

BHARAT HEAVY ELECTRICLES LIMITED
(A government of India undertaking)
Unit: High-Pressure Boiler Plant, boiler project P.O
TRICHIRAPALLI-14
COMBINED CYCLE DEMONSTRATION PLANT
NOTICE INVITING TENDER

01. Name of work : Plant Operation & Repair/Maintenance work : 2010-11
02. Estimate contract value : Rs. 52.00 lakh (approx)
03. Earnest money Deposit : Rs 1,50,000/-
04. Security Deposit : As per Works Policy
05. Operations & Maintenance period: One year
06. Cost of tender document : NIL
07. Last date for receipt of tenders : On or before 27.09.10 at 14:00 hrs.
08. Date of tender opening : On 27.09.10 at 14:30 hrs

This document contains Covering letter, Spec. and General conditions, Security Deposit details, Part-I(Qualification bid) and Part-II(Price bid). For qualifying criteria refer General Conditions under head General requirements point no 8.

CONTRACTOR

ISSUING OFFICER

BHARAT HEAVY ELECTRICLES LIMITED
TRICHIRAPALLI-14
COMBINED CYCLE DEMONSTRATION PLANT

CONT: SKILL:002: 2010-11

Date: 25.08.10

Sir,

Sub: Plant Operation and Maintenance Contract: 2010-11.

We are forwarding herewith one set of tender documents pertaining to the above work. You are requested to go through the Work Specification, General conditions and then reply your competitiveness in two parts in a sealed cover. The first part is technical bid and second part is a price bid. The contractor should visit the work spot at CCDP to assess the nature and quantum of work and study the specification/General conditions before quoting. The contractor must reply the technical competitiveness in Part-I and price bid in part-II

The Earnest Money Deposit amount of Rs 1,50,000/- (One Lakh fifty thousand only) prescribed for the work shall be furnished in the form of Demand Draft from Nationalized / Schedule bank payable at Trichy, drawn in favour of BHEL /Trichy. The details of EMD kept inside shall be mentioned on the sealed cover. No interest shall be allowed on EMD

The due date and time for submission of your offer is at 14:00 hrs on 27.09.10. When the tenders received, technical bid (part-I) will be opened first 14:30 hrs, only eligible contractors can attend price bid subsequently on the same day. BHEL/CCDP reserves the right to reject any or all the tenders received without assigning any reason therefore. The scheduled period of work is 12 months (One year period) from the date of award of work.

If you are in need of any further clarifications, please contact the undersigned on any working days between 09.00 am and 04.00 pm. In case you are not in a position to quote, please intimate the fact by return post duly returning the blank tender documents with your reply.

Thanking you,

Manager / CCDP

CC : SDGM / Finance

WORK SPECIFICATION
(Plant Operation/Maintenance contract)

Plant Operation Assistance:

The following field activities are carried out by our team of employees and supervisors. The contract employees are required to assist our team in the activities (in all three shifts) listed below.

1. Leak check for gasifier system and gas cleaning system, Flow check as per the instructions from control room.
2. Start up burner: starting burner, monitoring flame stability, controlling the flame temperature.
3. Coal feeding : opening closing of coal inlet valves, air valves, continuous monitoring of coal/bed material feeding through coal feed pipe, monitoring smooth functioning coal feeders against noise, gland leak, smooth transferring of coal in coal lock, coal receiver. Monitoring bunker level, transferring coal through weigh belt to coal lock
4. Bottom ash extraction: Monitoring of smooth functioning of three numbers bottom ash extractors, purging, gland leak, noise, temperature
5. Bottom ash disposal: smooth discharge through gates, disposal through chain conveyor and belt conveyor, keeping the area neat
6. Fly ash pump: continuous pumping of fly ash from hopper to silo, clearing line block, monitoring hopper and silo levels. Keeping the area neat.
7. Cooling water flow monitoring : Maintaining cooling water flow and temperature of fly ash coolers, bottom ash coolers, Y'pieces, Distributor cooling
8. Vent filter operation : Fly ash lock is depressurized through vent filter system and its operation like N2 purging, checking the discharge of fly ash collected in vent filter
9. Sampling : collection of samples for coal, bottom ash, fly ash, ash slurry at specified intervals and assistance during analysis
10. Gas cleaning quench column : Maintaining quench column level by suitably draining and filling level in order to remove dissolved dust periodically
11. Cyclone level maintaining: observation of ventury scrubbers and cyclone separators level functioning
12. Settler drum level: Maintaining settler drum by adding raw water, draining sediments during plant shut down
13. Flare stack: During plant start and gas generation, igniting and maintaining the flame in the flare stack

CONTRACTOR

ISSUING OFFICER

14. Boiler operation: auxiliary boiler starting, line up for use in gasifier/recycling /venting.
HRB boiler operation : Drum level, Steam pressure maintaining and use in gasifier/recycling/venting or ST use. Feed pump operation and maintaining dearator level.
15. Pumps operation : operation of cooling water pumps for cooling circuits to compressors, coolers, y-piece gasifier and distributor
16. DM Plant : DM water generation and routine maintenance
17. Compressors : Process compressors, service compressors, Instrument air compressor
18. operation and routine maintenance
19. Cooling tower operation and maintenance.
20. Gas Turbine and Steam Turbine operation
21. Electrical motors, equipments starting /stopping and other electrical related work
22. Operation related Instrumentation work
23. Any on line maintenance work required during plant run and safety related work like scaffolding, supporting for work to be carried out at height

Repair and maintenance work

The contract employees (Skilled and unskilled in all three shifts) will carry out the following repair and maintenance / modifications work during system working and shut down period. Our employees and supervisor will coordinate with the contract employees for early completion and restarting the plant.

