



BID DOCUMENT

Name of work: "SERVICES FOR AOH,ESP UNIT 4 (Two Parts)"

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ODISHA POWER GENERATION CORPORATION LTD. Unit# 3 & 4
1b Thermal Power Station, Banaharpali, Jharsuguda – 768234
(ODISHA)

Email: debesh.mohanty@opgc.co.in; bkmishra@opgc.co.in



ODISHA POWER GENERATION CORPORATION LIMITED
IB THERMAL POWER STATION Unit # 3&4
At/PO: BANHARPALI, DIST: JHARSUGUDA – 768 234 (ODISHA)
TEL: (06645) 289273
Email: debesh.mohanty@opgc.co.in, bkmishra@opgc.co.in

NOTICE INVITING TENDER

NIT No. ITPS/Unit 3 & 4/21-22/007

Date: 12/04/2021

Separate Sealed bids in the prescribed format are invited from bona fide and financially sound reputed Agencies / Registered Firms/Companies for execution of the following works at 2X660 MW IB Thermal Power Station, Banaharpali.

SI	Name of the work	Tender Cost (Rs.)	EMD (Rs.)	Contract Period	Sale of Tender document	Date of receipt & submission /Opening of technical Bid
1.	"SERVICES FOR AOH,ESP UNIT 4" (Two Parts)	Rs.5600/- (Inclusive of GST)	Rs.20,000/-	12 Months	12/04/2021 to 03/05/2021 (Hard & Soft copy only) Up to 3 PM	Up to 3:00 PM on 04/05/2021 3:30 PM onwards on 04/05/2021

- NB: a) Bidders having the requisite qualifying requirements specified in the bid document shall only be considered for the work.**
b) Further please note to submit your offer considering GST provision and its related input tax credit benefits to be passed on to OPGC

Cost of bid document (non-refundable) shall be paid by Demand Draft in favour of OPGC Ltd. drawn on State Bank of India (Code-9510) / Union Bank of India (Code-UBIN0806625) / Central Bank of India (Code-283899) payable at ITPS, Banharpali. Cost of bid document shall have to be submitted along with the bid and the DD towards the tender cost (separate from EMD) should be prepared on or before the last date of sale of tender, otherwise the bid shall be liable for rejection. In case of any discrepancy found between tender document submitted by the agency and the master copy in our office, the latter should prevail. No claim on this account shall be entertained. Complete and signed sealed bids in hard copy form only shall be received at Contract Cell, ITPS. Bids shall be opened at Contract Cell, ITPS in the presence of the bidders or their authorized representatives, if present at the time of opening. If the last date of issue / receipt / opening happens to be a HOLIDAY/office closed, the tender will be issued/ received / opened at the respective time on the next working day. The photocopies of all the supporting documents required for participating in the tender mentioned in NIT/Tender paper shall be submitted along with the bid; otherwise the bid is liable for rejection. Bids without EMD will be rejected outright.

Bids received after stipulated date & time shall not be entertained. OPGC shall not take any liability on account of any postal/courier delay. OPGC reserves the right to accept / reject any or all tenders, seek additional clarifications, split up the scope among eligible bidders or cancel the tender altogether without assigning any reasons thereof.

N.B: For further details & downloading of Tender documents, please visit our web site www.opgc.co.in.

Important: Agenda/Corrigenda/ Extensions, if any, will be notified on the OPGC website only and will not be published in any other media. Bidders are requested to visit our website regularly for any amendment of the present bid till finalization of bidding process.

Sd/- GM- SCM

SAFE & CLEAN POWER IS OUR COMMITMENT



Information to Bidders

- 1) The bids complete in all respect must be submitted in a sealed envelope super scribed with tender enquiry number, name of the work and due date of opening. Both the Techno-commercial & Price Bid in separate sealed cover shall be put in a sealed third envelope. **The bid documents are not transferable.** The bidder must submit the following along with the bid:
- a) EMD of requisite amount as per NIT shall be put in a sealed envelope separately:
 - i) All Micro & Small Enterprises (MSEs) who are registered with DIC/KVIC/KVIB/Coir Board/NSIC/DHH/ Udyog Aadhar Memorandum are eligible to get the benefit of exemption from payment of EMD & Tender cost and to get the exemption, the participating bidders have to obtain/register as MSME for the specific service/supply of goods/both.
 - ii) To get the exemption of EMDs & tender fee, the party has to make an application to the head of supply chain management (SCM) who is conducting tendering process along with proof of documents regarding eligibility of the exemption at least 2 days before the last day of bid submission. The HOD after due examination will allow to participate without submission of EMD& tender fee & the same has to be communicated to bidder in writing.
 - b) Photocopies of Provident Fund Registration certificate, ESI Registration certificate, Income Tax PAN and GST certificate.
 - c) Bid documents duly signed & stamped in all pages as a token of acceptance.
 - d) In case of bidders submitting the documents downloaded from OPGC web site, the cost of bid documents (as per NIT) must be submitted (separately from EMD) in the form of Demand Draft. **The draft towards cost of bid documents must be drawn on or before the last date of sale of bid documents.**
 - e) Original price bid duly filled in, signed & stamped on each page shall be submitted. Any price breakup (if required) must be submitted separately. The rates offered by the bidder shall be clearly written in English (clearly hand written or typed) both in words and figures and shall be free from any aberrations, deletions, corrections and overwriting. In case of any illegibility of the offer submitted by bidder the interpretation by OPGC shall be final and binding on the bidder. Insertion, postscript, addition and alteration shall not be accepted after submission of the bid.

Note: Tenders submitted without the above requirements shall be liable for rejection.

- 2) Bidders are advised to submit the tender based strictly on the terms and conditions and specifications contained in the tender documents and not stipulate any deviations in normal case.
- 3) **OPGC will award the contract to the successful bidder whose bid (offered/evaluated) has been found the lowest i.e. on L-1 basis.**
- 4) OPGC reserves the right to evaluate the quotation on such deviations having financial implications by adding the cost determined by OPGC.
- 5) Wherever it is mentioned in the specification that the contractor shall perform certain work or provide certain facilities, it is understood that the contractor shall do so at his own cost.
- 6) Before quoting the rates the Bidder should go through the specifications, scope of work, special condition of contracts etc. and get himself fully conversant with them. The bid should include cost of mobilization and cost to adhere to all safety norms as described in the tender & OPGC contractor safety management program document no.EM4/61 (PART A). No relaxation or request for revision of quoted/accepted rates shall be entertained subsequent to the opening of bid on account of mobilization or Safety costs.
- 7) The details of items in the price schedule shall be read in conjunction with the corresponding technical specifications. Items of work provided in the price schedule but not covered in the technical specifications shall be executed strictly as per instructions of Engineer in charge.
- 8) The Bidders shall quote rates inclusive of the complete cost towards consumables, tools and tackles, equipments, labour, levies, taxes and duties if any, **all safety PPE's as per OPGC norms to all workmen**, rectification, maintenance till handing over, supervision overheads, profits and all incidental charges not specifically mentioned but reasonably implied and necessary to complete the work according to contract.
- 9) OPGC reserves the rights of accepting the whole or any part of the tender and bidder shall be bound to perform the same at their quoted rates.

GENERAL CONDITIONS OF CONTRACT



ODISHA POWER GENERATION CORPORATION LIMITED
7TH. FLOOR, ZONE – A, FORTUNE TOWERS,
CHANDRASEKHARPUR, BHUBANESWAR – 751 023
(ODISHA)

