

Bharat Heavy Electricals Limited
High Pressure Boiler Plant
Tiruchirappalli – 620 014. India
Civil Engineering Department (Factory)

TENDER DOCUMENT (PRICE BID)

Name of work : Operation and Maintenance of Coolant Recovery System at BHEL, Trichy.

Value of work : Rs.47.02 Lakhs + Applicable service tax

Tender Notice No. : CF:TN:011/15-16

Tender Schedule No. : CF:TS:043/15-16

Period of Contract : 15 (Fifteen) Months

Issued to M/s / S/Shri :

**BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHIRAPPALLI – 620 014**

CIVIL ENGINEERING DEPARTMENT (FACTORY)

PREAMBLE

Name of work: **Operation and Maintenance of Coolant Recovery System at BHEL, Trichy.**

1. The tenderers are advised to visit the existing Coolant Recovery System Recovery System Plant at BHEL, Trichy in order to assess the nature of work, man power requirement etc., before submitting their offer.
2. **SCOPE OF COOLANT RECOVERY SYSTEM:**
 - 2.1 The contractor should engage skilled labourers and supervisors for two shift operations as per the man power deployment scheme to be submitted by the tenderer for operation & treating the waste coolant and for transporting the waste coolant from various buildings like Building No.1, 5, 6, 50, SSTP etc. to the centralised treatment plant located near Heat Treatment shop, transporting the treated Coolant back to machine shops, cleaning the coolant pits and filling the sump, etc. The labourers engaged should be paid not less than the prevailing minimum wages as per State Government norms.
 - 2.2 The tenderer should submit details of manpower deployment scheme to be employed per shift like supervisor and other supporting labourers, etc., along with the tender.
 - 2.3 Operation and maintenance is to be carried out in **Two shifts a day**. For want of coolant, Power supply, etc., the system can be operated in one shift occasionally, only with the prior approval of the Engineer-in-charge.
 - 2.4 If the labourers, supervisors etc., are not employed as per the manpower deployment scheme the recovery will be made from the payment at pro-rata basis.
 - 2.5 The work is to be executed on all BHEL working days.
 - 2.6 If the system is not operated for more than 24 hours due to break-down on account of other than Power Supply, non availability of Coolant, Spares, etc., recovery will be made on pro rata basis **as per the approved and awarded rate as in SI.No.1** per month from the date of break down to the date of putting back the system to perform effectively.
 - 2.7 If any additional shift is felt required by BHEL and operated on any day of the month, payment will be made on pro rata basis **as per the approved and awarded rate in SI.No.1** per month.
 - 2.8 Required minimum space, Compressed air, water and power for the operation of the system will be provided by BHEL free of charges.
 - 2.9 **Raw coolant, processed coolant and the permeate discharge should be tested for pH, Conductivity, Temperature and Volume for every batch taken for processing and a record should be maintained and produced to BHEL for its verification.**
 - 2.10 Bacteriological Analysis for TBC using Bactaslide once in a week or as and when required by BHEL on Raw and Processed coolant should be conducted at the site. The number of tests will be limited to five per month i.e 4 (four) for checking the Treated Coolant and 1 (one) per month for checking the Raw waste coolant. The used Bactaslides will be burn / destroyed in the presence of Engineer - in- charge and disposed with out affecting the environment.

- 2.11 The composite sample of the permeate discharged and the raw coolant water shall have to be analysed for BOD, COD, Suspended Solids and Total dissolved solids, Oil & Grease, Chlorides, Sulphates etc., at the agency's laboratory established at BHEL Trichy Complex or in any of the approved lab (King's Institute, Chennai, NIT, Trichy, TNPCB labs in TamilNadu, etc.) as directed by BHEL, in line with the laid down procedures of BIS. One sample of raw waste coolant and one sample of permeate once in a month has to be collected, analysed and the report of analysis should be submitted to BHEL for verification.
- 2.12 The contractor should maintain proper logbook for the performance of the system and the log book should contain the details of the quantity of collection of the waste coolant, Point of collection, quantity treated, quantity handed over, name of work centre, etc., complete.
- 2.13 **The tenderer has to ensure payment of Minimum Wages as per Tamil Nadu State Minimum Wages as applicable under law from time to time.**

The labourers engaged in this contract shall be paid additional payment as mentioned below in addition to the payment of Minimum wages as stated above.

a)	Unskilled Worker	Rs. 3200 per month
b)	Semi-skilled Worker	Rs. 3700 per month
c)	Skilled Worker / Supervisor	Rs. 4100 per month

Also the labourers shall be paid a minimum bonus which shall be 8.33% as per the payment of Bonus Act 1965 for the total wages paid (i.e) Payment of minimum wages and additional payment as mentioned above.

The Contractor shall have to remit EPF & ESI contributions at the rates applicable under law to the authorities concerned for the total wages paid (i.e) Payment of minimum wages and additional payment as mentioned above.

At present the Tamil Nadu State Government Minimum wages declared is enclosed for your reference (Pg No. 9) . Normally the revision will be with effect from 1st April of every year. Tenderers are requested to quote their offer after taking into account of the above factor also.

- 2.14 The workmen should be covered by PF & ESI Act as applicable and payment will be made only on verification of the documents for the remittance of ESI and PF for the personnel engaged in the work.
- 2.15 The spent Activated Carbon shall have to be dumped in the coal yard by the agency.
- 2.16 The treated Coolant will be collected and accounted separately and handed over to machine shops as and when required.
- 2.17 The collected tramp oil should be handed over by the contractor to the Stores of BHEL at his own cost.
- 2.18 Hand trolleys are to be arranged by the contractor for collection of coolant.
- 2.19 The spares listed in Sl.No.;2 of Bill of Quantities are tentative. Any other spares not listed, if supplied and provided will be reimbursed as per BHEL norms.
- 2.20 Spares like UV lamps, Ultra Filtration Membrane, High Pressure Pump etc., will be supplied by BHEL and the same shall be installed in the system by the contractor at no extra cost

- 2.21 If the spares supplied by the contractor found defective during the guarantee period, it should be serviced / replaced at the contractor's risk and cost to the satisfaction of the Engineer-in-charge. 50% of Security Deposit will be released only after the guarantee period is over.
- 2.22 The contractor should submit the list and quantity of consumables and spares used every month for the verification by BHEL.
- 2.23 The workers should be provided with personal protective equipments such as Gloves, Goggles, safety shoes and waste cloths, etc by the Contractor.
- 2.24 The Contractor should supply and use the monitoring equipments such as pH meter, Conductivity meter, Thermometer, Glass beakers, etc.
- 2.25 The Replacement of inter connecting HDPE pipes, indicator bulbs, tubings, Sensors with cables, etc are in the scope of the Contractor
- 2.26 The contractor should keep a First Aid Box with list of Aids and should be refilled as and when required.

