the Contractor at least fifteen (15) days in advance.

i) Notwithstanding approval of tests or equipment by the Electrical Executive Engineer the contractor shall be required to perform site tests and prove the correctness of ratings and performance of equipment/machinery and materials supplied and installed by the contractor as per the contract specifications and conditions. Engineer-in-Charge shall reserve the right to reject any equipment/machinery/material should it, on tests after erection, be found not to comply with contract specifications. Engineer-in-Charge shall have full power to order the material or work to be tested by an independent agency at the electrical Contractor's expense in order to prove soundness & adequacy.

j) All quantities indicated in BOQ are tentative which may vary as per site conditions. Contractor has to verify quantities before procuring the material.

k) All materials and equipment shall be brand new. On arrival of the materials at site they shall be inspected and tested by the Electrical Executive Engineer and his representative shall at all reasonable time have free access to the site of assembly. They shall have full powers to examine the materials and workmanship of the equipment at the contractor works or at any other place from where the material or equipment is obtained. The contractor shall give every facility to the engineer-in-charge and his representatives and necessary help for inspection, examination & testing of the materials. Original test certificates of the manufacturer's shall be submitted by the Contractor for all major equipment before they are accepted by the Engineer-in-Charge. Acceptance of any material or equipment shall in no way relieve the Contractor of his responsibility for meeting the requirements of the contract.

l) Electrical work done under this contract shall be executed by licensed men under the supervision of licensed electrical supervisor as per the Indian Electricity act.

m) Contractor shall obtain the approval of all electrical installation done under this contract from the appropriate competent authority before the installation and commissioning if required as per rules.

n) All tools and tackles required for handling of equipment and materials at site of works as well as for their assembly, erection, commissioning and also necessary test instruments shall be the responsibility of the contractor.

o) The Contractor shall provide for the tendered equipment comprehensive warranty for parts as well as labour for a period of 12 months against any manufacturing defect/faulty workmanship. In case any defect arises during maintenance period, the Contractor should replace/rectify the same at its own cost at site/works.

ANNEXURES-1

Details of Installation

1) Equipment covered under Comprehensive Annual maintenance Contract

We are enclosing the list of equipments covered under Comprehensive Annual maintenance Contract.

- Water Cooled Screw Chillers (Make – Carrier)-280TR - 04 nos
- Chilled Water Air Handling Units (Make – Edgetech) - 19 nos
- Chilled water pumps - Primary circuit (Make Xylem) - 04 nos
- Chilled water pumps - Secondary circuit (Make Xylem) - 04 nos
- Condenser water pumps (Make Xylem) - 04 nos
- Cooling Tower (Make – Advance) - 04 nos
- AHU starter panels - 19 nos
- Hot Water generator - 04 nos
- Pot Strainer

2) Scope of work under Comprehensive Maintenance includes -

- a) Attending & repairing against any nos of break down calls with all required manpower & material, spare parts for all the equipment covered under Comprehensive AMC.
- b) Preventive Maintenance: There will be Quarterly Preventive Maintenance of Chillers & Low side equipments. (Four times in a year).

QUARTERLY (Preventive Maintenance) of Chillers will have following activities.

Water cooling Chillars: 4x280 Tr Capacity – Make –Carrier

1. To visit & check the operating parameters of all the chillers every quarterly.
2. To review the previous months operating log records and alarm history.
3. To clean the electrical panel every quarterly with air blower.
4. To check for sign of leakage of refrigerant
5. To check the operation of safety control/ microprocessor.
6. Tightening the entire electrical contractor terminals of Chillers
7. To check the compressor motor starter and associated interlocks etc.