- 1.** Tenders are invited on behalf of the OPGC Ltd. for the work “SERVICES FOR AOH,ESP UNIT 4” (Two Parts).
- 2.** The Tender & rates shall be in the prescribed form provided by OPGC.
- 3.** The works are required to be carried out for 12 Months.
- 4.** Normally Bidders having corresponding class of license, PF Code, ESI Registration, Service Tax code, valid IT PAN & GST IN, expertise for the work required to be executed and financial capacity will be considered.
- 5.** The person who floats the NIT shall be the Accepting Authority herein after referred to as such for the purpose of this Tender.
- 6.** Applications for issue of tender documents shall be submitted to Accepting Authority so as to reach his office not later than dt.03/05/2021. (up to 3 PM)
- 7.** A Bidder shall possess IT PAN, PF Registration certificate and GST IN.
- 8.** Tender documents consisting of plans, drawings, specifications, Schedule(s) of Quantities / Price Schedule of various classes of work to be done, the Conditions of Contract and other necessary documents.
- 9.** A Bidder should quote his rates in figures as well as in words. The amount for each item should be worked out and the requisite totals given. Special care shall be taken to write rates in figures as well as in words, and the amounts in figures only in such a way that interpolation is not possible. The total amount shall be written both in figures and in words. In case of figures, the words ‘Rs.’ should be written before the figure of rupees and the words ‘Paise’ after the decimal figures, e.g. Rs.2.15 P. In case of words, the words ‘Rupees’ should precede and the words ‘Paise’ should be written at the end. Unless the rate is in whole rupees and followed by the word ‘Only’ it should invariably be up to two places of decimal.
- 10.** In the case of item rate Tenders, only rates quoted shall be considered. Any tender containing percentage below / above the schedule of rate quoted is liable to be rejected. In case of lump sum tenders, only quoted amount shall be considered.
- 11.** Any Bidder for the works shall not be witness in the Bid of any other Bidder for the same works. Failure to observe this condition shall render the Tender of the Bidder tendering as well as of those witnessing the Tender liable for rejection.
- 12.** Tender shall be received up to 3.00 P.M of dt. 04/05/2021 and shall be opened at 3.30 P.M on 04/05/2021 in presence of those Bidders or their duly authorized representatives who may like to be present.
- 13.** The Tender shall be accompanied by Earnest Money @ Rs.20,000.00. The Earnest Money offered shall be in shape of Demand Draft/Pay Order in favor of ODISHA Power Generation Corporation Ltd. drawn on State Bank of India (Code-9510) / Union Bank of India (Code-UBIN0806625) / Central Bank of India (Code-283899).
- 14.** The Tender shall be accompanied with letter of undertaking on non-judicial stamp paper of appropriate value in the prescribed format.
- 15.** The Earnest Money shall be made payable without any condition/demure to the Owner on demand. The Earnest Money shall be valid for a period of 03 (Three) calendar months from the date of opening of the bid

16. In consideration of the Owner opening and considering the Tender for purpose of award of Contract, the Bidder shall keep his Tender valid for a period of One Eighty (180) days from the date of opening of the Tender, during which period the Bidder agrees not to vary, alter or revoke his Tender either in whole or in part. If the Bidder however, fails to keep his Tender valid for One Eighty (180) days or varies its terms and conditions during the said period then the Owner shall be entitled to forfeit the Earnest Money amount without any notice or proof of damages etc. The Bidder shall submit his Tender as required in the Tender documents along with letter of undertaking in the proforma enclosed herewith.

17. The Earnest Money of all unsuccessful Bidders will be returned within thirty (30) days after the award of the Contract.

18. Any Tender not accompanied with Earnest Money in accordance with aforesaid provisions shall be rejected by the Owner as non-responsive Bid.

19. No interest will be payable by the Owner on the said amount covered under Earnest Money / other security deposits.

20. On finalization of Tender, Earnest Money deposited in form of DD of successful Bidder will be treated as part of the initial security at the option of the said Contractor or shall be returned to the successful bidder at his option.

21. A Bidder shall submit the Tender which satisfies each and every condition laid down in this notice and other tender documents, failing which the Tender will be liable to be rejected.

22. The ODISHA Power Generation Corporation Ltd. do not bind themselves to accept the lowest or any tender or to give any reasons for their decision. The Owner reserves the right to allow the Public Sector Undertakings price preference facilities as admissible under existing Govt. policy. The prospective Bidders may apprise themselves of the relevant Govt. notification in this regard before submission of their bid. The ODISHA Power Generation Corporation Ltd. reserves the right of accepting the whole or any part of the Tender or split the total scope of work among eligible Bidders and Bidder (s) shall be bound to perform the same at his/their quoted rates.

23. Except GST, Work Contract Tax or any other tax on materials in respect of this Contract shall be payable by the Contractor except service tax which shall be extra as applicable.

24. The right to accept the Tender rests with the Owner. The Owner further does not bind himself to accept the lowest tender and reserves the authority to reject any or all the Tenders received without assigning any reason whatsoever. The whole work may be split up between two or more Contractors or accepted in part (not entirely) if considered expedient. The rates shall be the lowest/negotiated for such eventualities. Tenders in which any of the particulars and prescribed information is missing or incomplete in any respect and/or the prescribed conditions are not fulfilled are liable to be rejected. The decision of the Owner in respect of the above shall be final and binding on the Bidders.

25. In case Contractor's labour go on strike with advance notice as per rule, it is responsibility of the Contractor to mobilize such manpower from their other sites or otherwise and continue the work so that execution of Contract is not affected. In such an event, the failure to perform shall lead the Owner to get the work done by any other agency, but at the cost & risk of the Contractor. Further, the Contract shall be terminated with seven (7) days' notice in O&M Contract and the Contractor may be debarred from participating in any future Bid in OPGC Ltd. In case of construction work, non-adherence to schedule shall lead to cancellation of Contract or imposition of penalty at the discretion of the Engineer-in-charge. If the labours go on strike without prior notice, the situation shall be treated as force majeure provided nonperformance is for a reasonable period only. If the situation is beyond reasonable control of the Contractor but has taken appropriate steps as a man of common prudence would have taken in his own case, Owner may consider in case to case basis to either terminate the Contract or otherwise get the work done by other means but at the cost & risk of the Contractor. Only events of such illegal strike, which make the performance impossible at the time of occurrence and for a considerable time period for mobilization, shall be considered as force majeure.

The period of Contract shall be specified in the Special Conditions of Contract. The Contract period shall reckon from the date of issue of LOI. OPGCL reserves the right to withdraw any item(s) of works from the scope by serving a 7 days' notice to the Contractor without giving any reason for the same and take up the job departmentally or otherwise if performance of Contractor is found to be unsatisfactory. Value for the items of work thus withdrawn shall not be payable by the Owner. The Contractor shall not claim any compensation on this account.

The period of Contract may be extended with mutual consent if the delay is beyond the control of Contractor at the discretion of the Engineer-in-charge.

26. SUSPENSION OF WORKS:

The Contractor shall, on receipt of the order in writing of the Engineer-in-charge, suspend the progress of the works or any part thereof for such time and in such manner, as the Engineer-in-charge may consider necessary for any of the following reasons:

- i) On account of any default on part of the Contractor; or
- ii) For proper execution of the works or part thereof for reasons other than the default of the Contractor;

In any of the above cases the Contractor shall properly protect and secure the works to the extent necessary and carry out the instructions given on that behalf by the Engineer-in-charge during such suspension period.

27. The Contractor shall employ labour in sufficient numbers to maintain the required rate of progress / attend the repair-maintenance on its occurrence and of quality to ensure workmanship of the degree specified in the Contract and to the satisfaction of the Engineer-in-charge. The Contractor shall not employ in connection with the works any person who has not completed his/her eighteen years of age.

28. The Contractor shall in respect of labour employed by him or his subcontractors comply with or cause to be complied with the Contractors Labour Regulations.

29. At present Employees State Insurance (ESI) Act is applicable to IB TPS, Contractor shall be liable to pay his contribution and the employees contribution to the State Insurance Scheme in respect of all labour employed by him for the execution of the Contract, in accordance with the provision of "The Employees State Insurance Act, 1948" as amended from time to time. Incase, the Contractor fails to submit full details of his account of labour employed and the contribution payable, the Engineer-in-charge shall recover from the running bills of Contractor an amount of contribution as assessed by him. The amount so recovered shall be adjusted against the actual contribution payable for Employees State Insurance.

30. The Engineer-in-charge shall on a report having been made by an Inspecting Officer as defined in the Contractor Labour Regulations have been the power to deduct from the money due to the Contractor any sum required or estimated to be required for making good the loss suffered by a worker or worker by reason of non-fulfillment of the Conditions of the Contract for the benefit of workers, non-payment of wages or of deductions made from his or their wages which are not justified by the terms of the Contract or non-observance of the said Contractors Labour Regulations.

31. In the event of the Contractor committing a default or breach any of the provisions of the aforesaid Contractors Labour Regulations as amended from time to time or furnishing any information or submitting or filling any Form/Register/Slip under the provisions of these Regulations which is materially incorrect, then on the report of the Inspecting Officers as defined in the Contractors Labour Regulations the Contractor shall without prejudice to any other liability pay to the Owner a sum not exceeding Rs.500.00 as liquidated damages for every default, breach or furnishing, making, submitting, filling materially incorrect statement as may be fixed by the Engineer-in-charge and in the event of the Contractor's default continuing in this respect the liquidated damages may be enhanced to Rs.500.00 per day for each day of default subject to a maximum of ten percent of the contract value. The Engineer-in-charge shall deduct such amount from bills or security deposit of the Contractor and credit the same to the Welfare Fund constituted under Contract Labour (R&A) Act 1970. The decision of the Engineer-in-charge in this respect shall be final and binding.