~~3. SCOPE OF METAL RECOVERY SYSTEM :~~

- ~~3.1 The contractor should engage skilled labourers and supervisors for two shift operations as per the man power deployment scheme to be submitted by the tenderer for operation & maintenance of Metal recovery system located at Heat Treatment shop. The labourers engaged should be paid not less than the prevailing minimum wages as per State Government norms.~~
- ~~3.2 The tenderer should submit details of manpower deployment scheme to be employed per shift like supervisor other supporting labourers, etc., along with the tender.~~
- ~~3.3 Operation and maintenance is to be carried in two shifts a day. For want of effluent power supply, etc., the system can be operated in one shift occasionally. Only with the prior approval of the Engineer-in-charge~~
- ~~3.4 The work is to be executed on all BHEL working days.~~
- ~~3.5 If the labourers, supervisors etc., are not employed as per the manpower deployment scheme the recovery will be made from the payment at pro-rata basis.~~
- ~~3.6 If the system is not operated for more than 24 hours due to break down on account of other than Power Supply, non availability of effluent, Spares, etc., recovery will be made on pro-rata basis as per the approved and awarded rate in Sl.No.1 per month from the date of break down to the date of putting back the system to perform effectively.~~
- ~~3.7 If any additional shift is felt required by BHEL and operated on any day of the month, payment will be made on pro-rata basis as per the approved and awarded rate in Sl.No.1 per month~~
- ~~3.8 Required minimum space, Compressed air, water and Power for the effective functioning of the system will be provided by BHEL free of charges.~~
- ~~3.9 Rinse water and the concentrate should be tested for pH, Conductivity, Temperature and Volume for every batch taken for processing and recorded for BHEL's verification.~~
- ~~3.10 The composite sample of the permeate discharge and the Reject (concentrate) shall have to be analysed for BOD, COD, Suspended Solids Total dissolved solids, Chromium (hexavalent/Trivalent), Cadmium/Copper / Nickel / Iron / Chlorides / Sulphates, etc at the agency's laboratory at BHEL Trichy Complex or in any of the approved lab (King's~~

Institute, Chennai, NIT, Trichy, TNPCB labs in TamilNadu, etc.) as directed by BHEL, in line with the laid down procedures of BIS once in a month The permeate and the Reject samples are to be tested once in a month

~~3.11 The contractor should maintain proper log book for the performance of the system for the scrutiny by BHEL. The log book should contain the details of the quantity of collection of the rinse water, Point of collection, concentrate and permeate recovered, point of handing over etc.~~

~~3.12 The tenderer has to ensure payment of Minimum Wages as per Tamil Nadu State Minimum Wages as applicable under law from time to time.~~

~~The labourers engaged in this contract shall be paid additional payment as mentioned below in addition to the payment of Minimum wages as stated above.~~

- ~~a) Unskilled Worker Rs. 3200 per month~~
- ~~b) Semi-skilled Worker Rs. 3700 per month~~
- ~~c) Skilled Worker / Supervisor Rs. 4100 per month~~

~~Also the labourers shall be paid a minimum bonus which shall be 8.33% as per the payment of Bonus Act 1965 for the total wages paid (i.e) Payment of minimum wages and additional payment as mentioned above.~~

~~The Contractor shall have to remit EPF & ESI contributions at the rates applicable under law to the authorities concerned for the total wages paid (i.e) Payment of minimum wages and additional payment as mentioned above.~~

~~At present the Tamil Nadu State Government Minimum wages declared is enclosed for your reference (Pg No 11). Normally the revision will be with effect from 1st April of every year. Tenderers are requested to quote their offer after taking into account of the above factor also.~~

~~3.13 The workmen should be covered by PF & ESI Act as practiced and payment will be made only on verification of the documents for the remittance of ESI and PF for the personnel engaged in the work.~~

~~3.14 The spares listed above are tentative. Any other spares not listed, if supplied and provided will be reimbursed as per BHEL norms.~~

~~3.15 Spares like UV lamps, RO membrane, High Pressure Pump etc., will be supplied by BHEL and the same shall be installed in the system by the contractor at no extra cost.~~

~~3.16 If the spares supplied by the contractor found defective during the guarantee period, it should be serviced / replaced at the contractor's risk and cost to the satisfaction of the Engineer-in-charge. 50% of Security Deposit will be released only after the guarantee period is over.~~

~~3.17 Every month the contractor should submit the list for the quantity of consumables and spares used for the verification by BHEL.~~

~~3.18 The workers should be provided with personal protective equipments such as Gloves, Goggles, safety shoes, and waste cloths etc., by the contractor.~~

~~3.19 The Contractor should supply and use the monitoring equipments such as pH meter, Conductivity meter, Thermometer, Glass beakers, etc.~~

~~3.20 The Replacement of inter connecting HDPE pipes, Indicator bulbs, Tubings, Sensors with cables, etc are in the scope of the Contractor~~

~~3.21 The contractor should keep a First Aid Box with list of Aids and should be refilled as and when required.~~

~~3.22 The permeate and the reject will be collected and accounted separately and handed over to user department.~~

4. Time is the essence of the contract. Being a time bound work on maintenance nature, the contractor should make all efforts to complete the work in the stipulated time.

5. **The following eligibility criteria shall be complied to fulfill the Qualification Bid:-**

Contractor should have separate Registration Code No. for EPF, ESI, Sales Tax Service Tax and Balance Sheet certified by the Auditor & Profit & Loss Account for the three financial years (2012-13,13-14 & 14-15).

Average annual turnover in the last 3 financial years (2012-13,13-14 & 2014-15) shall be minimum of Rs. 14.11 Lakh

During last seven financial years ending Nov-15 should have successfully completed works either

Three similar works each not less than Rs. 18.81 Lakh (or)

Two similar works each not less than Rs. 23.51 Lakh (or)

One similar work not less than Rs. 37.62 Lakh

Latest Solvency certificate (obtained within six months) from Nationalised / Scheduled Bank shall be atleast for Rs. 18.81 Lakh

Similar Work means Operation and Maintenance of Coolant & Metal Recovery Systems.

6. The norms for qualification with prescribed score is attached in the Qualification Bid Document. Evaluation will be done accordingly. Minimum score required for qualification is 60.

7. The works executed in the own name of the tenderer only will be considered for eligibility criteria.

8. Dissimilar / irrelevant works will not be considered for eligibility criteria.

9. The details on turnover, works experience, P.F, ESI registration etc., all as furnished by the tenderer shall have to be supported with documentary evidences. (Xerox copies-attested)

10. Documentary evidences (Xerox copies - attested) for turnover, works experience, P.F, ESI, Sales Tax and Service Tax registration etc., all as indicated & required in the tender document should be furnished without which it will not be taken into account.

11. Tender Value is only approximate and liable for variation without entitling the tenderer to any compensation, provided the total value of contract does not vary by more than 20% (twenty percentage).

12. **Quoted rate shall be firm throughout the contract period of 15 months and extended contract period if any and no cost escalation is allowed on any account.**

13. The item rate offered is for finished item of works and shall provide for the complete cost towards fuel, tools, tackles, plant & machinery, temporary works, labour, materials, levies, taxes, transport, lay-out, repairs, rectifications, maintenance till handing over,

supervision, labour colonies, establishment, services, roads, revenue expenses, overheads, profits & all other incidentals etc., complete.

The rate quoted shall not include service tax. However the service tax as applicable for this contract work can be claimed from BHEL along with their monthly bills for further payment to be made to the authorities concerned. The contractor has to submit the service tax payment challan as a documentary proof of having paid the service tax for the previous bill for which he has received the service tax payment along with the subsequent bill for which payment has to be processed.

The L1 position based on the quoted values (subject to calculations) excluding service tax, will not necessarily mean L1 for a vendor, but the net liability to BHEL, after considering the service tax criteria for the vendors who had participated in the tender In case of non-applicability of service tax, the contractor has to submit a declaration along with the tender documents

14. For any item of work not covered in Bill of Quantities, the rate will be arrived at based on the conditions given in BHEL General Conditions of Contract.
15. **After award of work the contractor has to furnish the security deposit, as per Clause 13 of Tender Notice. Also it is to be noted that after award of work the contractor has to furnish security deposit before the commencement of work.**
16. The decision of Engineer-in-charge shall be final and binding on the contractor regarding clarification of items in this tender schedule.
17. In all matters of disputes, the decision of the General Manager, BHEL, Tiruchirappali-14 shall be final and binding on the Tenderer / Contractor.
18. The contractor shall strictly adhere to various labour laws in force. The contractor shall follow norms of BHEL security system for movement of men & materials within the complex including biometric system.
19. Daily labour report for the manpower engaged on previous day area wise shall have to be submitted next day.
20. Since the responsibility for the quality, workmanship and accuracy of any work being carried out under this contract lies with the contractor, the contractor should ensure that no work is done without the presence of contractor's representative at the work spot.
21. The tenderer shall carry out health performance test at his cost for all the workmen engaged in the work through a registered medical practitioner and produce certificate on demand.
22. It shall be the responsibility of the contractor to see that the workmen do not utilize the departmental canteen facilities. Contractor has to make his own arrangements to provide refreshment for the workmen.
23. The works contract to be entered into with the successful tenderer will be governed by the BHEL Revised General Conditions of Contract in force.
24. All materials brought by the Contractor for incorporation in the work shall be got inspected and approved by the Engineer-in-charge before they are incorporated in the work.
25. The contractor should extend fullest co-operation with the third party agencies engaged, if any by BHEL to adhere the Quality Control Procedures ensuring quality.
26. At the written request from the contractor **Water required for the work and labour colony will be provided by this organization at only one point near the site of the work at free of cost.** In case of failure of water supply, the Contractor will have to make his own arrangements for water without any extra claims until supply is restored. BHEL

does not accept any liability whatsoever for non-supply or delay in the supply of water under any circumstances. The contractor shall ensure that there is no wastage of water otherwise supply of water is liable to be stopped at contractor's risk and cost.