1. Any failure of welding, gas leak, pipe erosion, hot spot failure due to very high temperature, Feeder/extractor gland leak, valves failure, Line block or chocking of lines or vessels. Any failure in Distributor like welding, nozzle melting, similarly in distributor plate, center pipe, cooling water lines, thermocouple damage, thermocouple welding failure, thermocouple bending, any other area of repair /maintenance work like gasifier, cyclones, quench column, water knock out drum, gas turbine steam turbine etc.
2. Investigation of failures: by opening flanges, cutting pipes, opening man holes, dismantling vessels, structures, lines that disturbs repair work, removing coal/ash from vessels, equipments, valves, lines and locating the failures
3. Preparation for repair work: arrangement for approaching failure spots, scaffoldings, ladders, supports, Cleaning the lines, vessels, equipments, preparing of plates, pipes, gaskets, bolts and nuts. Preparation of surfaces for repair work, by cutting grinding, edge preparing. Arranging welding set, cutting set, electrodes gas cylinders etc.
4. Repair work: cutting , welding, grinding other repair work like bending, gland packing, replacing damaged portion with new pipes, tubes, plates etc. Dye penetration and x'ray tests for welding repair and other quality control tests etc.

CONTRACTOR

ISSUING OFFICER

5. Assembly of system after repair work: assembly of vessels, flanges, pipe lines, equipments, dummies and tightening the manholes, flanges, equipments
6. Checking the failure: After repair, the repaired area strength to be tested with leak check, hydraulic check or any other applicable method
7. Putting back to service: After clearing the repair work, the system to be put back to service. Add bed material, ensure cooling water by starting pumps and opening/throttling valves, start the burner system, keeping steam ready for start
8. Modifications/improvement works
9. For system improvements, addition of gas lines, air lines, water lines, purge lines, valves, equipments, fabrication of burners, vessels or any other additions required to be added on need basis.
10. All electrical related maintenance work
11. All Instrumentation related maintenance work

CONTRACTOR

ISSUING OFFICER

GENERAL CONDITIONS

(PLANT OPERATION, REPAIR / MAINTENANCE WORK)

STATUTORY REQUIREMENTS

1. The contractor has to pay minimum wages to his labourers as per Tamil Nadu govt. norms and produce copies of attendance records / wage registers.
2. The contractor has to remit PF and ESI for the actual labourers engaged and produce the original challan every month along with bill for our record & verification.
3. The contractor shall not employ any one who has not completed 18 years of age.
4. The contractor shall comply with all state and central laws, statutory rules, regulations, inclusive of labour and industrial laws, which are applicable from time to time.
5. Any increase in minimum wage by Tamil Nadu Government, has to be implemented to the persons engaged by the contractor (including PF & ESI). For any reason, no increase in contract value shall be agreed.
6. Necessary gate entry, pass arrangement for labours shall be arranged by the contractor before commencement of the work. The authorized person / supervisor of the contractor is responsible for making the pass arrangement.
7. The contractor has to produce certificates for skilled workers engaged.
8. It is the sole responsibility of the contractor to ensure his workman against accident and injury while at work. They have to follow relevant pay compensation rules in case of accident/injury.

SAFETY

1. The contract employees shall follow safe working procedures by using appropriate safety equipments like safety belts, safety shoes, safety goggles, helmets, shields, earplugs, nose filter cloth or nose filters, aprons etc. All safety equipments mentioned above shall be supplied by the contractor.
2. All workers should compulsorily wear safety shoes at work site.
3. The contractor shall ensure that no damage is caused to any equipment at the site. If any such damage is caused, it is the responsibility of the contractor to make good the losses or compensate for the same.
4. Scaffolding if required should be done by the contractor. Pipe, wooden planks & ropes will be provided by BHEL at free of cost.
5. They have to strictly follow BHEL Engineers safety instructions whenever pointed out.
6. Since the contract employees are working in a coal/ash dust atmosphere, the contractor has to provide them face mask, long towel, soap, 100ml coconut oil once in a week compulsorily.