8. Cleaning the all the electrical connection.
9. Measuring operating voltage and ampere and record readings.
10. Inspect starter for signing of wear, arcing overhauling burns etc.
11. Inspect wiring and connections for signs of wear, arcing overheating, burns etc.
12. Check high compressor motor temperature
13. Check leakage in compressor.
14. Check high pressure safety switch
15. Verify the refrigerant charging.
16. Inspect unusual vibration & noise (if any).
17. Inspect moisture indicator for evidence of moisture.
18. Record the compressor suction and discharge pressure.
19. Record compressor oil pressure.
20. Check the proper water flow through chilled water control valves, strainers for its proper operation, routine servicing and repairing if required. Check superheat on the evaporator and economizer feed to the compressor. Inspection of starter panel and repair if required and replacement of control fuses, capacitors Check for all defective, corroded parts/foundation supports and recommend to replace/rectify.
21. Inspection of condenser fans for its proper operation, replacement of bearing, motor rewinding and rectification. Check the function of expansion valves, solenoid valves, relief valves, control switches, fusible plugs, economizers and rectification/replace if required.
22. Checking the plant components for normal running conditions such as vibration, Noise and minor rectification if required like readjust of vibration pads, repairing of Insulation, oil temperature control.
23. Check oil pump pressure in accordance with system pressure and repair/replace of pump if required.
24. Checking & Cleaning of cooling coil, Pre-filter, Micro-Vee filters , condenser coil fins in air cooled system.. Combing of fins of condenser & Evaporator coil if necessary.
25. Check oil pressure, oil level, oil separator, condition of oil and top up and replace the oil and oil filters if required and check oil temperature control.
26. Check proper functioning of microprocessor, take safety cut-outs test, safety relays, digital display, contactor and repairing/readjust and replace if required
27. Inspection of the safety and operating controls for proper operation, adjust and replace if required.
28. Cleaning of condenser/evaporator coil with Air/Chemical (De-scaling once in a year)
29. Annual health check up and efficiency test of the chillers and recommend to improve the efficiency.
30. Attend any number of breakdown -Repair/Replacement of PCB and all electrical/electronic components, Expansion valve, compressor, HP/LP -OP Cut outs.
31. Lubrication of all bearings and replace wherever found necessary.
32. Leak testing and rectifying leaks in the Refrigeration system include replenishment of Freon- 22 / 134A/ 410/ 407 gases.
33. Attend breakdown-Repair/Replace the defective components of the plant.
34. Gas Charging as & when required including brazing, Replacement of driers, heaters, refrigerant filters if required.
35. Checking all valves for proper operation.
36. Replacement of, ducting, insulation, piping, Filters, Micro-vee filters Hepa filters, water line valves, and refrigerant line valves.
37. Electrical main incoming switch (Switch fuse unit), Main incoming cable, fuses, control transformers & indicating lamps.
38. Replacement to foundation/structural support.
39. Replacement of Flow switch, Air filters, condenser coils, evaporator coils, Blower unit.
40. Replacement of sensor/ transducer, pressure gauge, Thermometer, external to equipment covered, plastic components, parts, which are damaged.
41. BMS system and its controllers/ VFD Drives
42. DDC control panel with associated sensors
43. Water piping & accessories, Ducting, Dampers, Duct lining, grilles
44. Replacement of sheet metal parts.
45. Change/repair of Spare parts wherever and whenever required.
46. Servicing 4 times in a year.

QUARTERLY (Preventive Maintenance) of Chilled Water Pumps will have following activities.

Chilled Water Pumps :

- | | | |
|--|---|---------|
| o Primary Chilled Water Pumps (Make Xylem) | - | 04 nos |
| o Secondary Chilled Water Pumps (Make Xylem) | - | 04 nos |
| o Condensor Water pumps (Make Xylem) | - | 04 nos. |

1. Overhauling the motors as per requirements during the contract period.
2. Quarterly PM of the pumps as per OEM/Best Practices.
3. Attend to break down calls, valves servicing / repairing as required.
4. Replacement of pump spares as required.
5. Inspection of Motor and Pumps for its proper operation and rectification if required.
6. Rewinding of Motor as and when required
7. Rectification of leakage from pump
8. Check for proper flow of water, water pressure and rectify if required.
9. Check the proper water flow through control valves, strainers for its proper operation, routine servicing and repairing if required
10. Check for all defective, corroded parts/foundation supports and recommend to replace/rectify Exclusion.
11. Replacement of Motor/Pump.
12. Repairs / replacement of electrical main incoming switch (Switch fuse unit), Main incoming cable, fuses, control transformers & indicating lamps.
13. Repairs / replacements of Water piping & accessories,
14. Replacement of sheet metal parts and painting.