27. At the written request from the contractor **Electrical energy required for the work will be given by this organization at any one point near the site of work at free of cost.** BHEL does not accept any liability whatsoever for non-supply, delay in supply or failure of supply of electrical energy. Contractor shall ensure that there is no wastage of electrical energy otherwise supply is liable to be stopped at contractor's risk and cost. The contractor shall make leak proof / fire proof shed and provide control panel board of required capacity and lay the required cables at their own cost for further distribution.
28. At the written request from the contractor **Compressed air for the work will be provided by this organization at only one point near the site of work at free of cost.** The contractor should be in a position to make his own arrangement for compressed air without any extra claim for the uninterrupted operation of jackhammer with silencer wherever BHEL is not in a position to supply compressed air.
29. BHEL reserves its right to reject a tender due to unsatisfactory past performance in the execution of a contract at another project/unit awarded against a different enquiry.
30. BHEL reserves its right to accept/reject any or all the tenders.
31. Also BHEL reserves its right to finalize the contract through reverse auction for which only qualified tenderers will be provided with necessary documents containing reverse auction rules, terms and conditions for this purpose.
32. **No advance / mobilization advance will be given.**
33. LD/Penalty clause is applicable as per General Conditions of Contract. All the terms & conditions in the documents are binding on the tenderers.



BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHIRAPPALLI – 14
HUMAN RESOURCE MANAGEMENT

CIRCULAR

No.BHE: HR: WEL: MW
Date: 26/03/2015

ALL CONTRACT EXECUTING/AWARDING OFFICIALS

- Sub. : Minimum Wages Act 1948 – Fixation of Minimum rates of wages for the employment in “General Engg. and Fabrication Industry” – Revision of DA – Reg.
Ref. : Letter No.Z3/4053/2015 dated 11/03/2015 from the Commissioner of Labour, Chennai.600 006

Consequent upon the increase in Dearness Allowance payable under the Minimum Wages Act from Rs.4175.00 to Rs.4575.00 per month to those employed in “General Engineering and Fabrication Industry”, the Minimum Wages payable by the Contractors to their workmen engaged in the following categories would be as follows with effect from 01/04/2015:

Sl. No.	Category	Minimum Basic Wages per day	Minimum DA per day	Total Minimum Wages per day	Minimum Basic Wages per month	Minimum DA per month	Total Minimum Wages per month
1	Unskilled Worker	Rs.123.00	Rs.176.00	Rs.299.00	Rs.3690.00	Rs.4575.00	Rs.8265.00
2	Semi-Skilled Worker	Rs.133.00	Rs.176.00	Rs.309.00	Rs.3990.00	Rs.4575.00	Rs.8565.00
3	Skilled Worker	Rs.139.00	Rs.176.00	Rs.315.00	Rs.4170.00	Rs.4575.00	Rs.8745.00
4	Supervisor				Rs.3956.00	Rs.4575.00	Rs.8531.00

Contract Awarding Executives are requested to ensure that the contractors make payment to their workers not less than Minimum Wages as stated above.


DGM (HR-Welfare and Recruitment)

Cc: All HR Executives
Sr.Manager/HR/PC/Chennai
Sr.Manager /HR/PPPU/Thirumayam
AGM/Finance
GM/Finance

REVERSE AUCTION

BHEL reserves the right to go for a Reverse Auction (RA) instead of Opening the submitted sealed bid, which will be decided after technical evaluation. Information and general terms and conditions governing RA are given below.

GENERAL TERMS AND CONDITIONS OF RA

Against this enquiry for the subject item/ system with detailed scope of supply as per enquiry specifications, BHEL may resort to "REVERSE AUCTION PROCEDURE" i.e., ON LINE BIDDING (THROUGH A SERVICE PROVIDER). The philosophy followed for reverse auction shall be English Reverse (No ties).

1. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
2. Those bidders who have given their acceptance for Reverse Auction (quoted against this tender enquiry) will have to necessarily submit „online sealed bid“ in the Reverse Auction. Non-submission of „online sealed bid“ by the bidder for any of the eligible items for which techno-commercially qualified, will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines in vogue.
3. BHEL will engage the services of a service provider who will provide all necessary training and assistance before commencement of on line bidding on internet.
4. In case of reverse auction, BHEL will inform the bidders the details of Service Provider to enable them to contact & get trained.
5. Business rules like event date, time, bid decrement, extension etc. also will be communicated through service provider for compliance.
6. Bidders have to fax the Compliance form (annexure IV) before start of Reverse auction. Without this, the bidder will not be eligible to participate in the event.
7. In line with the NIT terms, BHEL will provide the calculation sheet (e.g., EXCEL sheet) which will help to arrive at "Total Cost to BHEL" like Packing & forwarding charges, Taxes and Duties, Freight charges, Insurance, Service Tax for Services and loading factors (for non-compliance to BHEL standard Commercial terms & conditions) for each of the bidder to enable them to fill-in the price and keep it ready for keying in during the Auction.
8. Reverse auction will be conducted on scheduled date & time.
9. At the end of Reverse Auction event, the lowest bidder value will be known on auction portal.
10. The lowest bidder has to fax/e-mail the duly signed and filled-in prescribed format for price breakup including that of line items, if required, (Annexure VII) as provided on case-to-case basis to Service provider within two working days of Auction without fail.
11. In case BHEL decides not to go for Reverse Auction procedure for this tender enquiry, the Price bids and price impacts, if any, already submitted and available with BHEL shall be opened as per BHEL"s standard practice.
12. Bidders shall be required to read the "Terms and Conditions" section of the auctions site of Service provider, using the Login IDs and passwords given to them by the service provider before reverse auction event. Bidders should acquaint themselves of the „Business Rules of Reverse Auction“, which will be communicated before the Reverse Auction.

13. If the Bidder or any of his representatives are found to be involved in Price manipulation/ cartel formation of any kind, directly or indirectly by communicating with other bidders, action as per extant BHEL guidelines, shall be initiated by BHEL and the results of the RA scrapped/ aborted.

14. The Bidder shall not divulge either his Bids or any other exclusive details of BHEL to any other party.

15. In case BHEL decides to go for reverse auction, **the H1 bidder (whose quote is highest in online sealed bid) may not be allowed to participate in further RA process.**

Force Majeure clause: If at any time during the continuance of this contract the performance in whole or in part by either party of any obligations under this contract shall be prevented or delayed by reason, of any war, hostilities, acts of the public enemy, civil commotion, sabotage, fires, explosions, epidemics, quarantine, restrictions or acts of GOD (hereinafter referred to as events) then provided notice of happening of any such events is given by either party to other within twenty one days from the date of occurrence thereof neither party shall reason of such events be entitled to terminate this contract nor shall either party have any such non performance and delay is resumed as soon as practicable after such events has come to an end or ceased to exist. If the performance in whole or part of any obligation under this contract is prevented or delayed by reason or any such event claims for extension of time shall be granted for period considered reasonable by BHEL subject to prompt notification by the tenderer to BHEL of the particulars of the events and supply to the BHEL if required of any supporting evidence. Any waiver of time in respect of partial installment shall not be deemed to be a waiver of time in respect of remaining deliveries.