32. Model Rules for Labour Welfare: The Contractor shall at his own expense comply with or cause to be complied with Model Rules for Labour Welfare. In case the Contractor fails to make arrangements as aforesaid, the Engineer-in-charge shall be entitled to do so and recover the cost thereof from the Contractor.

33. Safety code: The Contractor shall at his own expense arrange for the safety provisions.

34. REMOVAL OF WORKMEN:

The Contractor shall employ in and about the Execution of the works only such persons as are skilled and experienced in their several trades and the Engineer-in-charge shall be at liberty to object to and require the Contractor to remove from the works any person employed

by the Contractor in or about the execution of the works who in the opinion of the Engineer-in-charge misconducts himself or is incompetent or negligent in the proper performance of his duties and such person shall not be again employed in the work without permission of the Engineer-in-charge.

35. WORK DURING NIGHT SUNDAYS AND HOLIDAYS: Subject to any provisions to the contrary contained in the Contract, none of the permanent works except emergency maintenance work & operation shall be carried out during night or on Sundays or on authorized holidays without the permission in writing of the Engineer-in-charge. But in case of maintenance Contract, the Contractor shall be required to work any time any day as required by Engineer-in-charge.

36. NEGOTIATION OF RATES:

In case Owner finds the lowest price to be at higher side in consideration of market price of various inputs including labour component, may call the lowest Bidders for negotiation of price based on analysis of their rate etc.

37. Payment of running bill:

a) 90% payment along with 100% taxes & duties shall be released on monthly basis within 30 days from the date of submission of bills duly certified by EIC.

b) Balance 10% of basic order value will be released within 30 days after completion of the contract, clearance from EIC & production of statutory evidence towards payment/deposit of PF, Leave salary, Bonus, Retrench benefit etc. of labour.

39. LABOUR LAWS

Contractor shall comply with all laws, ordinances, regulations and notification / instruction of Govt. concerning the health, wages, welfare, safety and employment and non-employment of his workers and shall exclusively bear the consequences of failure to comply therewith.

The following points are to be observed strictly by the Contractor.

i) No labour below the age of 18 (eighteen) years shall be employed on the work.

ii) The Contractor shall not pay less than the notified wages by the appropriate government towards minimum wages from time to time and must comply with Minimum Wages Act. The payment has to be made to the labours in the presence of authorized representative of the Owner / Engineer-in-charge.

iii) The Contractor shall at his expense comply with all labour laws and keep the Owner indemnified in respect thereof.

iv) The Contractor shall pay equal wages for men & women in accordance with Equal Remuneration Act 1976.

v) The Contractor under the Contract Labour (Regulation and Abolition) Act, shall have a valid Labour license from appropriate licensing authority prior to starting / within 15 days of commencement of the work under the Contract. Validity of the license shall be maintained till expiry of Contract period & its extension, if any.

vi) The Contractor shall employ labour in sufficient numbers to maintain the schedule of work and of quality to ensure workmanship of the degree specified in the Contract and to the satisfaction of the Engineer-in-charge.

vii) The Contractor shall furnish to the Engineer-in-charge at the interval of every 15 days a statement of the workmen employed on the works and also furnish information under rule 73 of ODISHA Contract Labour (R&A) Rule, 1975 or rules made there under.

40. PREPARATION OF BID:

The Bidder(s) shall submit the bid in two part, namely-

I) Techno commercial Bid and

II) Price bid

PART-I: TECHNO-COMMERCIAL BID

A complete set of original Tender documents as issued to the Bidder duly filled in as prescribed in different clauses of the Tender documents with signature & stamp in all pages as token of unconditional acceptance shall constitute Techno-commercial Bid.

The Bidder shall enclose the following & documents mentioned in qualifying criteria in this Bid.

a) **Crossed Demand Draft** for requisite amount drawn in favor of ODISHA Power Generation Corporation Ltd. in the manner prescribed above towards the Earnest Money and Tender cost without which the Tender will be summarily rejected.

b) **Details of work order of similar nature** and magnitude executed by the Bidder as per the qualifying criteria & other documents as specified in tender qualification criteria.

Note: If required additional sheet may be used to furnish all above information but in the format provided in General Conditions of Contract.

The techno-commercial bid with all its enclosures as mentioned should be put in an envelope, sealed & super scribed as "TECHNO-COMMERCIAL BID". **This envelope must contain Name of the work, NIT No., Due date of opening and Name & Address of the Bidder on bottom left hand corner of the cover.**

PART-II: PRICE BID

Kindly submit the Price bid in a different envelope as per BOQ.

Price bids of only those bidders will be opened who meet as per qualification criteria given below. The Owner shall not entertain any correspondence with any Bidder in relation to the acceptance or rejection of any Price Bid.

For and on behalf of ODISHA Power Generation Corporation Ltd.

Signature...Sd/-

Designation: GM-SCM – Contract Cell Unit 3&4 , ITPS.

Date:

QUALIFYING CRITERIA

Name of work: "SERVICES FOR AOH, ESP UNIT 4" (Two Parts).

Bidders having the following criteria shall only be considered to be qualified in the Techno-commercial Bid:

1. Experience of having successfully completed similar nature of works during last three (03) years ending last day of month previous to the one in which applications are invited should be either of the following:-
 - i. Three similar completed works costing not less than the amount equal to Rs.8 Lakhs each.
'OR'
 - ii. Two similar completed works costing not less than the amount equal to Rs.10 Lakhs each.
'OR'
 - iii. Single similar completed work costing not less than the amount equal to Rs.16 Lakhs.

Definition of similar nature of work: - Similar nature of work means experience of complete overhauling in minimum of 210 MW and above in coal fired thermal power plant & experience in ESP in coal fired Power

2. Average Annual financial turnover during last three years (17-18, 18-19 & 19-20) should be Rs.25 Lakhs or more. Audited Balance Sheet and profit & Loss A/C must be submitted along with the Techno-commercial Bid. In case the account is not audited a certificate from a chartered accountant should be produced towards turnover.
3. The bidder must have own Provident Fund Registration certificate, ESI Registration certificate, Income Tax PAN and GST certificate. Photocopies of these documents must be submitted along with Techno-commercial Bid.

NOTE:

- 1) **The bidders who are found qualified in above will be invited for the opening of the price bids.**
- 2) **All the above documents along with supporting documents to be enclosed in the Techno-Commercial Bid (PART-I).**

Owner reserves the right to obtain necessary documents and also to assess the qualification of the Bidder, subsequent to submission of bid, as deemed necessary by Owner to establish bidder's qualification.

Acceptance of Reverse Auction: **Bidders are to give their acceptance for participating in e-Reverse Auction through M/s.MSTC in addition to the submission of manual Price Bids. E-RA will be held after opening of manual price bids and the lowest among both manual bids and e-RA will be considered further for evaluation.**

The detailed terms and conditions of the e-Reverse Auction is mentioned in the tender document as "RULES AND REGULATIONS OF THE E-REVERSE AUCTION".

NB: The transaction fee for e-RA will be @0.03% of starting Price maximum up to Rs.10,000/- + Taxes as applicable, payable to M/s.MSTC.

Carry out of E-RA option is in the discretion of OPGCL. OPGCL may exercise it if the price seems to be wide variation for acceptance.