15. Change/repair of spare parts whenever and wherever required.
16. Servicing 4 times in a year.

○ **QUARTERLY (Preventive Maintenance) of Cooling Towers will have following activities.**

○ **Cooling Towers**

17. Bi monthly PM as per OEM/Best Practices recommendations.
1. Overhauling the chiller motors as per requirements during the contract period.
2. To inspect the greasing and replacing the same, if required.
3. Bimonthly PM as per OEM/Best Practice recommendations
4. Regular checking and remove all dust, scale, and algae from tower basin, fills and spray nozzles and replace if required
5. Check oil level, leakage in gear box and repair if required.
6. Make sure water is flowing through nozzles in the hot well.
7. Check for any abnormal noise and rectification
8. Inspection of Motor for its proper operation and minor Repair of fan motors / greasing, rewinding, bearing, bushes replacements of start & run contactors, capacitors.
9. Rectification of water leakage
10. Check the proper water flow through control valves, strainers for its proper operation, routine servicing and repairing if required.
11. Check and tighten fan motor foundation bolts, pulleys, gear box
12. Check drift eliminators, louvers, and fill Look for proper positioning and scale build up and remove the same.
13. Annual health check up and effectiveness test and recommend to improve the efficiency. Pressure cleaning fills
14. Replacement of Motor/Pump.
15. Repairs / replacement of electrical main incoming switch (Switch fuse unit), , fuses, control transformers & indicating lamps.
16. Repairs / replacements of Water piping & accessories,
17. Replacement of sheet metal parts and painting.
18. Change/repair of spare parts whenever and wherever required.
19. Servicing 4 times in a year.

○ **QUARTERLY (Preventive Maintenance) of AHUs will have following activities.**

○ **Air Handling Units**

- 1 Bi monthly PM as per OEM/Best Practices recommendations.
- 2 Lubrication of all bearings wherever found necessary and replace the defective bearings
- 3 Checking & Cleaning of filters.
- 4 Check for all defective, corroded parts/foundation supports and recommend to replace/rectify.
- 5 Check for proper air flow and water flow and rectify the obstacles
- 6 Check and replace defective V-belts & check proper function of actuators, thermostat, pressure gauges, valves and rectification if required
- 7 Checking the components for normal running conditions such as vibration, Noise etc.
- 8 Check motor winding and mongering value and rewinding if required. adjust of pulley, shafts
- 9 Inspection of the safety and operating controls for proper operation. Inspection of electrical starters, replacement of start & run contactors, capacitors & re crimp lugs as required. .
- 10 Inspect and adjust all safety control, required.
- 11 Attend breakdown/Repairs of the components of the plant.
- 12 Chemical cleaning of coils annually.
- 13 Rectification of any water leakage Exclusions
- 14 Day to day routine maintenance and operation of the units.
- 15 Replacement of Motor/Pump.
- 16 Repairs / replacement of electrical main incoming switch (Switch fuse unit), Main incoming cable, fuses, control transformers & indicating lamps.
- 17 Repairs / replacements of Water piping & accessories, Any kind of masonry / structural work.
- 18 Replacement of sheet metal parts and painting
- 19 Change/repair of spare parts whenever and wherever required.
- 20 Servicing 4 times in a year.
- 21 AHUs Starters.

ANNUAL SHUTDOWN INSPECTION:

- 1 Overhauling the chiller motors as per requirements during the contract period.
- 2 To inspect the greasing and replacing the same, if required.
- 3 To clean all the contactors during the annual visit in chillers panel.
- 4 Check the chilled water flow by checking pressure drop across the chiller.
- 5 Annual overhauling of the whole air conditioning systems will be done during winter season.
- 6 During this annual overhauling the whole system should be checked by the OEM expert service engineers.
- 7 Service provider will take prior permission from customer for fixing the Time Schedule for annual overhauling.
- 8 Service provider shall assess the spare requirement which will be required during the annual overhauling period and submit the same at least three months in advance (considering availability of the spares from the contractor) before the annual overhauling of the systems.
- 9 Service Provider shall carry out the total maintenance work for chiller units in all respect for healthy operation of the unit.
- 10 To provide and replace internal oil filters, if required, subject to maximum once during the contract period.
- 11 To provide and replace refrigerant driers, if required, subject to maximum once during the contract period.
- 12 To inspect the oil quality (by color and operating parameters) and replacing the same, if required, subject to maximum once during the contract period.
- 13 Change/repair of spare parts whenever and wherever required.
- 14 Servicing 4 times in a year.
- 15 Supply of compressor oil, and refrigerant & to and fro transportation of the compressor in case of repairs to our workshop
- 16 Any empty cylinder (refrigerant) if required during gas drawback
- 17 Condenser De-scaling of and cooler brushing
- 18 Replacement of Air- Filters of Air- Handling Units / Fan Coil Units.
- 19 Replacement of Cooling Coil of AHU and FCU.
- 20 Fills of cooling tower
- 21 Any kind of repairs / replacement of Ducting, Duct & Pipe insulation, piping, pipeline valves, motorized valves, actuator, thermostat for motorized valve of A.H.U.
- 22 Replacement of any card / full VFD
- 23 Replacement of the equipment (Chiller, cooling tower, pumps, motors, cooling tower gear box etc. which is beyond repairing.
- 24 HVAC Panel.

Exclusion: Following are excluded from the scope of CAMC.

- Main electrical panel switches, circuit breakers, fuses and related interconnecting power wiring. Supply of spare parts for main electrical panel switches, circuit breakers, fuses and related interconnecting power wiring.
- Any kind of consequential damages, losses of any nature whatsoever is not covered under this offer.
- Day to day operations of HVAC system.
- Any non-HVAC Panel
- Any kind of wear and tear caused due to atmospheric conditions, corrosion, chemical pollution of rusting, pitting of the plant.
- Any kind of civil / masonry / carpentry work.
- Painting of plant and equipment.

Schedule of Maintenance

Preventive Maintenance-Per Month (12 visits) The preventive Maintenance is to be carried out in such a manner that overall functioning & reliability of the Chiller plants with their low sides are not affected during the period of contract.

(a) **Breakdown Maintenance-(Unlimited)** The Breakdown Maintenance is to be carried out during 24x7 and 365 days of a year. It covers all type of major breakdown which include repair and replacement of assemblies, components etc.

(b) **Response time** - Minimum 2 hours and Maximum 4 hours

Note: All the spare parts as and when required to get repair /replacement either for Chillers, Primary Pumps, Secondary Pumps, Condenser Water Pumps, Hot Water Generators, Cooling Towers, Air handling Units, HVAC Panel, AHU Starters, Pot Strainers etc. are covered under this Comprehensive Maintenance period and if required it will get repair /replace immediately after verifying the Guinness of spare from Engineer-In-Charge.

ANNEXURES-2

Price Bid

Rates of **Non-Schedule items** in two bid systems (Technical and Price Bid) are invited through e-tendering process from eligible and experienced firms registered in any government organization under which similar nature of works are carried out. Intending bidders must be registered with e-procurement cell on www.eproc2.bihar.gov.in. After registration bidders will get user ID, password and digital signature which will provide an opportunity and eligibility to take part in e-tendering process.

Sl No:	Item Descriptions	Unit	Qty	Rate/Unit	Amount
1)	Comprehensive Annual Maintenance of Water Cooled Chillers with their low side HVAC Plant Systems i.e Chillers, AHUs, Cooling Towers, Pumps and related accessories at IGIMS Patna.	Ton	1120.00		

Note:

Quoted rate by the agency must include all complete works including deputing sufficient manpower having experience at working in Water Chillers Plant, supply and installation of spare parts, freight taxes, contractor profit etc. all inclusive. The interested agency is advised to visit the site at IGIMS, Patna before quoting their rate, so that to understood the scope of work at site. Accommodations of Supervisor will be the responsibility of contractor and Institute will not provide these facilities.


Details of Installations and Scope of Work is enclosed at Annexure -1.

Name and Address of the Firm:

Signature of authorized agency:

Seal of the Firm:

(E-Tender Notice No: IGIMS / EC/ EW/03/ 2023-24)


DIRECTOR
IGIMS, PATNA