The correspondence exchanged against the tender from both tenderer and BHEL through email are considered as valid document legally though it is not signed. It is treated as valid confirmations made on behalf of the respective company and very much comes under the legal ambit of the business transaction and hence it is binding on both the parties to the business.

Any transaction pertaining to the tender from both the parties of business done round the clock irrespective of the office or business hours of the companies, are valid legally and binding on both the parties. This applies to the extent only in such cases where deadline time for transaction is not specifically declared by either or both the parties to the business.

In case Letter of Intent (LOI) is issued through email, the PC generated time and date of mail shall be construed as the official time and date of release of LOI. In as much as this date is within the last date of validity given by the bidder the LOI is said to have been issued within the validity period and shall be binding on both the parties to the business.

Tenderers participating in the tender should declare in their technical bid that whether they have been black-listed / kept on hold for a specified period / given Business holiday for a specified period by any Public sector undertaking or Government departments. The reasons for such action with details and the current status of such hold shall be clearly furnished to BHEL. If no such details are mentioned in the offer then it will be construed that the subject bidder is not under any such hold. But at a later date if it comes to the notice of BHEL about any such hold under enforcement on the subject bidder, BHEL will have every right to reject the offer of such vendors at any point of time and also under any stage of the finalization of the subject tender irrespective of the status of the subject bidder in that tender. Such bidders will not be permitted to participate in the further tender proceedings and will be communicated suitably. They will not be also considered for any ongoing tenders even if participated till the hold is officially lifted and confirmed in writing.



BHARAT HEAVY ELECTRICALS LIMITED
(A Government of India Undertaking)
Unit : TIRUVERUMBUR, BOILER PROJECT, P.O.
TIRUCHIRAPALLI - 620 014.

CIVIL ENGINEERING DEPARTMENT

NOTICE INVITING TENDER

- of
01. Name of work : **Operation and Maintenance
Coolant Recovery
System at BHEL, Trichy.**
02. Estimated Cost : **Rs. 47.02 Lakh**
03. Earnest Money Deposit : **Rs. 1,00,000/-**
04. Completion Time : **FIFTEEN (15) Months**
(From the date of commencement of
the work which will be reckoned from
the date of handing over to the
Contractor)
05. Cost of Tender Document : **Rs.750/-** (Rs. 825/- if required by
post)
including Sales Tax in DD form
This amount will not be refunded
under any circumstances
06. Last Date for Receipt of
Tenders : **10.30 Hrs. on 30.12.15**
07. Date of Tender Opening : **10.30 Hrs. on 30.12.15**
08. Maintenance Period : **6 (Six Months from the date of actual
completion of the entire work
and handing
over to Bharat Heavy Electricals
Limited)**

Tender document contains **96** pages in Qualification Bid and **32** pages in Price Bid
including Bill of Quantities, Drawing etc.

Issued to Messrs. / Thiru :

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INSTRUCTIONS TO TENDERERS

1. The tender is open to all Contractors. The Contractors not borne on the approved list of contractors of this Organization must submit the following testimonials simultaneously with their tenders.
 - i. A Certificate to establish that the tenderer is an independent contractor working on his own
 - ii. At least two certificates from responsible Officers of Government of Firms of repute, regarding the tenderer's capacity to undertake to undertake and carryout the work tendered for or similar work satisfactorily

NOTE :

- a) Copies of testimonials unless attested a Gazetted Officer will not be accepted
 - b) Non – Submission of the above testimonials simultaneously with the tenders may result in the tender being rejected
2. The tenders should be accompanied by a list of contracts already held by the contractor at the time of submitting the tender and giving the following particulars
 - a) Value of each contract
 - b) The balance value of work to be done on the same
 3. The tenderer is advised to obtain the tender documents in person or by a messenger duly authorized to do so. The BHARAT HEAVY ELECTRICALS LIMITED will not under any circumstances accept responsibility for the non – receipt of delay in the receipt of the tender documents by the tender.
 4. Rate for each item of the tender schedule should be quoted in FIGURES and in WORDS. In case of any difference in the rates quoted in figures and in words, the lower of the two rates will be taken as the tendered rate. Unit rate quoted shall be the basis for arriving the total value of the tender. The total amount for every item shall be arrived by multiplying the unit rate with the quantity indicated for that item. In case of any arithmetic deviation is noticed in the total amount, the same will be corrected and evaluated by taking unit rate as basis and multiplying with the quantity indicated.

The item rate offered is for finished item of works and shall provide for the complete cost towards fuel, tools, tackles, plant & machinery, temporary works, labour, materials, levies, taxes, transport, lay-out, repairs, rectifications, maintenance till handing over, supervision, labour colonies, establishment, services, roads, revenue expenses, overheads, profits & all other incidentals etc., complete.

The rate quoted shall not include service tax. However the service tax as applicable for this contract work can be claimed from BHEL along with their monthly bills for further payment to be made to the authorities concerned. The contractor has to submit the service tax payment challan as a documentary proof of having paid the service tax for the previous bill for which he has received the service tax payment along with the subsequent bill for which payment has to be processed.

The L1 position based on the quoted values (subject to calculations) excluding service tax, will not necessarily mean L1 for a vendor, but the net liability to BHEL, after considering the service tax criteria for the vendors who had participated in the tender In case of non-applicability of service tax, the contractor has to submit a declaration along with the tender documents

5. Tender Value is only approximate and liable for variation without entitling the tenderer to any compensation, till the total value of contract vary by more than 20% (Twenty Percentage)
6. Quoted rate shall be firm throughout the contract period of **15 months** and no cost escalation is allowed on any account including extended period if any.

7. The works contract to be entered in to with the contractor will be governed by the BHEL Revised General Conditions of contract in force.
8. Should a tender find discrepancies or omissions in the drawings or any of the tender documents or should be in doubt as to their meaning, he should at once address the authority inviting the tender for clarification. Every Endeavour is made to avoid any error which can materially affect the basis of the tender but the successful tenderer shall take upon himself to provide for the risk of any error which may be subsequently by discovered and shall make no subsequent claim on account thereof.
9. Tenders submitted by post should be sent "Registered Post with Acknowledgement due". These should be posted with due allowance for any delay in postal delivery. Tenders received after the due date and time of opening, tenders are liable to be rejected.
10. Where the tender called for covers only the building work and excludes internal services such as sanitary and water supply installations, electrification etc., the building contractor will have to leave pockets, holes, etc., as required for other works and will have to phase his work to ensure smooth progress of the work of the other agencies also as directed by the Engineer – in – charge.
11. Where the tender schedule contains special items of work such special floor finishes, foam concrete for insulation, special water proofing treatment to roofs etc., it will be entirely at the discretion of the Project Authorities to allot these items of work to other contractors specialized in these works. In such cases, the main building Contractor will have to tender all necessary co-operation to the agencies involved so as to ensure the smooth progress of all work.
12. The contractor's responsibility under this shall commence form the date of receipt of the contract order of acceptance of his tender. The scheduled period of completion for this work will be as mentioned in page No. 14, and the Contractor will have to plan his work accordingly.
13. Generally, the maintenance period for any work under BHEL Organization will be Six (6) months.

15. Earnest Money Deposit:

Earnest Money is to be paid by each tenderer to ensure that the tenderer does not refuse to execute the work after it is awarded to him. EMD be furnished only in the form of Pay Order or Demand Draft in favour of BHEL, Trichy , EMD in any other form will not be accepted. The rate of earnest money deposit shall be as under:

Works costing up to Rs. 2 lakhs	NIL
Works costing more than Rs.2 lakh and up to Rs. 5 lakhs	Rs. 10000/-
Works costing more than Rs.5 lakhs and up to Rs.10 lakhs	Rs. 20000/-
Works costing more than Rs.10 lakhs and up to Rs.20 lakhs	Rs. 40,000/-
Works costing more than Rs.20 lakhs and up to Rs.30 lakhs	Rs. 60,000/-
Works costing more than Rs.30 lakhs and up to Rs.50 lakhs	Rs.1,00,000/-
Works costing more than Rs.50 lakhs and up to Rs.100 lakhs	Rs.1,50,000/-
Works costing more than Rs.100 lakhs	Rs. 2,00,000/-

One time EMD will also be Rs.2.00 lakhs.