SCOPE OF WORK FOR ESP OVERHAULING WORK & SPECIAL CONDITIONS

SCOPE OF WORK FOR ESP OVERHAULING WORK (MECHANICAL)

Technical Specification & Work description:

1.	OVERHAULING & RECTIFICATION OF THE ESP FIELDS IN EACH PASS
	<p>i. WATER WASHING & ESP INTERNAL CLEANING</p> <ul style="list-style-type: none"> • Work includes cleaning & removal of ash from ESP, ESP internal including the GD screens to be water washed with water pressure of 4-5 kg/sq. cm. till metallic surface exposed completely free of ash deposits. Necessary hoses are to be arranged for the work by the contractor. The contractor must clean the outer surface of ESP as per instruction of E-I-C.
	<p>ii. INSPECTION & RECTIFICATION OF BOWED COLLECTING PLATE</p> <ul style="list-style-type: none"> • Repair of collecting plates, the job involves checking of bowed collecting plates, straightening of bowed collecting plates by heating, hammering or fasteners replacement if required & suitable clamps provided to maintain the gap of 150 mm between electrodes, if detached from the shock bar the suitable patch (to be provided by OPGC LTD) of same profile to be provided with bolting and welding thereafter with shock bar, repair of collecting plate at top hook position patch with 3 mm plates and welding.
	<p>iii. CLEANING, INSPECTION, REPAIR / RECTIFICATION OF ESP INTERNAL</p> <ul style="list-style-type: none"> • Cleaning and checking of support & shaft insulators, inside & outside corona shields, hopper inspection doors, casing doors, GD Screen and manholes are to be done. New ceramic rope is to be replaced, bolt tightness to be done for the above. Replacement of ropes/gaskets (inspection door, insulator housing door, CERM shaft cover, etc.) to be done and closing of inspection doors, manholes and final box up after completion of the works. • Inspection of GD Screen are to be done and if required same will be replaced / repaired. • Inspection & rectification of GD screen deflector plate and fixed new in replace of damaged deflector plate. • Inspection and rectification of Dust guard gap and cleaning of dust guard. • Inspection and rectification of screen tube gap. • Cut the angle and extra projected structure of the field for reduce the spark. • Maintain the gap between section one and section two field of collecting and emitting frame. • Inspection and maintain the gap (40 mm) in between shock bar and shock bar guide assembly (rapping and non-rapping side). • Alignment of field along with emitting system frame shall be in contractor scope.
	<p>iv. CHECKING OF EMITTING ELECTRODE SPRING BACK</p> <ul style="list-style-type: none"> • Removal of defective emitting electrodes and its fixing are to be done with a new one. Checking of the snapping, missing and loose electrodes and their recording are to be done. Checking of electrodes spring back/tension of all emitting

	<p>electrodes in first fields and last field (of both section one and section two) and the rest field on random basis. During unhooked condition, minimum spring back gap should be 350mm otherwise replacement to be done. The stretching & fixing of electrodes have to be done through stretching device. The contractor has to arrange the stretching device.</p>
	<p>v. CHECKING OF GAPS BETWEEN ELECTRODES</p> <ul style="list-style-type: none"> • Gap between the collecting & emitting electrodes of each field is to be measured with "GO & NO GO" gauges and necessary rectification to be done if any to maintain the gap of 150 mm between collecting & emitting electrode all over the fields & recording thereof. Voltage gap to be maintained as per acceptable limit all along the field length.
	<p>vi. REPLACEMENT OF SUPPORT INSULATOR</p> <ul style="list-style-type: none"> • Support insulators (if found damaged/cracked) is to be replaced by a new one. The job involves checking of the cracked insulator, replacement of support insulator gasket if required, while replacement the suspension bolts and the screen tubes gaps are to be maintained. Detail arrangements like J Hooks will be provided by OPGC LTD.
	<p>vii. INSPECTION & RECTIFICATION OF EMITTING RAPPING MECHANISM</p> <ul style="list-style-type: none"> • The complete emitting electrode rapping mechanism including its pin wheel (Big/Small), Bush Bearing, inner arm, outer arm, vertical shaft, thrust bearing and plain bearing, emitting system and Support bracket system are to be thoroughly inspected and necessary replacement/modification and tack welding of bolts is to be done. The shaft straightness are to be checked and if necessary the bend/worn out shaft to be repaired/replaced and complete alignment of the shaft to be done as per the instruction of EIC. Shaft insulators (if found damaged) is to be replaced by a new one. Repair/replacement of Vertical shaft, corona shields are to be checked & replacement done if required. Checking of hammer for play in bush and pin looseness, removal of damage hammer by gas cutting, positioning of new hammer with full tightening of nuts and checking of hammer for freeness and straightening with respect to the Emitting frame. Rapping shaft rotation to be checked and ensure for every hammer hitting position with respective Emitting frame position correctly. Replacement of pin wheel (Big/Small), bush bearing, inner arm, outer arm and plain bearing to be done as per condition based & instruction of EIC.
	<p>viii. INSPECTION & RECTIFICATION OF COLLECTING ELECTRODE RAPPING MECHANISM AND GDRM</p> <ul style="list-style-type: none"> • The complete collecting electrode rapping mechanism with all its plain bearing, inner arm, outer arm, shock bar, shock pad, shock bar guide assembly (Rapping and non-rapping side) and its attachment are to be thoroughly inspected and necessary replacement/modification and tack welding of bolts are to be done as per the instruction of EIC. The shaft straightness are to be made and if necessary the bend/worn out shaft to be repaired/replaced and complete alignment of the shaft to be done as per the instruction of EIC. Checking of hammer for play in bush and Pin looseness, removal of damage hammer by gas cutting, positioning of new hammer with full tightening of nuts and checking of hammer for freeness and straightening with respect to the shock bar, checking/replacement of plain bearing, inner arm checking, Straightening of misaligned shock bar and its assembly are to be done and gap between the electrodes to be maintained. The clearance between the shock bar and guide assembly should be measured and modifications to be carried out as per requirement to maintain the required gap.

	Rapping shaft rotation to be checked and ensure for every hammer hitting position with respective shock bar position correctly for CRM & GDRM. Replacement of plain bearing, inner arm, outer arm, shock pad, shock bar, shock bar guide angle, set rings to be done as per condition based & instruction of EIC. Extra support for shock bar guide angle to be provided in all fields as instruction of EIC.
	ix. Rectification /Replacement of CERM, EERM, GDRM motor, gear, coupling etc.: Checking of motor, coupling, Gearbox servicing, bearing replacement if any with its all accessories checking and rectification .
	x. Testing & final commissioning <ol style="list-style-type: none"> 1. Air-load/Dust load test and final commissioning. 2. All rectified field should meet the technical parameters like Peak voltage, Av voltage, Current, belly voltage etc. as per OPGC design specification. <p>The above tests are applicable for all passes</p>

3. TECHNICAL SPECIFICATION OF ELECTROSTATIC PRECIPITATOR:

Type of ESP – BHEL Make ESP for OPGC IB Valley 2x660MW unit #3&4
Manufacturer - M/S BHEL, Ranipet

4. LIST OF CONSUMABLES

This list is only indicative and not exhaustive. Arrangement for other consumables required for timely completion of the job shall be the responsibility of the contractor and shall be arranged by him.

1. Kerosene/Diesel, Petrol and Rustolene.
2. Hacksaw blades.
3. Cotton waste.
4. Marking cloth and Old cloth.
5. Prussian blue.
6. Cutting & Grinding wheels. (BOSCH/NORTON/CUMI)
7. Oil stones.
8. Teflon tapes (1", 1/2")
9. Emery Cloths (fine, medium and coarse)
10. Oxygen and D/A cylinders.
11. Coir rope & Manila Rope.
12. Required Welding electrodes (ESSAB / D&H / ADVANI make only).
13. Polythene sheets.
14. Hand gloves (Asbestos, Cotton, Leather and Rubber),
15. Air hoses (1/2", 3/4", 1")
16. Welding goggles & Helmets.
17. Rustolene
18. Fevicol
19. Quick fix Adhesive
20. Holdtite Liquid
21. LPG cylinder for heating