CONTRACTOR

ISSUING OFFICER

WORKS

1. The contractor has to engage sufficient skilled workers (Daily three shifts, each shift minimum Fitters 3, Structural Welders 2, Electrician 2, Instrument mechanic 1, unskilled workers 11 and Supervisor 1) to meet the work listed in Specification
2. Pipe welding shall be done only after the edge preparation as per standard.
3. Proper electrode shall be used for welding joints based on grade/ type of material.
4. General category welders shall be engaged for all welding works.
5. Preheating of electrode as recommended by the electrode manufacturer shall be carried out prior to welding.
6. Pipes, pipe fittings, bends, flanges, valves, gaskets, gland ropes, fasteners and spares etc. & welding electrodes, oxygen / acetylene cylinders, kerosene, paints, rustolene and other consumables, electric power supply shall be supplied by BHEL at free of cost.
7. Welding machine, cutting set, drilling machine & accessories and special tools shall be provided by BHEL at free of cost.
8. All scrap materials shall be transferred to CCDDP stores after inspection by the site in charge.
9. The contractor shall bring welding shield and arc welding holder for welding works.
10. The contractor has to bring two sets of tool boxes with spanners, hammers, chisels, cutters, wire brushes, steel tapes, bonds, shovels etc., also sufficient safety equipments like safety belts, helmets, safety shoes, safety goggles, shields, earplugs, aprons etc.
11. The contractor has to engage sufficient skilled workers wherever necessary like structural welding, pressure vessel welding, fitting, alignment, servicing, repair work of rotating parts, servicing of ball valves and other types of valves and all other preventive maintenance activities.
12. Timely completion of work is very important. Hence the contractor has to engage sufficient no. of workers. If sufficient workers are not brought to the work spot, penalty will be imposed for the delay caused at 10% of value of such work and it may even be extended up to termination of contract.
13. During plant operation, every location has to be manned with sufficient man power, to the satisfaction of site engineer.
14. Any deficiency in the supply of required man power for operational needs will be met by Department from other agencies at your risk & cost.
15. The contractor has to engage supervisors for maintaining quality, speedy and smooth overall work coordination.

CONTRACTOR

ISSUING OFFICER

GENERAL

1. The contractor shall be responsible for the proper behavior and observing all rules and regulations by the labour employed by them.
2. BHEL rules will be applicable towards issue of refreshments /food which will be adhered by the contractor. As per existing procedure for Canteen facilities, the lunch coupon shall be issued @ Rs.5 (Rs. Five) per person. Sufficient and valid coupons are to be tendered for Tiffin, Tea, Coffee, Milk, etc. to the canteen staff.
3. No advance payment will be arranged for the contract
4. Monthly bill shall be raised as per the measurement of actual work completed on pro-rata basis.
5. The contractor is directly responsible for the payment of wages to his workmen.
6. Maintenance and repair work will have to be completed in all three shifts (including Sundays and Holidays) as per BHEL engineer's instructions so that the plant can be started as early as possible.
7. The contractor should submit an acceptance letter for the above terms and conditions.
8. Qualification criteria : The tenderer should have executed a similar single contract of value not less than Rs15 lakh per year. Technical/Qualification competitiveness will be evaluated by technical committee and based on their recommendations only price bid will be opened. If the Tenderer fails to satisfy qualifying criteria (both explicitly and implicitly stated) their offer will be rejected.

CONTRACTOR

ISSUING OFFICER

WORKS POLICY

8.2 Security Deposit:

8.2.1 Security deposit should be collected from the successful tenderer. The rate of security deposit will be as given below:

- Upto Rs. 10 lakhs - 10% of work order value.
- Above Rs. 10 lakhs upto Rs.50 lakhs - 1 lakh +7.5% of the amount exceeding Rs. 10lakhs.
- Above Rs. 50 lakhs Rs 4 lakhs + 7.5% of the amount exceeding Rs. 50 lakhs

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

8.2.2 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 discharge on the back.)
- V. Bank Guarantee from Scheduled Banks / Public Financial Institutions as defined in the companies act subject to a maximum of 50% of the total Security Deposit value. The balance 50% has to be remitted either by cash or in the form of security. The Bank Guarantee format should have the approval of BHEL.
- VI. Fixed Deposit Receipt issued by Scheduled Banks / Public Financial Institutions as defined in 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.

Security Deposit shall not be refunded to the contractor except in accordance with the terms of the contract.

CONTRACTOR

ISSUSING OFFICER

PART-I
(TECHNICAL BID)

1. Years of experience in the similar function :
2. Similar functions executed earlier. If so, cite examples :
(Use separate sheet if required including feedback letters from such Customers)
3. Possess adequate manpower for deployment with required qualification/experience (Furnish details) :
4. Approximate quantum of business per annum :
(For the past three years)
5. Number of contracts under execution at present :
6. Number of employees deployed in your organization :
Temporary :
Permanent :
7. Any instance of termination of contract in the middle :
8. Speed of Response to the queries after awarding the contract :
9. PAN card No.:
10. ESI No.:
11. PF. Account No.:
12. Estimated man days category wise required for completing the Scope of work :
13. Permanent address of the Firm as well as the Contact details of Chief personnel :

CONTRACTOR

ISSUING OFFICER

PART - II
(Price Bid)

Name & Address of the Contractor :

Rate of executing Plant operation and
repair / maintenance work listed in work spec. for
one full day (24 hours in 3 Shifts)

Rs.....per day (24 hours in
three Shifts)

CONTRACTOR

ISSUING OFFICER