EMD by the Tenderer will be forfeited as per tender Documents if:

- a) After opening the tender, the tenderer revokes his tender within the validity period or increases his earlier quoted rates,
- b) The tenderer does not commence the work within the period as per LOI / Contract. In case the LOI / contract is silent in this regard then within 15 days after award of contract.

- c) EMD given by all unsuccessful tenderers shall be refunded normally within fifteen days of acceptance of award of work by the successful tenderer.
 - d) EMD shall not carry any interest.
16. Should a tenderer or a contractor on the list of approved Contractors have a relative, or in the case of a firm or Company of contractors any of its share holders or shareholder's relative, employed in a gazetted capacity in the Engineering Department of the Bharat Heavy Electricals Limited, the authority inviting tenders shall be informed of this fact at the time of submission of the tender, failing which tender, may be disqualified or if such fact subsequently comes to light, the contract may be rescinded in accordance with the relevant provisions in the General Conditions of Contract.
 17. If tenderer expires after the submission of his tender or after the acceptance of his tender the BHEL may, at their discretion, cancel such tender. If a partner of a firm expires after submission of tender or after the acceptance of the Tender, BHEL may cancel such Tender at their discretion unless the firm retain its character.
 18. The Bharat Heavy Electricals Limited will not be bound by any power of attorney granted by the tenderer or by changes in the composition of firm made subsequent to the execution of the contract. They may however recognize such power of attorney and changes after obtaining proper legal advice the cost of which will be chargeable to the contract concerned.
 19. If the tenderer deliberately gives wrong information in his tender or creates conditions favorable for the acceptance of his tender, the Bharat heavy Electricals Limited, reserves the right to reject such tender at any stage.
 20. Words importing the singular number shall also be deemed to include the plural number and vice versa where the context so requires.
 21. The expenses for competing and stamping the agreement shall be paid by the contractor.
 22. The General and special conditions are complementary to each other and where they are conflict the Special Conditions shall prevail. In regard to matters not covered by the General and Special Conditions of Contract, those contained, those contained in the Tamil Nadu Building Practice Standard Specifications or other specifications approved by the Bharat Heavy Limited, Shall apply.
 23. Tenderers shall not increase their quoted rates in case the Bharat Heavy Electricals Limited, negotiates for negotiation for reduction of rates. Such negotiation shall not amount to cancellation or withdrawal of the original offer and the rates originally quoted shall be binding on the tenderes for a period of three months from the date of opening of tenders.
 24. Canvassing in any form in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection
 25. All contractors will have to produce Income tax Clearance Certificate from the Income Tax– Officer concerned along with their tenders. Those Contractors whose income is not taxable will be required to give an affidavit of their income on the prescribed form. If the successful tenderer fails to produce the Income – tax clearance certificate within the stated period the Earnest Money Deposit and Security Deposit of the tenderer may be forfeited and the contract terminated.

TENDER NOTICE

NAME OF WORK : Operation and Maintenance of Coolant Recovery System at BHEL, Trichy.

ESTIMATED COST : Rs. 47.02 LAKHS

1. SEALED TENDERS for the above noted work are hereby invited from contractor experienced in works of similar kind and magnitude. Tenders will be received by **DGM/CIVIL/PLANNING(FACTORY)** Bharat Heavy Electricals Limited, Tiruchirappalli – 620 014. Up to 10.30 Hrs. on **30.12.15** and will be opened on the same day at **10.30 Hrs.** at the **Office of the DGM /CIVIL/ PLANNING (FACTORY)** in the presence of such of those tenderers. Or their agents who may choose to attend.
2. TENDER FORMS and other particulars regarding the proposed work can be obtained on any working day from 8.00 A.M. to 4.30 P.M. up to **29.12.15** on payment of the prescribed sum of Rs. **750 / -** per set in person (Rs. 825/- if required by post) including Sales Tax in the form of Demand Draft Amount nor refundable.

In case of tender documents downloaded from website, tender shall accompany the tender cost of Rs.750/- in the form of Demand Draft (separate) in addition to the EMD amount in the form of Demand Draft. Tenders without tender cost will also be summarily rejected.

3. TENDERS must be submitted in sealed covers and should be addressed to the with full name and address of the tenderer and the name of work being noted on the cover
4. All entries in the tender documents should be in the one ink. Erasers and over writings are not permitted. All cancellations and insertions should be duly signed by the tenderer concerned.
5. TENDERERS should fill in all the required particulars in the blank spaces provided for this purpose in the tender documents and also sign each and every page of Tender Documents including the drawings attach there to before submitting their tender.
6. UNIT rate should be quoted in figures as well as in words with reference to each item and for all the items shown in the attached schedule. These rates shall be for the finished work in site. Amount of each item and the total page by page and also the grand total amount of the whole contract should be filled in by the tenderers. Unit rate quoted shall be the basis for arriving the total value of the tender. The total amount for every item shall be arrived by multiplying the unit rate with the quantity indicated for that item. In case of any arithmetic deviation is noticed in the total amount, the same will be corrected and evaluated by taking unit rate as basis and multiplying with the quantity indicated.
7. QUANTITIES shown in the attached schedule are only approximate and are liable to variation without entitling the Contractors to any compensation, provided the total value of the Contract does not vary by $\pm 20\%$ (twenty percent)
8. In quoting their rates, the tenderers are advised to take account all factors including any fluctuations in the market rates etc. No claim will be entertained on this account after acceptance of the tender or during the currency of the contract.
9. Before tendering, the tenderers are advised to inspect the site of work and its environments and be well acquainted with the actual working and other prevalent conditions position of materials and labour, General and Special Conditions of Contract. Instructions to tenders, drawings and Specifications and all other documents which form part of the Agreements to be entered into.

10. The rates quoted in the tender shall remain valid for a period THREE MONTHS from the date of opening of tenders.
11. In the event of tender being submitted by firm the tender must be signed separately and legibly by each partner or member of the firm or in their absence, by the person holding the power of attorney on behalf of the firm concerned in the latter case a copy to the power of attorney duly attested by a Gazetted Officer must accompany the tender.
12. Every tender must be accompanied with EMD for the amount as specified in Page No. 14 in any of the form mentioned in Para 15 of the "Instruction to Tenderers". This Earnest Money will be refunded to the unsuccessful tenderers within fifteen days of finalization of the award of work. In case of the successful tenderer, the Earnest Money will be retained as part of the Security Deposit for satisfactory completion of the work in accordance with Clause 16 of the General Conditions of Contract

NOTE : Cheques, Currency Notes and Money Orders will not be accepted in lieu of the deposit receipt referred to above

13. Security Deposit

13.1 Security Deposit should be collected from the successful tenderer . The rate of Security Deposit will be as below:

Up to Rs. 10 lakhs	: 10%
Above Rs. 10 lakhs up to Rs.50 lakhs	: 1 lakh + 7.5% of the amount exceeding Rs. 10 lakhs.
Above Rs. 50 lakhs	:Rs.4 lakhs + 5% of the amount exceeding Rs. 50 lakhs.

The security Deposit should be collected before start of the work by the contractor.

13.2 Security Deposit may be furnished in any one of the following forms

- i) Cash (as permissible under the Income Tax Act)
- ii) Pay Order, Demand Draft in favour of BHEL.
- iii) Local cheques of scheduled banks, subject to realization.
- iv) Securities available from Post Offices such as National Savings Certificates, Kisan Vikas Patras etc.
(Certificates should be held in the name of Contractor furnishing the security and duly pledged in favour of BHEL and discharged on the back).
- v) Bank Guarantee from Scheduled Banks / Public Financial Institutions as defined in the Companies Act. The Bank Guarantee format should have the approval of BHEL.
- vi) Fixed Deposit Receipt issued by Scheduled Banks / Public Financial Institutions as defined in the Companies Act. The FDR should be in the name of the contractor, A/C BHEL, duly discharged on the back.
- vii) Security deposit can also be recovered at the rate of 10% from the running bills. However in such cases at least 50% of the Security Deposit should be collected before start of the work and the balance 50% may be recovered from the running bills.
- viii) EMD of the successful tenderer shall be converted and adjusted against the security deposit.

ix) The security deposit shall not carry any interest.