5.LIST OF T&P

Sl. No.	DECRPTION	CAPACITY / SIZE	UOM	QTY.
1.	Pick up vehicle		Nos.	1
2.	O2 analyzer	Continuous measurement of O2	Nos.	2
3.	Life line rope	8mm dia	Mts	1000
4.	PP rope	20mm dia	Mts	100
5.	STRECHING DEVICE	For emitting electrode erection	Nos.	4
6.	Welding Rectifier (With	400 AMPS	Nos.	10
7.	Portable Welding M/C (With	220 V	Nos.	02
8.	CUTTING SET	WITH FIRE ARRESTOR	NOS	10
9.	Chain pulley block	2T to 5T	Nos.	15
10	Chain pulley block	3T	Nos.	04 Each
11	Chain pulley block	5T	Nos.	05 Each
12	Pulling lifting m/c (Hook-	3T & 5T	Nos.	02 Each
13	D/E Open spanners	6x7 to 30X32	Set.	06 Each
14	D/E Ring spanners	6x7 to 30X32	Set.	06 Each
15	Box Spanner	6 to 32	Set	06 Each
16	Adjustable Spanner	12" , 6"	Nos.	04 Each
17	Pipe Wrench	12" , 6"	Nos.	03 Each
18	Screw Driver	12" , 8"	Nos.	15 Each
19	Combination & Nose Pliers	8" ,6"	Nos.	10 Each
20	Outside & Inside circlip Pliers	6" , 8" , 12"	Nos.	03 Each
21	Ball Pane Hammer	1.5lbs	Nos.	04
22	Wooden Hammer		Nos.	06
23	File (Flat, Round, Half round)	300 mm	Nos.	04 Each
24	Needle File set	300 mm	Set	03 Each
25	Feeler Gauge	6".12:	Nos	01 Each
26	Tap Set (Metric size)	6, 10, 12, 16, 20, 24, 30, 33, 36, 39, 45	Nos.	02 Each
27	Tap Set (Metric size)	M12X1.25 & M16X1.25	Nos.	01 Each
28	Allen Key Set	Up to 30 mm and Inch	Set	02 Each
29	Gas cutting set with back fire		Set	06
30	Welding Cable	400 amps	Mtr.	400
31	Welding Cable	600 amps	Mtr.	200
32	Plum bob		Nos.	01
33	Shim Cutter		Nos.	04
34	Angle Grinder AG 4, AG 5 &		Nos.	02 Each
35	Straight Grinder GQ - 4		Nos.	02
36	Hand Drill M/C (up to 12		Nos.	02
37	Drill Bit up to 08 mm	Assorted Size	Nos.	03 Each
38	Drill Bit up to 08-12 mm	Assorted Size	Nos.	02 Each
39	Wire Rope Slings (up to 10	Assorted Size	Nos.	10 Each
40	Portable welding electrode		Nos.	02
41	Electric switchboards Single Phase (extension boards		Nos.	4

42	Electric switchboards three Phase (extension boards with RCCB)		Nos.	6
43	Floor light arrangements (Hand Lamps etc.)		Nos.	8
44	Floor light arrangements (24		Nos.	16
45	Floor light arrangements		Nos.	04
46	Huck bolt M/C		Nos.	02

Note:

This list is only indicative and not exhaustive. Arrangement for any other T & P required for timely completion of the job shall be the responsibility of the Contractor and shall be arranged by him at his own cost.

5.Warranty Period:

Warranty Period shall be 12 months from the date of successful Overhauling.

6.MANPOWER

- a) The Contractor should clearly understand that close and technically competent supervision of work is an extremely important part of the work specified in this contract. The Contractor shall have a site-in-charge exclusively for the contract. In addition to the site-in-charge, the Contractor has to ensure supervision of work in progress by deploying technically competent site supervisor. The site-in-charge of the Contractor shall authorize his representative to collect/return materials from/to OPGC LTD as per requirement of work.
- b) The job is of skilled nature and manpower with suitable requisite skill and experience only shall be permitted to be deployed. The manpower engaged should be as per the category mentioned and experience, which will be ensured by OPGC LTD through interviewing the person. Contractor has to ensure that the credentials and certificates of the welders deployed for welding work are submitted to OPGC LTD / FQA and are to be vetted by them before the start of work.
- c) The contractor has to mobilize adequate human resource to carry out the job on day & night shifts on all days including Sundays, holidays and national holidays.

7.SCHEDULE

1. Schedule is the essence of the Contractor. The contractor has to complete overhauling maintenance activity within the time period as per instructions and time schedule given by the EIC. If contractor's fails to do the job, OPGC LTD will get the work done by other Contractor at the risk and cost of the contractor. Further OPGC LTD shall penalize the contractor for non-executed activity / sub activity at twice the expenditure incurred amount for carrying out the activity / sub activity. The decision of EIC on this regard shall be final and binding on the contractor.
2. Contractor has to mobilize his resources after getting the notice from EIC, and if fails, a penalty @ 5% per day of the job's value shall be imposed. In case the contractor fails to execute the job and then the work will be get done by OPGC LTD and cost of the same shall be recovered along with penalty from contractor's RA bills.
3. It is to be noted that the rates of activity are to be read in conjunction to the attached detailed scope work. The elements for which description is not clear to the contractor, job shall be taken up only after recording clear understanding of scope. The decision of EIC in this regard shall be final and binding on the contractor.

8.Schedule of supply and services:

Completion of Overhauling services including testing and commissioning, release for unit operation	25 Days (From the date of NTP)
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9.Liquidated Damages (LD):

Time is the essence of the contract and delay in achieving Guaranteed completion of services of refurbishment of ESP and release for unit operation, the Liquidated Damages for Delay shall be subject to maximum ceiling of Ten percent (10%) of the basic Contract Price.

The following LD factors are applicable			
S/N	Particulars	LD Factor	Value(Rs. Million)
1	For every additional day delay in Guaranteed completion of services	LD Factor	0.2% of contract price / day.

10.SPECIAL TERMS & CONDITIONS OF CONTRACT

- a. Contractor has to deploy administrative manpower (like- Safety officer, Supervisor, Electrician, store keeper etc.) at his own cost for smooth execution of the work.
- b. Since the jobs are to be carried out 24X7, the Contractor should also ensure availability of his consumable and T&P round the clock (i.e. 24x7), Up to field charging.
- c. The contractor must arrange all consumables as required for completion of job. Any other consumable, which will go permanently with the machine, will be supplied by OPGC LTD. Arrangement of any other consumables required for timely completion of the job shall be the responsibility of the Contractor. Contractor has to ensure availability of Consumables and T & P.
- d. Contractor has to ensure availability of welding equipment's, oxyacetylene set at site during the Welding consumables and oxygen and LPG to be arranged by the Contractor. Only those welding electrodes listed in the approved list of OPGC LTD are to be used. All general purpose electrodes (for e.g. E-6013 & 7018 etc.) shall be under Contractor's scope.
- e. Contractor to follow OPGC's approved standard quality checks and provide method statement along with HIRA/JSA and field quality plan for OPGC approval for the execution of work.
- f. During the total period of contract, the contractor has to carry out the activities in a phased manner as required by OPGC and to meet the completion schedule.
- g. The contractor has to provide supply and refurbishment work schedule immediately after release of work order.
- h. The contractor to submit daily reports showing work carried out with details of available manpower, resources etc.
- i. In case of extreme emergency, in a situation, where in the Contractor is unable to arrange DA & LPG, OPGC LTD will provide the same on chargeable basis with 100% overheads on the actual OPGC LTD rates.
- j. Special tools and tackles supplied by equipment manufacturer will be provided by OPGC LTD. A tentative list of T&P to be mobilized by the Contractor is enclosed. However in case of extreme emergencies depending upon the availability of the same with OPGC LTD, T&P items like welding machine, grinding machine, chain pulley block etc. may be issued to the contractor on chargeable basis.
- k. Any other fixtures as and when required will have to be fabricated by Contractor free of cost.
- l. All lifting equipment and tools (chain pulley blocks, lifting & pulling machine, slings etc.) for the job will have to be arranged by the Contractor. All such tools have to be load tested and certified by the Competent Authority (as per Factories act) before being deployed for the job.

- m. Portable machines like grinders, portable drill machines, blowers etc. and their consumables like grinding wheels, cut off wheels, mounted point tools, buffing wheels, drill bits etc. will be arranged by the Contractor.
- n. Contractor has to ensure the healthiness of all electrical appliances i.e. equipment / Tools, movable lighting system etc. OPGC LTD will provide the existing electrical points near by the work.
- o. Scaffolding/ working platforms required for the job will have to be erected by the Contractor with his own manpower, material shall be provided by OPGC LTD on free of cost.
- p. Lighting at work site will be Contractor's responsibility for which power supply of 220V will be provided by OPGC LTD free of cost. 24V supply will be permitted for lighting in confined spaces. Contractor has to ensure availability of 220V/24V transformers and bulbs for the purpose. Welding Machine & Extension boards with ELCB are only permitted.
- q. For the spares used, record is to be maintained and submitted at the time of billing. The damaged bearings and other spares replaced are to be kept in Contractor's custody and should be deposited to OPGC LTD stores immediately after the completion of work. The stock of the damaged spares will be cross-checked with the spares issued. If the Contractor fails to do so, the cost of the spares will be deducted from the Contractor's bill. The Contractor must return the unused spares issued.
- r. Transportation of material to/from central stores and from/to site stores or site or workshop will be Contractor's responsibility. Material handling equipment like hydra, cranes, forklifts etc. wherever required will be provided by OPGC LTD.
- s. Accommodation for all employees shall be provided by OPGC on chargable basis as per OPGC rate.
- t. The contractor should not engage any subcontractor for the awarded contract. All the official communication, bills, wage sheet etc. must be on contractor's letter head.
- u. Material Handling equipment for Transportation of all spares from M/s OPGCL's stores to ESP area/ location shall be in contractor's scope.
- v. All Materials/ Components/ Spares including the consumables including but not limited to welding Electrodes, Welding Gases, Cutting Sets etc. shall be under the scope of contractor.
- w. Disposal of all scraps to the scrapyard or Supply, installation and dismantling of scaffolding material as per the requirement. The designated area shall be under the scope of contractor.
- x. Adequate illumination at Work Site for working round the clock basis shall be under the scope of contractor.
- y. Higher capacity Crane (as required for the job), Hydra, trailer etc. with operator for material handling / dismantling and erection on round the clock basis shall be under the scope of contractor.
- z. Any work related to removal /laying / repairing / rerouting /replacement of cable & cable tray shall be under the scope of contractor.
- aa. Any fabrication works for the completion of the job shall be under the scope of contractor.