NOTE: Acceptance of Security Deposit against Sl. No. (iv) and (vi) above will be subject to hypothecation or endorsement on the documents in favour of BHEL. However, BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith.

14. Unless the contractor whose tender is accepted signs the Contract Agreements and makes the necessary security deposit specified in Para 13 above within Seven days of the date of the order directing him to do so the amount of Earnest Money Deposit already deposited by him will be forfeited and acceptance of his tender withdrawn.
15. If after opening of tenderer revokes his tender or increases his earlier quoted rates or after acceptance of his tender does not commence the work in accordance with the instruction of the Engineer-in-charge, the Earnest Money deposited by him will be forfeited and acceptance of his tender withdrawn. If only a part of the work included in the tender had been awarded to the tenderer, the amount of Earnest Money to be forfeited will be based on the value of the contract so awarded.
16. The Bharat Heavy Electricals Limited reserve the right to reject any or all the received or accept any tender or part there of without assigning any reason thereof. In the case acceptance of part of tender, time for completion may also be reduced to the extent considered appropriate by the Accepting Authority.
17. Conditional and Unwitnessed tenders, tender containing absurd rates and amounts tenders which are incomplete or otherwise considered defective and tenders not in accordance with the tender conditions laid down by the Accepting Officer are liable to be rejected.
18. Tenders not submitted on the prescribed form are liable to be rejected
19. The work must be completed within a period as mentioned in Page No. 14.
20. The Chairman / General Manger / Deputy General Manager / Deputy Manager / Senior Engineer shall be Accepting Officer, herein after referred to as such for the purpose of this contract.
21. This tender notice shall be deemed to form an integral part of the contract to be entered into for this work.
22. The tenderers are advised to go through the condition stipulated in Tender document & code of conduct for 'Health & Safety of Contract Labourer' in details. Any violation thereof will invite punitive action being taken against them. While quoting the rate all the above factors are to be taken into account.

SCHEDULE 'A'

LIST OF WORKS AND PRICES

NAME OF WORK:

Operation and Maintenance of Coolant Recovery System at BHEL, Trichy

DETAILS & QUANTITIES of each item of work shown in the BILL OF QUANTITIES are only approximate and the same is attached. They are given as a guide for the purpose of tendering only and are liable to variation and alteration of the Competent Authority. The work under each item as executed shall be measured and priced at the corresponding rate quoted by the contractor in the BILL OF QUANTITIES

Sl.No.	Description of work / supplied	Total amount of work / supplies (in figures and words)		Period of contract
		Rs.	Ps.	
1.	Operation and Maintenance of Coolant Recovery System at BHEL, Trichy.	Rs 47,02,115.00/-	+Applicable service tax	Fifteen (15) MONTHS

ANNEXURE TO SCHEDULE A

BILL OF QUANTITIES

Sl. No.	Appx. Qty.	Description of work	TNBP No.	Rate (Both in Unit fig & Words)	Amount Rs. Ps.
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AS PER SEPARATE SHEETS ATTACHED CONTAINING **03** PAGES.

FROM Page No. **20 to 22.**

**BHEL / TRICHY-620 014
CIVIL ENGINEERING DEPARTMENT-FACTORY
BILL OF QUANTITIES**

Name of work : Operation and Maintenance of Coolant Recovery System at BHEL, Trichy.

S.No	QTY	Description	Unit	Rate (Rs.P) (Both in Figures& in Words)	Amount (Rs.P)
1	15	<p>Operation and maintenance of existing Coolant Recovery plant at BHEL, Trichy-14. The scope of work covers Operating the Coolant Recovery plant for two shifts in a day, as convenient to BHEL and on all BHEL working days including collection of the waste coolant from the machine shops within Main Factory complex, Conveying in the barrels/carboys to the centralised Coolant Treatment Plant near Heat Treatment Shop, Storing in syntax tanks or M.S barrels and processing it to make it fit for recycling, transferring the processed coolant to the machine shop and pouring in Coolant sumps after cleaning the pits where ever required etc. complete. The scope also includes mechanical & electrical maintenance of the coolant recovery system including periodical preventive maintenance, replacement of all spares (as indicated in SI.No.2 and membranes supplied by BHEL), supply of required quantity of chemicals and consumables for uninterrupted maintenance & operation of the system, testing of Raw Coolant and permeate water etc., complete vide details listed in the annexure-A. The quoted rate includes cost of all labour, chemicals, consumables and all other required spares (other than spares listed in SI.No.2 and membranes supplied by BHEL) testing charges, Tax & duties if any and all other incidental charges, etc., complete.</p>	Per Month		

CONTRACTOR

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ACCEPTING OFFICER

S.No	QTY	Description	Unit	Rate (Rs.P) (Both in Figures & in Words)	Amount (Rs.P)
2		Supply of the following spares for the operation of the equipment. The quoted rate shall include cost of spares, Taxes, duties, packing, forwarding, conveyance and all other incidentals, etc., complete. The spares supplied shall be guaranteed for not less than one-year wherever not specified.			
a)	8	Bag Filter consists of filter media made of HDPE woven with 10-25 microns pore size bag stitched for 200mm dia. with flanged end.	Each		
b)	15	Cartridge Filter consists of 5/10-micron resin bonded 10" long cartridge (Ametek make).	Each		
c)	250	Activated carbon with Iodine No.1200 mg/gm (Min.) and apparent density 0.45 gm/cc(Min.)	Kg.		
d)		<u>Spares for Photo Chemical Reactor.</u>			
i)	6	Ballast – Electronic ballast duplex for 2 lamps - 22 watts each.	Each		
ii)	16	Glass Tubes – coated with UV Reflector– 340mm long, 20mm dia.	Each		

S.No	QTY	Description	Unit	Rate (Rs.P) (Both in Figures & in Words)	Amount (Rs.P)
e)	1	<p>Photo Chemical Reactor of capacity 500 lph comprising 6 Nos. of UV lamps, Polymer tubes, ballast and Glass tubes covered in powder coated M.S metal leak proof Box with inlet and outlet arrangements, etc. complete.</p> <p>(i) The imported UV Lamp – 22 watts and 425mA, single ended 4-pin type low pressure and High intensity with a UV dosage of 50,000 to 60,000 Micro watts/cm²/sec. – 435mm long and 19mm dia. With Ozone and UV resistant ceramic base. The life of UV lamp should be guaranteed for 7000 hrs. working.</p> <p>(ii) Polymer Tube: Teflon based polymer tubes with 26 mm dia and 21" length</p> <p>(iii) For other items like glass tube, ballast, etc., the specification shall be as indicated above in this bill of quantities.</p>	Per Set		

(Rupees				GRAND TOTAL	
.....				
.....			 only)	

1. The quoted rate shall be firm throughout the contract period and extended period also, if any. No cost escalation will be paid on any account.

2. The above coolant and metal recovery systems are to be operated in two shifts in a day as mentioned in item No. 1.

3. The contractor has to deploy minimum labourers individually for each system as mentioned below for the smooth operation of the systems.

a) Supervisor (Skilled) 1 No. / shift (i.e. 1 No. x 2 shifts = 2 Man days each day)

b) Operator (Semi- skilled) 1 No. / shift (i.e. 1 No. x 2 shifts = 2 Man days each day)

c) Workers (Unskilled) - 6 Nos. / shift (i.e. 6 Nos. x 2 shifts = 12 Man days each day)

4. The labourers shall be paid additional payment as mentioned below in addition to the payment of minimum wages, Bonus to the workmen employed by him at the rates which shall not be less than the minimum wages applicable from time to time .(Un Skilled Worker - Rs. 3200 per month, Semi Skilled Worker Rs. 3700 per month & Skilled Worker / Supervisor Rs.4100 per month)

5. If the coolant Recovery system is not operated for more than 24 hours due to break down on any unforeseen account of other than power supply, non availability of raw effluents, spares, etc., recovery will be made on pro rata basis as per the approved and awarded rate in SI.No.1 per month from the date of stoppage to the date of putting back in to operation effectively.

In case of any eventuality for not operating the systems as stated above, the man power shall be suitably redeployed. No separate compensation will be paid for non operation of the system.

CONTRACTOR

ACCEPTING OFFICER

SPECIAL CONDITIONS OF CONTRACT FOR OPERATION AND MAINTENANCE
OF
COOLANT RECOVERY SYSTEM:

- 01 The tenderers are advised to visit the existing Coolant Recovery System Plant at BHEL, Trichy in order to assess the nature of work, man power requirement etc., before submitting their offer..
- 02 The contractor should engage skilled labourers and supervisors for two shift operations as per the man power deployment scheme to be submitted by the tenderer for operation & treating the waste coolant and for transporting the waste coolant from various buildings like Building No.1, 5, 6, 50, SSTP etc. to the centralised treatment plant located near Heat Treatment shop, transporting the treated Coolant back to machine shops, cleaning the coolant pits and filling the sump, etc. The labourers engaged should be paid not less than the prevailing minimum wages as per State Government norms.
- 03 The tenderer should submit details of manpower deployment scheme to be employed per shift like supervisor other supporting labourers, etc., along with the tender.
- 04 Operation and maintenance is to be carried out in **Two shifts a day**. For want of coolant, Power supply, etc., the system can be operated in one shift occasionally, only with the prior approval of the Engineer-in-charge.
- 05 If the labourers, supervisors etc., are not employed as per the manpower deployment scheme the recovery will be made from the payment at pro-rata basis.
- 06 **The work is to be executed on all BHEL working days.**
- 07 If the system is not operated for more than 24 hours due to break-down on account of other than Power Supply, non availability of Coolant, Spares, etc., recovery will be made on pro rata basis **as per the approved and awarded rate as in SI.No.1** per month from the date of break down to the date of putting back the system to perform effectively.
- 08 In case of any eventuality for not operating any of the systems as stated above the man power shall be suitable redeployed. No separate Compensation will be paid for non-operation of systems.
- 09 If any additional shift is felt required by BHEL and operated on any day of the month, payment will be made on pro rata basis **as per the approved and awarded rate in SI.No.1** per month.
- 10 Required minimum space, Compressed air, water and power for the operation of the system will be provided by BHEL free of charges.
- 11 **Raw coolant, processed coolant and the permeate discharge should be tested for pH, Conductivity, Temperature and Volume for every batch taken for processing and a record should be maintained and produced to BHEL for its verification.**
- 12 Bacteriological Analysis for TBC using Bactaslide once in a week or as and when required by BHEL on Raw and Processed coolant should be conducted at the site. The

number of tests will be limited to five per month i.e 4 (four) for checking the Treated Coolant and 1 (one) per month for checking the Raw waste coolant. The used Bactaslides will be burn / destroyed in the presence of Engineer - in- charge and disposed with out affecting the environment.

- 13 The composite sample of the permeate discharged and the raw coolant water shall have to be analysed for BOD, COD, Suspended Solids and Total dissolved solids, Oil & Grease, Chlorides, Sulphates etc., at the agency's laboratory established at BHEL Trichy Complex or in any of the approved lab (King's Institute, Chennai, NIT, Trichy, TNPCB labs in TamilNadu, etc.) as directed by BHEL, in line with the laid down procedures of BIS. One sample of raw waste coolant and one sample of permeate once in a month has to be collected, analysed and the report of analysis should be submitted to BHEL for verification.
- 14 The contractor should maintain proper logbook for the performance of the system and the log book should contain the details of the quantity of collection of the waste coolant, Point of collection, quantity treated, quantity handed over, name of work centre, etc., complete.
- 15 The tenderer has to ensure payment of Minimum Wages as per Tamil Nadu State Minimum Wages as applicable under law from time to time.

The labourers engaged in this contract shall be paid additional payment as mentioned below in addition to the payment of Minimum wages as stated above.

a)	Unskilled Worker	Rs. 3200 per month
b)	Semi-skilled Worker	Rs. 3700 per month
c)	Skilled Worker / Supervisor	Rs. 4100 per month

Also the labourers shall be paid a minimum bonus which shall be 8.33% as per the payment of Bonus Act 1965 for the total wages paid (i.e) Payment of minimum wages and additional payment as mentioned above.

The Contractor shall have to remit EPF & ESI contributions at the rates applicable under law to the authorities concerned for the total wages paid (i.e) Payment of minimum wages and additional payment as mentioned above.

At present the Tamil Nadu State Government Minimum wages declared is enclosed for your reference in QB . Normally the revision will be with effect from 1st April of every year. Tenderers are requested to quote their offer after taking into account of the above factor also.

- 16 The workmen should be covered by PF & ESI Act as applicable and payment will be made only on verification of the documents for the remittance of ESI and PF for the personnel engaged in the work.
- 17 The spent Activated Carbon shall have to be dumped in the coal yard by the agency.
- 18 The treated Coolant will be collected and accounted separately and handed over to machine shops as and when required.
- 19 The collected tramp oil should be handed over by the contractor to the Stores of BHEL at his cost.
- 20 Hand trolleys are to be arranged by the contractor for collection of coolant.

21. **The spares listed in Sl.No.;2 of Bill of Quantities are tentative. Any other spares not listed, if supplied and provided will be reimbursed as per BHEL norms.**
22. **Spares like UV lamps, Ultra Filtration Membrane, High Pressure Pump etc., will be supplied by BHEL and the same shall be installed in the system by the contractor at no extra cost.**
23. **If the spares supplied by the contractor found defective during the guarantee period, it should be serviced / replaced at the contractor's risk and cost to the satisfaction of the Engineer-in-charge. 50% of Security Deposit will be released only after the guarantee period is over.**
24. **The contractor should submit the list and quantity of consumables and spares used every month for the verification by BHEL.**
25. **The workers should be provided with personal protective equipments such as Gloves, Goggles, safety shoes and waste cloths, etc by the Contractor.**
26. **The Contractor should supply and use the monitoring equipments such as pH meter, Conductivity meter, Thermometer, Glass beakers, etc.**
27. **The Replacement of inter connecting HDPE pipes, indicator bulbs, tubings, Sensors with cables, etc are in the scope of the Contractor.**
28. **The contractor should keep a First Aid Box with list of Aids and should be refilled as and when required.**

COLANT RECOVERY SYSTEM

ROUTINE MAINTENANCE & OPERATION

- 1) The existing system is capable of treating about 750 litres of waste coolant per shift.
- 2) All the chemicals required for routine maintenance and operation shall be supplied by the contractor.
- 3) Bag filter and Cartridge filter are cleaned not less than twice in a week by rinsing in caustic soda solution and washing it with fresh water.
- 4) The Activated Carbon Filter is washed with caustic soda solution and fresh water at the end of week's operation (Saturday) and filled with fresh water and kept for 24 hours or up to starting of next shift. The entire Activated Carbon will be replaced with fresh materials once in 45 days. The spent activated carbon shall be disposed at the coal yard of PG Plant or as directed by the Engineer-in-charge.
- 5) Ultra filtration, Disinfection unit and process tank are to be cleaned daily after the end of the shift.
- 6) Monitoring and maintaining the pressure shall be done at inlet and outlet of the Membrane System.
- 7) The Ultrafiltration unit is cleaned daily by circulating DM water for about 20 minutes and saturated with fresh water by proper closing of inlet and outlet valves.
- 8) At the end of week's operation, the Ultrafiltration unit is filled with soap water and kept in until further usage of system.
- 9) Surface Disinfection unit is to be cleaned with surf water (200gms of Aerial powder in 25 lit. water) circulated for 30 minutes and washed with fresh water. This is carried out twice in week.
- 10) The pH, TDS, and Temperature of the raw coolant are checked and recorded before treatment.
- 11) After 30 minutes of circulation again pH, TDS and Temperature are checked and the treated coolant is handed over for recycling.
- 12) TDS of the treated coolant shall be corrected if it exceeds 1000 ppm, by adding fresh water and disinfected on repeated cycles.
- 13) Bactaslide is used to find the bacterial content of the coolant before and after disinfection. The number of tests will be limited to not more than five per month i.e.4 (four) for checking the treated coolant and 1 (one) for checking the raw coolant once in a month.
- 14) The treated and disinfected coolant shall have a bacterial count not more than 10^2 .
- 15) The contract agency has to fix all the spares supplied by him and also the spares supplied by BHEL at his own cost.
- 16) The contractor should put up his Bill for his month wise payment along with, (a) Production Report, (b) Test Report of the Raw waste and coolant water Permeate, (c) Attendance particulars, (d) Pay Acquittance and (e) PF & ESI remittance challans.