11.SAFETY, HEALTH & ENVIRONMENT

- a. The contractor shall ensure compliance with all the Acts, Rules & Regulations pertaining to HSE (Health, Safety & Environment) as applicable from time to time. The contractor shall be fully responsible for the safety of his workmen & shall take necessary precaution to avoid any accident.
- b. The contractor has to deploy safety supervisor. All employees of the contractors shall undergo the safety induction before the start of the job. (CLASS ROOM TRAINING 1 DAY)
- c. The contractor's workmen will be required to work at various heights, location & in vicinity of rotating/running/charged equipment and also equipment in not working conditions. He should also give proper instructions to his workmen to be careful to avoid accident.
- d. The contractor shall arrange proper and sufficient no of PPE appliances such as hand gloves , helmets, nose mask, ear muffs, safety shoe, safety belts (double life protection) etc. & first aid box and ensure that his workmen use them during execution of work.
- e. Contractor has to provide the Method statement along with HIRA/JSA for approval of OPGC before start of the execution.

- f. **Electrical Appliances:** The contractors have to ensure that all the electrical equipment/gadget used by them are ISI marked only. All the electrical work should be carried out as per the norms in the Indian Electricity Act, 2003 and Indian Electricity Rules, 1956. All types of electrical equipment should be provided with ELCB/RCCB & body earthing. Only authorized persons should be engaged for any kind of repair, maintenance job.
- g. **Industrial Gas Cylinders:** All types of Gas cylinders should be handled in proper manner with safety cap on it.
- h. **Tools & Tackles:** Valid test certificates for all lifting/pulling T&Ps are to be submitted by the contractor before starting of work. The Test Certificates of All Lifting Tools & Tackles to be submitted by the contractor before starting the job.
- i. Any violation in the safety norms like not using PPE at the work, a token of penalty will be imposed as deemed fit by the OPGC LTD's Safety Officer.
- j. Compliance with statutory rules, regulation and local conditions: The contractor shall comply with provision of all statutory rules, regulations and acts as applicable from time to time.
- k. All inflammable materials should be removed from the vicinity of the place where sparks/hot metal from welding/gas cutting/grinding are likely to fall. Coverings are to be provided for inflammable materials for permanent installations.
- l. D/A carrying hoses should be kept away from the welding cables & should have flash back arrester. The hoses should be healthy with proper clamping to prevent chances of gas leaks. Gas cylinders should not be rolled on the ground or carried on bicycle. Trolleys should be used for their transportation. For lifting and lowering the cylinders proper cage should be used.
- m. Working platforms at height should have adequate space and proper railings. Toe Guards should be provided in the platforms. Proper approach should be made up to the work area. Scaffoldings and platforms should be properly supported. Contractor has to ensure that workmen working at heights should wear safety belts.
- n. The used cotton waste, cloth or muslin contaminated with used/ waste oil should be properly disposed at designated place and finally carried over to the stores at the storage facility before being finally disposed in accordance to the statutory environment regulations.
- o. Contractor has to ensure that all man and material have been cleared from the work site after completion of work and before trial of the equipment.
- p. **Indemnity:** OPGC LTD shall not be responsible for any accident to the labor employed by the contractor. The Contractor shall provide necessary Medical aid to his workmen at his own cost during any incident/accident at site. The contractor shall be responsible for all risk involved, liabilities & obligation arising out of the contractor under any provision of law in force from time to time.

12.MANPOWER

- a) The Contractor should clearly understand that close and technically competent supervision of work is an extremely important part of the work specified in this contract. The Contractor shall have a site-in-charge exclusively for the contract. In addition to the site-in-charge, the Contractor has to ensure supervision of work in progress by deploying technically competent site supervisor. The site-in-charge of the Contractor shall authorize his representative to collect/return materials from/to OPGC LTD as per requirement of work.
- b) The job is of skilled nature and manpower with suitable requisite skill and experience only shall be permitted to be deployed. The manpower engaged should be as per the category mentioned and experience, which will be ensured by OPGC LTD through interviewing the person. Contractor has to ensure that the credentials and certificates of the welders deployed for welding work are submitted to OPGC LTD / FQA and are to be vetted by them before the start of work.
- c) The contractor has to mobilize adequate human resource to carry out the job on day & night shifts on all days including Sundays, holidays and national holidays.

13.Following documents are required for Billing:

1. Register of Wages sheet – Form – XVII
2. Overtime Register – Form – XXIII (If required)
3. Cancel Gate pass Photo copy
4. No dues from Central Store, EMD & AHP (OPGC LTD)
5. Certification of Job from EIC

14.BOQ OF SERVICES

Sr No.	DESCRIPTION	Qty
1	OVERHAULING OF ESP FIELDS (40 MECHANICAL FIELDS) AS PER SCOPE OF WORK	1 LS

SCOPE OF WORK FOR ESP OVERHAULING WORK (ELECTRICAL)

Technical Specification & Work description:

1	Servicing of emitting gearbox with motor & alignment
	<ul style="list-style-type: none">➤ Decoupling & dismantling of gearbox, motor & distance piece➤ Complete servicing of gearbox internal with cleaning with diesel, changing of internals & gaskets➤ Complete servicing of distance piece➤ Complete servicing of motor and changing of bearings, if required➤ Assembling & fitting at its location, oil topping and arresting of oil leakage, if any➤ Alignment & coupling of the gearbox➤ Replacement or alignment of grip coupling, if required➤ Checking of IR & WR of the motor, successful trial run, checking of direction of rotation & rectification of defects, if any <p>Note: All tools and tackles, T&P, consumables are in the scope of contractor. Gear Oil, Diesel, IR tester, motor bearings, grip coupling are in the scope of OPGC</p>
2	Servicing of collecting gearbox with motor & alignment
	<ul style="list-style-type: none">➤ Decoupling & dismantling of gearbox, motor & distance piece➤ Complete servicing of gearbox internal with cleaning with diesel, changing of internals & gaskets➤ Complete servicing of distance piece➤ Complete servicing of motor and changing of bearings, if required➤ Assembling & fitting at its location, oil topping and arresting of oil leakage, if any

	<ul style="list-style-type: none"> ➤ Alignment & coupling of the gearbox ➤ Checking of IR & WR of the motor, successful trial run, checking of direction of rotation & rectification of defects, if any <p>Note: All tools and tackles, T&P, consumables are in the scope of contractor. Gear Oil, Diesel, IR tester, motor bearings, grip coupling are in the scope of OPGC</p>
3	Preventive Maintenance of HVR
	<ul style="list-style-type: none"> ➤ Cleaning of the transformer body with air blower, brush and diesel ➤ Checking of HT side bushings and cleaning of bushings with air blower and cloth ➤ Arresting of oil leakage from the transformer ➤ Checking and replacement of silica gel ➤ Checking of conservators and Buchholz Relay ➤ Tightness checking of terminals if required on offline ➤ Checking of LT and HT side cables terminations and re-glanding & re-lugging and termination, if required ➤ Checking of IR and WR of the transformer ➤ Checking of oil BDV and PPM <p>Note: All tools and tackles, T&P, consumables are in the scope of contractor. IR, BDV and PP tester and transformer spares are in the scope of OPGC</p>

Works Program/Quality Assurance Plan /Safety Plan:

Before starting the work, you shall submit detailed works program to the Engineer-in-charge for approval on day-to-day basis after which work shall be progressed as per the approved program. At the end of every day, you shall report to the Engineer-in-charge the status of items of work assigned to you on previous date and receive the instruction for the jobs to be attended next day. A site job register shall be maintained by you in which the completion of job to the satisfaction of Engineer-in-charge shall be recorded with joint signatures of yours /your authorized representative and Engineer-in-charge / his authorized representative.