SCHEDULE 'B'

1. The following materials will be issued FREE of cost to contractor at BHEL Stores / Stock yard.

Sl.No.	DESCRIPTION	PLACE OF ISSUE
--NIL--		

2. It will be the responsibility of the Contractor to submit his demands for the above stores in writing atleast seven days in advance of the actual requirement.
3. Issue of Stores is subject of the availability at the place of issue cited above, items of stores to be issued by BHEL which are not available at the time of indenting by the contractor may be supplied by BHEL after necessary procurement. The contractor shall not be entitled to any claim of compensation for delay in the supply of stores by BHEL under any circumstances.
4. The materials will be issued only during the working hours of the BHEL Stores Department (8.00 a.m. to 4.30 p.m.). Contractor shall have to transport them to the site of work at his own cost as soon as they are issued to him.
5. The steel materials if issued will be in random lengths and sizes as stocked by the BHEL and the cost of all cutting, conversion, substitution and fabrication as well as wastage shall have to be borne by the Contractor.
6. The contractor shall from time to time render proper account of all materials issued to him by BHEL. If he fails to do so, no further issue of materials will be made to him and he will be held responsible for any delay in the execution of the work which may occur on this account.
7. Where A.C. Sheets and accessories, Doors, Windows, Sanitary fittings, Special glasses or other items are issued free of cost to the contractor, the contractor will have to make good at his own cost any loss or damage to any part or whole of the items issued to him as above. All wastage within the premises limits as fixed by BHEL will be charged for at the prescribed issued rates of BHEL. Excess wastage will be charged for at punitive rates which will be 100% higher than the issue rates.
8. All surplus materials in good condition which are not returned to the BHEL Stores as also quantities of materials consumed in excess of the max. permissible limit as fixed by BHEL shall be charged for at punitive rates.

The decision of the Senior Engineer / Dy. Manager / Manager as to the extent to which materials have been rendered surplus or consumed in excess of the actual requirements shall be final and conclusive and binding on the contractor.

SCHEDULE 'C'

ISSUE OF TOOLS AND PLANTS TO CONTRACTORS

Sl.No.	Qty.	Particulars	Details of BHEL Crew Supplied	Hire Charges Per unit Per Day	Place of Issue	Remarks
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.....Nil.....

- a. Machineries shall not be operated over time without the written permission of the Sr. Engineer / Dy. Manager / Manager.
- b. All Coolies, Watermen etc., required in addition to BHEL crew mentioned in column 4 above shall be arranged by the contractor at his own expense.

SCHEDULE 'D'

NOTE : All Drawings are to be signed by the Contractor as well as the officer entering into contract.

SL. No.	DRAWING NUMBER	DESCRIPTION
		----NIL----

SCHEDULE 'E'

LEAD STATEMENT

Sl. No.	Name of Material	Name of Source	Lead Particulars both for Factory and Township
	---NIL---		

C.A.....Date
(To be used in conjunction with BHE Ltd., General Conditions of Contract)

AUTHORITY TO TENDER

Tender Notice No. **CF:TN:011/15-16** Office of the
DGM/CIVIL/PLANNING/F&T
BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHY – 14.

Tender Schedule No. **CF:TS:043/15-16**

~~Lumpsum / Percentage rate / Item rate~~ tender for works required in **“Operation and Maintenance of Coolant Recovery System at BHEL, Trichy.”**

Messrs. are / is hereby authorized to tender for the above work. The Tender is to be delivered at the Office of the **DGM/CIVIL/PLANNING/F&T** Bharat Heavy Electricals Limited Unit, Thiruverumbur, Tiruchirappalli – 620 014 **up to 10.30 hrs. on 30.12.2015 addressed to the DGM / Civil / Planning(F&T),Building No.53 Ground floor,** BHEL. Tiruverumbur, Tiruchirapalli – 620 014 superscribing the name of works as mentioned above.

Any correspondence concerning this Tender should be addressed as indicated above quoting the Tender Notice, schedule No. and other relevant particulars.

BHARAT HEAVY ELECTRICALS LIMITED DO NOT BIND THEMSELVES TO ACCEPT THE LOWEST OR ANY TENDER

**Issuing Officer with
Designation**

Contract Agreement No.....

TENDER

To

DGM/CIVIL/PLANNING/F&T
Bharat Heavy Electricals Limited
Unit : Tiruverumbur
TIRUCHIRAPPALLI – 620 014.

I / We hereby offer to carry out the work of **“Operation and Maintenance of Coolant Recovery System at BHEL, Trichy.”**

I / We hereby carefully perused the following documents connected with the above noted work and agree to obide the same.

1. Specifications (General & Particular)
2. Drawings
3. Schedule ‘A’, ‘B’, ‘C’, ‘D’ & ‘E’ and Bill of Quantities attached hereto.
4. Schedule or rates
5. BHE Ltd., General & Special Conditions of Contract, Tender Notice and Instructions to Tenders attached hereto.

I / We forward herewith the sum of Rs.....as Earnest Money, which shall be refunded should this tender be rejected. I / We further agree to deposit such sum which along with the sum of Rs.....mentioned above shall make up 50% of the fully Security Deposit for this work as provided for under conditions of the BHARAT HEAVY ELECTRICALS LIMITED General Conditions of Contract.

I / We further agree to execute all the work referred to in the said documents upon the terms & condition contained or referred therein and as detailed in Schedule ‘A’ and Bill of Quantities annexure thereto an to carry out such deviations as may be ordered, vide conditions 6 of the BHEL Ltd., General Conditions of Contract upto a maximum of 20% of the tendered of Rs.....

I / WE further agree to refer all disputes, as required by condition 62 of the General conditions of Contract to the sole arbitration of an Officer, to be appointed by the General Manager, B.H.E. Ltd., in his sold discretion whose decision shall be final and binding.

WITNESS

Signature of the Contractor

Date :

1.
2.

GENERAL SUMMARY

1.	(a) Net Cost of works or building etc., from Schedule 'A' and Bill of quantities annexed thereto	Rs.
2.	Provisional sum	Rs.
	Total Rs.

Rupees.....
.....
.....Shri..... in the capacity of has been duly authorized by me / use to sign the tender for and on behalf of
.....
(in block letters)

Date : SIGNATURE OF CONTRACTOR

Witness : Postal Address :

1..... Telephone No.
Address

2.....
Address

..... alternations have been made in the Tender Document and as evidence that these alternations were made before the execution of contract agreement, they have been initialed by the Contractor and the

..... is hereby authorized to sign and initial on my behalf the documents forming part of this contract (Number of alternation in figures and words to be given me)

The above tender is accepted by me on behalf of the Bharat Heavy Electricals Limited, Unit Thriuverumbur, Tiruchirappalli – 620 014. for a sum of Rs.. at the item rates as indicated in the Bill of Quantities attached to Schedule 'A'.

Signature Date.....

Designation