Measurement of work:

The work shall be inspected / measured as directed by Engineer-in-charge and entered in the measurement sheet with signatures of both contractor and Engineer-in-charge or their authorized representatives as a token of acceptance.

Quantity Variation / Extra Items:

- a) You shall not execute the high value (abnormal item rates) jobs beyond the ordered quantity without any prior amendment order from OPGC. No payment shall be paid against the extra items if executed without the knowledge of EIC or any prior amendment from OPGC.
- b) Any item(s) which is not covered under the scope of work, but is required to be executed for maintenance work, you shall execute the same at the scheduled rate / approved rate of OPGC. However, Payment shall be made as per actual quantity executed in unit rate. There will be no provision for reimbursement of extra payment if any towards escalation in wages.

Tools and Tackles:

You shall arrange all the tools and tackles required for the work. A list of such tools and tackles to be made available during the entire tenure of contract and shall be submitted to the satisfaction of Engineer in charge. The Tools and Tackles before being used are to be thoroughly tested and certified by competent person of OPGC as nominated by CIF, Odisha. The defective tools and tackles, if any shall

be removed from the site immediately. Industrial plugs of reputed make before connecting to the source. In the event of your failing to arrange any specific tool, and if the same available with OPGC, may be utilized for the said purpose in which case, hire charges as determined by the Engineer-in-charge shall be deducted from your bill.

Permit to Work:

Before the start of each work, you shall ensure that a valid and duly signed Permit to Work has been issued. Also, you shall ensure the issue of valid and duly signed Confined Space permit and Hot Work Permit if the same is required as per OPGC rule. All the permits shall be returned to the concerned Engineer after completion of the job.

Termination of contract:

- a) In case of failure to start the work within due date, OPGC reserves the right to terminate the contract without reference to you and the earnest money deposit shall be forfeited.
- b) If the quality of the work is found to be unsatisfactory, the contract shall be terminated with immediate notice and the earnest money deposit/security deposit shall be forfeited.

Penalty:

- a) In case of failure to make payment to the workmen within 7 days after wage period i.e. any month, penalty @0.1% of gross value of bill for corresponding period for which wage is due per day of default shall be imposed & deducted from the interim running bill maximum to the extent of 1% of the gross value of bill for the said period. Repetition of such default for more than three times shall lead for termination of the contract with 7 days advance notice to you.
- b) In case of non-performance / continuous poor performance, the contract shall be terminated with 7-day notice and the work shall be done by any other means at your cost and risk till engagement of other agency. If the price of contract for the balance work shall be higher, the additional amount shall be recovered from the security or any dues of the contract or any other contract taken by you in OPGC.
- c) In case of labor strikes, you shall arrange fresh workmen and perform the contract without any discontinuation. If there is a discontinuation of work for consecutive 3 days, the "Termination of Contract" clause shall apply. This will debar you to participate in any future bid in OPGC for next 05 years.
- d) In case of failure to remove the scraps/debris within the stipulated period, the same shall be executed by other agencies at the cost and risk of the vendor and a liquidated damage @1% of the contract value shall be imposed.
- e) In case of any OPGC material is lost or damaged during execution of work due to your negligence or wrong workmanship, the cost of the same as per prevailing market rate plus departmental expenses shall be recovered from your bills.

Liquidated Damages:

Any intentional delay, or delay due to improper mobilization of men and material for executing the assigned works by you or unprofessional attitude of yours causing any delay, the Engineer-in-charge shall penalize you at the rate of 1(one)% of the bill value for each day of delay up to a maximum of 10(ten)% of the total monthly bill value.

Offloading of job:

In case it is observed during the tenure of contract that you are not capable or in a position to complete the job, OPGC reserves the right to offload the same and get it done through other agencies at your cost and risk.

Subletting:

The work shall not in any manner or degree be sublet without prior written approval of OPGC. The work shall be executed under the direct supervision of your firm.

Consumables / Maintenance Equipment/ Materials:

The vendor shall make arrangements for all the materials, consumables including cutting gas, structural electrodes, welding machines that are necessary to carry out the job. In case of any OPGCL material is lost or damaged by the Vendor during execution of work due to negligence or wrong workmanship, the cost of the same as per prevailing market rate plus departmental expenses shall be recovered from the monthly bill or security deposit. Transportation of all spares and materials like consumables, gas cylinders full or empty, oil drums provided by OPGCL shall be arranged by the vendor from and to Central or Site OPGC stores. Transport and lifting for heavy material requiring mechanical aid shall be provided by OPGCL.

Indemnity:

You shall keep OPGC indemnified from all liabilities resulting out of this contract and act of your workmen.

Engineer's Decision:

To prevent disputes & litigation, it shall be accepted as an inseparable part of the contract that in the matter regarding materials, workmanship, technical question touching the intent of this work order, the decision of Engineer-in-charge shall be final, conclusive & binding on the contractor.

MANPOWER

- d) The Contractor should clearly understand that close and technically competent supervision of work is an extremely important part of the work specified in this contract. The Contractor shall have a site-in-charge exclusively for the contract. In addition to the site-in-charge, the Contractor has to ensure supervision of work in progress by deploying technically competent site supervisor. The site-in-charge of the Contractor shall authorize his representative to collect/return materials from/to OPGC LTD as per requirement of work.
- e) The job is of skilled nature and manpower with suitable requisite skill and experience only shall be permitted to be deployed. The manpower engaged should be as per the category mentioned and experience, which will be ensured by OPGC LTD through interviewing the person. Contractor has to ensure that the credentials and certificates of the welders deployed for welding work are submitted to OPGC LTD / FQA and are to be vetted by them before the start of work.
- f) The contractor has to mobilize adequate human resource to carry out the job on day & night shifts on all days including Sundays, holidays and national holidays.

SCHEDULE

4. Schedule is the essence of the Contractor. The contractor has to complete overhauling maintenance activity within the time period as per instructions and time schedule given by the EIC. If contractor's fails to do the job, OPGC LTD will get the work done by other Contractor at the risk and cost of the contractor. Further OPGC LTD shall penalize the contractor for non-executed activity / sub activity at twice the expenditure incurred amount for carrying out the activity / sub activity. The decision of EIC on this regard shall be final and binding on the contractor.
5. Contractor has to mobilize his resources after getting the notice from EIC, and if fails, a penalty @ 5% per day of the job's value shall be imposed. In case the contractor fails to execute the job and then the work will be get done by OPGC LTD and cost of the same shall be recovered along with penalty from contractor's RA bills.
6. It is to be noted that the rates of activity are to be read in conjunction to the attached detailed scope work. The elements for which description is not clear to the contractor, job shall be taken up only after recording clear understanding of scope. The decision of EIC in this regard shall be final and binding on the contractor.

Schedule of services:

Completion of Overhauling services including testing and commissioning, release for unit operation	25 Days
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BOQ ESP AOH MECHANICAL			
Sr No.	DESCRIPTION	Qty	Code
1	OVERHAULING OF ESP (40 MECHANICAL FIELDS) AS PER SCOPE OF WORK	1 LS	2120002133
TECHNICAL SPECIFICATION OF ELECTROSTATIC PRECIPITATOR:			
Type of ESP – BHEL Make ESP for OPGC IB Valley 2x660MW unit #3&4			
Manufacturer - M/S BHEL, Ranipet			
Type of Precipitator :- FAA-10X45M 2-X116150-2			
CERM GEARBOX SET SPECIFICATION:			
Power Build make geared motor			
Item Des. : HGM FM HP 0.50 83B-32.1K-D71L4-A-1.10-B3			
With Oil, Motor as per BHEL Spec., With special internals, 1st pair H.A. 25 Degree,			
With Eff. Class IE2, PBL make IE2 motor			
EERM GEARBOX SET SPECIFICATION:			
LHP make helical geared motor complete with gear boxes 0.37kw 2.5 output rpm			
B3 SQUIRREL CAGE AC IE2 Efficiency class MOTOR, 415 ,B3,SEC,S1- F/B			
ambient all other parametrs as per your : S F. 1.4			
HVR RECTIFIER			
HVR RECTIFIER, 118 KVA, RATIO 373.5/74030 V, Input Terminal Voltage 415 ± 10 % Vrms, Input Current 316 Arms, Output Voltage (Negative Polarity) 95 KVp, Output Current 1200 mA (mean), 50 HZ, 1 PHASE, ONAN COOLING, Rectifier type : Silicon Diode Bridge Rectifier, Oil type : Mineral oil (IS-335),			

BOQ ESP AOH ELECTRICAL

Sr No.	DESCRIPTION	QTY	UOM	Code
1	Servicing of emitting gearbox with motor & alignment	80	EA	2120000752
2	Servicing of collecting gearbox with motor & alignment	80	EA	2120000753
3	Preventive Maintenance of HVR	80	EA	2120000757

TECHNICAL SPECIFICATION OF ELECTROSTATIC PRECIPITATOR:

Type of ESP – BHEL Make ESP for OPGC IB Valley 2x660MW unit #3&4
Manufacturer - M/S BHEL, Ranipet
Type of Precipitator :- FAA-10X45M 2-X116150-2

CERM GEARBOX SET SPECIFICATION:

Power Build make geared motor
Item Des. : HGM FM HP 0.50 83B-32.1K-D71L4-A-1.10-B3
With Oil, Motor as per BHEL Spec., With special internals, 1st pair H.A. 25 Degree,
With Eff. Class IE2, PBL make IE2 motor

EERM GEARBOX SET SPECIFICATION:

LHP make helical geared motor complete with gear boxes 0.37kw 2.5 output rpm
B3 SQUIRREL CAGE AC IE2 Efficiency class MOTOR, 415 ,B3,SEC,S1- F/B
ambient all other parametrs as per your : S F. 1.4

HVR RECTIFIER

HVR RECTIFIER, 118 KVA, RATIO 373.5/74030 V, Input Terminal Voltage 415 ± 10 % Vrms, Input Current 316 Arms, Output Voltage (Negative Polarity) 95 KVp, Output Current 1200 mA (mean), 50 HZ, 1 PHASE, ONAN COOLING, Rectifier type : Silicon Diode Bridge Rectifier, Oil type : Mineral oil (IS-335),
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BOQ & PRICE BID FORMAT

BOQ & PRICE BID FORMAT (MECHANICAL & ELECTRICAL)					
Name of Work: Electrical SERVICES FOR AOH,ESP UNIT 4					
Sl.No.	Description	UOM	Qty	Unit rate	Value (Rs)
1	Servicing of emitting gearbox with motor & alignment	EA	80		
2	Servicing of collecting gearbox with motor & alignment	EA	80		
3	Preventive Maintenance of HVR	EA	80		
SUB-TOTAL (A) EXCLUDING GST					
Name of Work: Mechanical Services for AOH,ESP UNIT 4					
Sl.No.	Activity	UOM	Qty	Unit rate	Value (Rs)
1	OVERHAULING OF ESP (40 MECHANICAL FIELDS) AS PER THE SCOPE OF WORK	LS	1		
SUB-TOTAL (B) EXCLUDING GST					
TOTAL VALUE (A+B) EXCLUDING GST					
GST EXTRA AT ACTUALS, SAC CODE ALONG WITH APPLICABLE % TO BE INDICATED IN YOUR OFFER					

Rules and Regulations of the e-Reverse Auction

Buyer's Name/Owner	Ib Thermal Power Station (A Unit of Odisha Power Generation Corporation Limited)
Auction To Be Conducted By	MSTC Limited
Name of the work	SERVICES FOR AOH, ESP UNIT 4 (02 Part)
Date & Time Of Auction	Auction Date: [To be intimated later] Online e-Reverse Auction Time : [To be intimated later] URL: www.mstcecommerce.com/eprochome/opgc
Special Instructions	Bidding in the last minutes and seconds should be avoided in the bidders own interest. Neither the Service Provider nor OPGC will be responsible for any lapses /failure on the part of the vendor, in such cases.
Auto Extension of Closing Time	5 minutes NB: If any bidder quotes 5 minutes before closing time, the closing time will be extended automatically for another 05 minutes and so on till 05 minutes idle time between the bids.
Decremental Value	<u>Minimum decrement is Rs. 10,000/- and in multiples of Rs. 10,000/-</u>
Start Price	The start price shall be confirmed before start of the e-RA and the same should be the lowest IPO/estimated price as decided by OPGC.

1. Bidding would be conducted through two (02) stage process comprising of technical bid in which the bidder would be required to provide the details regarding compliance with the eligibility conditions, and financial bid comprising of the Initial Price Offer (IPO) and the Final Price Offer (FPO) through E-RA.
2. The IPO is to be submitted along with the tender document separately in a sealed envelope and super scribed with "PRICE BID" along with the tender enquiry number & Name of the work. Both the techno-commercial & price bid envelopes should be kept in a third envelope sealed and super scribed with tender enquiry number and Name of the work.
3. The financial bid process will comprise of two rounds. In the first round, the IPO of the techno-commercially qualified bidders will be opened & ranked on the basis of ascending order for determination of qualified bidders. Best five (L-1 to L-5) bidders would be qualified bidders for E-RA and such qualified bidders shall be eligible to participate in the E-RA and submit their FPO with respect to the bid.
4. For the proposed e-Reverse Auction, best five (L-1 to L-5) bidders would be qualified bidders for and such qualified bidders shall be eligible to participate in the E-RA.
5. Bidders must be a registered user to bid for Buyer ("OPGC") in MSTC portal www.mstcecommerce.com/eprochome/opgc. Bidders need to have their Login ID and Password prior to e-Reverse Auction.
6. Bidders have to participate as per the e-Reverse Auction time and date communicated to them & based upon e-Reverse Auction invitation for particular Auction.
7. Quotation once submitted through e-Reverse Auction cannot be withdrawn /deleted. Otherwise, the EMD submitted by the bidder shall stand forfeited.
8. Buyer reserves the right to ban the bidder from participating in e-Reverse Auction without any explanation/reason at any stage of e-Reverse Auction.
9. Buyer reserves the rights to extend / cancel the e-Reverse Auction.
10. E-Reverse Auction shall be conducted in Indian Rupees only.
11. All prices submitted by Bidder in e-Reverse Auction shall be as per Tender's Terms & Conditions.
12. Validity of bids: As mentioned in Tender Document.
13. Written Confirmation shall be taken in advance regarding participation in the e-Reverse Auction to buyer along with the Authorized person name and details.
14. Buyer reserves the right to award the Purchase Order / Service Order as per buyer's discretion irrespective of Live Auction Rank.
15. Buyer reserves the right to repeat the e-Reverse Auction of same package.

- 16. After completion of e-Reverse Auction, the lowest evaluated bid of all the bids submitted in manual and e-Reverse Auction process shall be considered for award of the Purchase order / Work order.**
17. The bidders shall quote from their own offices/ place of their choice. Internet connectivity shall have to be ensured by bidders themselves.
18. 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, OPGC at its own discretion shall debar the bidder from the e-Reverse Auction/Tender and future participation also.
19. OPGC reserves the right to cancel the e-Reverse Auction process/ tender at any time, before ordering, without assigning any reason and may go for manual opening of price bids as per standard practice.
20. OPGC shall not be liable for any interruption or delay in accessing the MSTC portal irrespective of any cause. In such cases, the decision of OPGC shall be binding on the bidders.
21. Other terms and conditions shall be as per NIT, bidder's techno-commercial Bid and other latest correspondences/ final confirmations, (if any) against the NIT.
22. If any item is not quoted by a bidder, the maximum price quoted by the other participated bidders for that item shall be considered for arriving evaluated price of that bidder.
23. The total L1 Price obtained through e-Reverse Auction shall be proportionately distributed among each line item in line with the price quoted and evaluated in the hard copy price bid.
24. The price quoted in e-Reverse Auction is the total price for all the items and quantity as per Price Schedule of NIT irrespective of any omission by the bidder in the hard copy price bid.
25. In case, the L1 Bidder in e-Reverse Auction and manual Tender happens to be the same bidder, then minimum price among both shall be considered as L1. If the bidder disagrees to accept the said condition, then his EMD shall be forfeited. Apart from this the bidder will be debarred from participating in future e-Reverse Auction/Tender of OPGC.
26. Each Bidder shall get the final loading factor (%age of the quoted price) from OPGC before e-Reverse Auction for the deviations, if any, taken by them in the techno-commercial bid.
27. The Price quoted in the e-Reverse Auction shall be inclusive of all applicable taxes, duties and levies, deviations considering the loading factor (got from OPGC/Tender Condition as mentioned in above clause) on his quoted price. However, the GST shall be paid extra as applicable and not included in the loading factor as well as total price.

UNDERTAKING

I hereby undertake that I agree to the **"Rules and Regulations of the e-Reverse Auction"** mentioned herein.

Signature:

Name:

Date:

Company Name:

Seal: