

BOKARO POWER SUPPLY CO. (P) LTD.

**HALL NO:- M-01, OLD ADMINISTRATIVE BUILDING,
ISPAT BHAVAN, BOKARO STEEL CITY – 827001**

**Reg. Office : Ispat Bhawan, Lodhi Road, New Delhi – 110 003
CIN:U40300DL2001PTC112074**

**TENDER NOTICE NO.: BPSCL/MM/21-22/C-130/NIT-1069/3022
Dated 15/11/2021**



TENDER DOCUMENT

NAME OF WORK: Annual Maintenance (Preventive, Running & Breakdown) and Repair of Electrical and C&I Equipments belonging to BPTG unit # 9 of Power Plant.

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Bokaro Power Supply Co. (P) Ltd.

(A Joint Venture of SAIL & DVC)
Hall No: - M-01, Old Administrative Building,
Ispat Bhavan, Bokaro Steel City – 827001
Reg. Office : Ispat Bhawan, Lodhi Road, New Delhi – 110 003
CIN:U40300DL2001PTC112074

NOTICE INVITING TENDER

NIT No.: BPSCL/MM/21-22/C-130/NIT-1069/3022

Date: 15/11/2021

For and on behalf of BOKARO POWER SUPPLY COMPANY (P) LTD, sealed tenders in two parts, **Part - A :** Earnest Money Deposit and **Part- B :** Technical & Commercial Offer with copy of system generated acknowledgement-slip for online submission of sealed price are invited from the bidders meeting the eligibility and qualifying criteria stipulated in the bidding documents for the following work at our Power Plant.

Description of Work	Annual Maintenance (Preventive, Running & Breakdown) and Repair of Electrical and C&I Equipments belonging to BPTG unit # 9 of Power Plant.
Estimated Cost	Rs. 85,07,484.00 (Rupees Eighty Five Lakh Seven Thousand Four Hundred Eighty Four Only) Excluding GST.
Earnest Money	Nil In lieu of EMD, the bidder shall submit either Bid Security Declaration as per clause 1.a of General Terms & conditions. OR Document for Exemption as per clause 1.b of General Terms & conditions.
Period of Contract	One (01) Year from the date of commencement of work. Mobilization Period: Work shall be started within 15 days from the date of issue of work order or as directed by BPSCL.
Last Date & Time of submission of Tender	14/12/2021 at 12:00 Hrs. (IST)
Bid opening Date & Time	14/12/2021 at 12:15 Hrs.

Qualifying Requirements / Eligibility Criteria :

- Bidder should have Minimum average annual turnover (MAT) of **Rs. 25.52 Lakhs** in preceding three (03) Consecutive Financial years.
 - Average annual turnover shall be determined taking into consideration turnover of preceding three consecutive financial years. Other income shall not be considered for arriving at annual turnover.
 - Audited annual accounts along with auditor's report of the bidder should be furnished in support of the same. Where audited annual account is not mandatory as per the law, the bidder has to submit annual financial turnover during the consecutive last three (03) years, ending 31st March of the previous financial year duly certified by CA.
- The bidder should have valid ISO 9001 Certification in maintenance field as on date of bid opening.
- Bidder should have experience of having completed **similar work** in India in any Public Sector Undertaking / Government / Semi Government organization or joint venture thereof / Company registered under Companies Act during last 7 years ending last day of month previous to the one in which offers are invited. Value of such work order shall be either of the following :
 - Three similar completed works each costing not less than to **Rs. 34.02 Lakhs**
OR
 - Two similar completed works each costing not less than to **Rs.42.53 Lakhs**
OR
 - One similar completed work costing not less than to **Rs. 68.05 Lakhs**

Similar Work means: *Work Order / Orders which includes Annual Maintenance (Preventive, Running & Breakdown) of electrical system such as generator / transformer (at least 11 KV) / HT drives and switchgear and C&I system having DCS based controls and Pneumatic actuation system in a thermal Power Plant.*

The total value of the contract carried out by the bidder for AMC of Electrical and C&I system even in separate work orders in last seven (07) years will be combined together (one each for electrical system and C&I system within a span of three (03) years as one set for 3(c), two sets for 3(b) and three sets for 3(a)).

- Completed Work is defined as the executed/completed portion of work order/ AMC / RC, even if the work has not been completed totally (subject to furnishing proof of executed value of work in the form of certified copies of RA Bills) along with successful work execution certificated certified by the concerned authority.
- 4. Credentials of Bidder having work experience as Sub-contractor will not be considered.
- 5. In support of their eligibility and experience, the bidder is required to submit self attested photo copies of work orders & completion certificates (by the concerned competent authority) along with the techno-commercial bid. In addition, bidder shall submit a self declaration as per format at **Annexure-VI**.
- 6. The bidder shall submit self certified copies of the following:-
IT Return (*Latest*), Copy of EPF, ESI Certificate, valid Electrical Contractor's License or proof for renewal of the same, Partnership Deed / Affidavit for Proprietorship / Memorandum & Articles of Association, including changes in the Constitution of the Firm, (if any) and Copy of GST registration certificate).
- 7. The bidder shall submit acceptance for finalization of rates through Reverse Auction as per **Annexure - VIII**

General Terms & Conditions:

1. Earnest Money:
 - a) In lieu of EMD, Bidders shall have the option of submitting a Bid Securing Declaration accepting that if they withdraw / modify their Bids during the period of validity without assigning any valid reason for the same or refuse to submit Performance Security / Performance Guarantee as per the relevant Clause of this tender enquiry or refuse to accept the price quoted by them in Online Price Bid / Reversed Auction within the period of validity of the same or refuse to sign the Contract Agreement upon emerging as the successful bidder, they will be suspended for a period of one year from being eligible to submit bids against tender enquiries of BPSCL. A Format of Bid Securing Declaration is provided at **Annexure X**.
 - b) Micro & Small Enterprises (MSEs) / PSU /Govt. Undertakings and Co-operative societies will be exempted from submission of Earnest Money as per government policy. For MSEs, the exemption from submitting Earnest Money will be granted only on submission of valid copy of Udyam Registration Certificate. SSI/NSIC certificate holders should also submit Udyam Registration Certificate. Further, unit claiming exemption is required to submit copy of Udyam registration certificate clearly indicating the item category for which they are registered.

Note: Offers not accompanied with Bid Security Declaration (*as per clause a*) or documents for exemption (*as per clause b*) will be treated as INVALID.

2. Consortium bids will not be considered unless the provision for consortium is specifically mentioned in Tender Document.
3. If you withdraw your bid after opening of bids without giving any satisfactory and acceptable explanation thereof, you shall be debarred from participating in any tender of BPSCL for a minimum period of 01 (one) year.
4. **SUBMISSION OF PERFORMANCE GUARANTEE BOND FOR QUOTING UNWORKABLE RATE:**
If you quote unworkable rates, i.e. if the quoted price is less than **90%** of the estimated price and is considered for placement of order, you will be asked to justify the rate quoted. On non acceptance of justification / refusal of the same, you will be asked to furnish Performance Guarantee Bond in the form of Bank Draft/Bank Guarantee. The amount of Performance Guarantee Bond will be equal to the difference between **90%** of estimated price and your quoted price. In case you refuse to give Performance Guarantee Bond, you will not be considered for participating in any kind of Tender for next 01 (one) year from the date of issue of letter to you, if order / contract is not finalised from the present tender.
In case of forfeiture of Performance Guarantee Bond, you shall be required to reimburse the applicable GST to BPSCL.
5. **RATE FINALIZATION:** BPSCL reserves the right to finalize the rate through either of the following modes:
 - a. Opening of Online Price (*submitted on www.buyjunction.in*) submitted at the time of techno-commercial bid.

b. Through Reverse Auction to be conducted by our service provider **M/s. mjunction**.

Note: BPSCL may ask techno-commercially accepted bidders to submit decrement in percentage (%) on their online price submitted at the time of techno-commercial bid. On line price bid alongwith % decrement shall be considered together in case online price bid is opened.

6. BPSCL reserves the right to :

- a) Re-tender / extend the due date of submission of offer.
- b) Accept or reject any offer / all offers in full or part at any time at any stage without assigning any reasons and without any compensation thereof to the bidders.
- c) Modify the tender documents at any stage before the due date of tender.

Note:

1. Tender documents are to be downloaded from **Website: www.bpscl.com** only.
2. Bidders are requested to visit above website regularly for any addendum / corrigendum / extension till opening of the NIT. **Any such changes shall not be published through Press advt.**

For and on behalf of
Bokaro Power Supply Company (P) Limited

(A.K. Das)
CGM (MM)
Tel: 8986874119
Email: purchase.bpscl@gmail.com

Conditions & Rules to be observed in submitting Tenders**1.01 Manner of Submission of the Tender**

The tender shall be divided into 02 parts as follows:-

- a) **Part A:** This part shall comprise of Bid securing Declaration/ Exemption document.
- b) **Part B:** This part shall comprise of Technical and Commercial details, consent on terms & conditions of NIT/ signed Tender Document along with copy of SYSTEM GENERATED **ACKNOWLEDGEMENT-SLIP FOR ONLINE SUBMISSION OF SEALED PRICE*** bid etc.

Sealed Tender *through Regd. Post/Speed Post/In-person/Courier Service* only, in an envelope containing 02 (Two) separate sealed envelopes (*as mentioned above*) with NIT No. & date of opening along with Sender's Name & Address printed on it, is to be sent to the below mentioned address:

CGM (MM)
Bokaro Power Supply Co. (P) Ltd.
Hall No.M-01, Old ADM Building
Ispat Bhawan, Bokaro Steel City – 827001
Ph: 06452 240380, Mob: 8986874119

*** PROCESS FOR ONLINE SUBMISSION OF SEALED PRICE :**

1. Online sealed Price Bid (% above / % below) through URL : <http://www.buyjunction.in>

The process of submission of Online Price bid is as detailed hereunder-

- Step 1: Type <http://www.buyjunction.in> in the internet explorer.
- Step 2: Click on Login (present on Top right side of the Page)
- Step 3: Click on **View Live Auctions and Tenders**.
- Step 4: In the right side open/ global tenders link will be displayed.
- Step 5: Click on the link for the above mentioned tender link present under Open tenders
- Step 6: Click on new user if you are not registered in buyjunction earlier. Click on Existing user in-case you have already registered in buyjunction earlier. Existing users can login with their user id and password.

Please note foreign bidders are required to select their bidding currency from the drop down menu available before proceeding further (where ever applicable).

New Users:

Steps to get your **User ID** and **Password**

1. Click on the required tender link under “**Open Tenders**”
2. Choose your Auction currency in-case any option is coming to select currency. Click on “**New User**”
3. Fill up the “**Registration Form**” and click on “**Submit**”. All fields marked with (*) are mandatory fields.
4. On submitting the filled-up registration form, an auto generated email will be sent to the email address you have mentioned in the registration form containing your User ID and Password.
5. Changing of password on first login is compulsory.
6. On receipt of the User ID and Password you become an **Existing User**. Now follow the steps of existing user to login to the auction site.

Existing Users

1. Click on the required tender link under “**Open Tender**”
2. Click on “**Existing User**”.
3. Log in with your existing user id and password for placing your bid.
4. Read through the “**Bidding Procedure**” to proceed further for bidding.

Bidding Procedure

After logging in with your user id and password you have to accept the “**Auction Terms**”.

Steps to accept the “Auction terms”:

1. Click on “**Auction Terms**”.

2. Then click on “**View term without DSC**”
3. Click on the relevant auction terms appearing under “**Term**” column.
4. Select the check box on the left-side of the relevant auction terms.
5. Click on the button besides “**Accept**”.
6. Then click on “**Submit**”.
7. A message will be displayed to you mentioning your acceptance to terms for auction.
8. It is mandatory to accept the terms of online bidding in order to proceed for submission of bid.

Steps to Submit Price Bid

1. Click on “**Bids.**”
2. Then click on “**Live Auction.**”
3. Put your login password as transaction password
4. Select the auction id and click on add to watch list.
5. Now the bidding screen is visible.

6a. For Template Bidding

1. Click on **Icon “T”** on left column of bidding screen (Which will appear separately **for each lot**).
2. A template form will open where you need to fill up the price & click on evaluate at the bottom
3. If you want to quote the evaluated price then click on “**confirm**”.
4. After clicking on the confirm button of the template window, your price will appear in the “**New Bid**” box.

6b. For Non-Template Bidding

1. Fill your Price in the “**New Bid Box**” visible on the bidding screen.
2. Select the check box at the extreme left of the bidding screen
3. Click on “**Submit**” button placed at the bottom left of the screen.
4. Bid once placed will have to be honoured.
5. You will see “**Bid Accepted**” in the “**Result**” column. This indicates that your bid is accepted and registered in the system.

Steps to take a print-out of the receipt

1. Once you have placed your bid, to download Bid Receipt, kindly click on “**Download**”.
2. Then click on “**Bid Receipt for Open Tender**”.
3. Select the auction to generate receipt.
4. Take print out of the same market-wise (Term List)/ item-wise (Auction list).

Note: For any clarification on the bidding process please contact

Mr. Anjan Buda- 9163348263 - anjan.buda1@mjunction.in

Ms. Debalina Maity - 8336991451 - maity.debalina@mjunction.in

Ms. Bingyasini Pradhan – 9163348173 – pradhan.bingyasini@mjunction.in

Ms. Priyanka Muzumdar – mazumdar.priyanka@mjunction.in

Mr. Mukesh Kumar Singh- 8873002741 – mukesh.singh@mjunction.in

A copy of System generated **acknowledgement-slip** for Online submission of sealed price bid is to be submitted along with Techno-commercial Bid.

1.02 Tender Validity Period

Validity of the offer shall be **Four (04) months** from the bid opening date. In case of extension of "Bid Submission / Opening Date", the validity will be counted from the extended bid opening date.

1.03 General Instructions:

- i) You shall have to quote price in any of the two options given below:

Percentage ABOVE with respect to Total Estimated Cost excluding GST
OR

Percentage BELOW with respect to Total Estimated Cost excluding GST

- a) If you do not quote price in terms of percentage or quote in more than one option, your offer will be rejected.
- b) In the tender schedule at the place where you have to quote PERCENTAGE, ‘**above**’ will mean mathematically **positive** and ‘**below**’ will mean **negative**.

- c) The Lowest-1 (L-1) Bidder will be the one whose PERCENTAGE is mathematically lowest and all other Bidders will be ranked/termed as Lowest-2 (L-2), Lowest-3 (L-3) and so on, in the increasing order of PERCENTAGE quoted by them.
- ii) You are requested to visit site for actual assessment of the job before submission of offer.
- iii) You shall clearly indicate that your quoted prices shall remain firm in all respects till execution of the work order.
- iv) Any conditional offer or offer having deviations is liable to be rejected.
- v) You have to submit Tender document bearing your signature and seal on all the pages along with Techno-Commercial Offer / consent on NIT's Terms & Condition. Otherwise, it will be presumed that you do not accept our terms and conditions and this may lead to rejection of your offer forfeiting your claims if any.
- You are advised to mention page no. on each page of documents submitted by you. BPSCL shall not bear any responsibility in case of any loss of documents submitted by the bidder during tender opening or thereafter.
- vi) If you are a Firm or Company, then you shall, in the forwarding letter, mention the number and names of all the partners & shall sign before submitting the same, unless the Power of Attorney holder has specifically been authorized in this respect.
- vii) Price or any indication of price shall **NOT** be mentioned in the Techno-Commercial Bid.
- viii) The sealed tenders received will be opened on scheduled opening date and time in the office of Material Management, in presence of such bidders who might choose to witness the same
- ix) In case the date of tender opening happens to be holiday, the tender will be opened on the next working day at the same time.
- x) Communication regarding date of Opening of Price-Bid to individual communication to the techno-commercially eligible bidders will be sent only to their e-mail address given in the tender documents.
- xi) Offers from two or more bidders shall summarily be rejected if they have any of the following parameters in common:
- a) Same PAN
 - b) Same GST Number
 - c) Same Postal address
 - d) Same E-mail ID
 - e) Same Mobile number
 - f) Same person signing in more than one offer/representing more than one bidder.
- xii) BPSCL reserves the right either to reject any/all the tenders without assigning any reason thereof.

GENERAL TERMS AND CONDITIONS

1. You are requested to visit site for actual assessment of the job before submitting of your offer.
2. You shall make yourself fully conversant with the actual site condition, nature of subject job(s) to be executed and terms and conditions of contract, cost of all the input materials and facilities, cost of labor, transport, incidentals, royalties etc. or any other taxes and duties before submitting the tender.
3. You will have to arrange necessary Gate Passes for your workmen.
4. You will have to deploy proper category of manpower for execution of the job.
5. You have to comply with all labor laws, ESI Act, EPF rules & AWA rules applicable in the Industry.
6. You will have to strictly adhere to the provision of various labor laws including Payment of Bonus Act 1965.
7. **Payment Default Clause:** You must ensure that payment is made to the workers as per provisions of Payment of Wages Act and CLC norms failing which BPSCL shall make payments to concerned workers directly. The amount so paid along with 15% of Administrative cum Service charge shall be deducted from any of the concerned Contractor's bill. If the provision of Payment of Wages Act is not adhered to second time, the Contractor shall be liable for banning of business dealing with BPSCL as per procedure in Vogue. Such Contractor shall not be permitted to work in BPSCL through sub-contracting also for the banning period.
8. **You have to pay your workmen as per circular / notification published by the State Government in regard to rates of payment of VDA in vogue.**
9. You will have to pay an additional amount of **Rs.4/-** to every worker engaged by you for the subject work over and above their daily minimum wages, as per BPSCL rules.
10. **AWA CLAUSE:** You shall have to pay an amount of Rs 96.15 per day on actual attendance per month (not exceeding Rs 2500/month) to the workers engaged by you in this job as Additional Welfare Amenity (AWA) as per relevant circular/notification of BPSCL.
11. You shall execute the work in compliance with the provisions of contract and contract Technical Specification and/or design drawings furnished by BPSCL in terms of the contract and as per codes and standards specified therein, wherever applicable.
12. Supervision of the work is your responsibility. Inspection of executed work will be done by Site Engineer/BPSCL.
13. If situation demands, you will have to execute the work round the clock.
14. After completion of work, Engineer-in-charge or his representative will review the work(s), you will have to rectify any defect, if found, at no extra cost.
15. You shall remove all debris, surplus materials, etc., if any, and dump the same at place as directed by the Engineer-in-charge.
16. All the applicable taxes will be deducted from your bills.
17. During contract period there will be no consideration for idle & escalation charges.
18. You will be fully responsible for any sort of unsafe activity of your workmen and all your workmen should be trained for operational safety and to avoid fire hazards of Power Plant and must have proper safety certificates issued by BPSCL before start of work.
19. You will have to follow and observe the safety & statutory requirements and comply with all safety rules & regulations applicable in the plant area as per Booklet of Safety rules for BPSCL contractors. If you are not having that booklet, same may be collected from the safety department with a request letter.
20. For working at height, you shall produce medical fitness certificate for your workmen. Height passes to be obtained from safety department, if required.
21. All the working tools & tackles, men, material etc. and safety appliances like personal protection equipment are to be provided to your workmen by you at your own cost. All safety appliances of reputed make are to be provided by you to your workmen in presence of Safety Officer of BPSCL. The list and make of safety appliances may be obtained from safety office.
22. In case any documents/information submitted by you are found to be false or containing any misrepresentation or having any fraudulent declaration in it then in such eventuality EMD will be forfeited and legal action (including cancellation of contract, banning of business dealing, criminal proceedings etc.) as deemed fit may be initiated by BPSCL against you.
23. **GST RELATED CLAUSES:**
 - a. You should quote GST as extra. If not mentioned in offer it will be considered as extra.

- b. You have to pass on the tax benefit/savings, if any, on account of output taxes to BPSCL.
 - c. You shall agree to do all things not limited to providing GST invoices or other documentation as per GST Law relating to the above Services, payment of taxes, timely filing of valid statutory returns for the tax period on the Goods and Service Tax Portal etc. that may be necessary to match the invoice on GSTN common portal and enable BPSCL to claim input tax credit in relation to any GST payable under this agreement or in respect of any part under this agreement.
 - d. In case the Input Tax Credit of GST is denied or demand is recovered from BPSCL on account of any non-compliance by you, including non-payment of GST charged and recovered, you shall indemnify BPSCL in respect of all claims of tax, penalty and/or interest, loss, damage, costs, expenses and liability that may arise due to such non-compliance. Further, in case of any differential tax liability on account of any wrong classification/valuation etc. by you, BPSCL will not be liable to reimburse any part of such differential tax, interest, penalty etc. It will be your responsibility to discharge appropriate taxes, as applicable.
 - e. You have to maintain high GST compliance rating track record at any given point of time.
24. **Banning of Business Dealings:** On arising of any situation or occurrence of any event as mentioned in Clause 6 of the Guidelines on Banning of Business Dealings, you shall be liable for action under and in accordance with the aforementioned Guidelines. The "Guidelines on Banning of Business Dealings" shall form part of the Tender/Contract and can be viewed on our website www.bpscl.com.
25. **RISK AND COST:** Failure on your part to start the work within reasonable time/ the progress of the job is poor/ for any breach of contract will entail termination of the Contract. In such an event, the job will be executed at your risk and cost by alternate arrangements.
26. **SAFETY CLAUSE:** You shall be liable for penalties mentioned below for violation of safety norms:
- i. Up to Rs.5000/-by Head of safety Engineering Department /Head of the Department where work is being done for 1st violation of safety norm, non-use of PPEs (Personal Protective Equipment) like safety shoes, hand gloves, safety helmets, goggles etc. as per work requirements by You or your workers. This condition is applicable in case of violations of Road Safety norms also.
 - ii. Fine up to Rs. 20,000/- on 2nd Violation as mentioned in clause (i) above
 - iii. You shall be debarred for one year / deregistered from taking up further contractual work in BPSCL from the date of issue of debarring / deregistering order on 3rd violation as mentioned in clause no. (i) above.
 - iv. Fine up to Rs. 10,000/- for violation in use of Full Body Harness by you or your worker for working at height (above 1.8 meter from immediate floor).
 - v. Fine Rs. 25,000/- (minimum) to Rs. 50,000/- (Maximum) for serious injuries and disabilities caused by violations as mentioned in Clause No. (i) and (iv) above.
 - vi. Independent of the above, You shall be fined Rs. 1,00,000/- (1 Lakh) or more and debarred / deregistered from taking up further contractual work in BPSCL from the date of issue of debarring / deregistering order in case any Fatal accident occurs due to violations as mentioned in Clause (i) and (iv) above.
27. **FORCE MAJEURE:** You shall not be considered in default if delay occurs due to causes beyond your control such as acts of God, natural calamities, civil wars fire, strike, frost, floods, riot and acts of unsurpassed power. Only those causes which have duration of more than seven days shall be considered in force majeure clause. In the event of delay due to such cause the delivery / completion period will be extended for a length of time equal to the period of force majeure without imposition of LD at the option of BPSCL.
28. **Work accident**
- a. You will be fully responsible for the safety of the workers employed by you. In the event of any work-accident, major or minor, your representative must take care of the injured person immediately and provide him the required treatment as suggested by the doctor. If you or your representative is not available for medical care, the injured worker will be treated in Bokaro General Hospital and the cost of treatment will be recovered from you.
 - b. You shall be fully responsible for making payment of compensation to your own workmen in respect of any accident or injury occurring to them. BPSCL will in no way be responsible for it and will remain indemnified against all such claims of compensation in such cases.
29. **You shall also maintain all records/register/return/cards such as:**
- i) Register of workmen employed by contractor
 - ii) Employment card
 - iii) Muster Roll
 - iv) Register of wages-cum-muster roll
 - v) Submission of Return
 - vi) Order book

Scope of Work:**A. ELECTRICAL:**

List of equipment and work, which is indicative and not limiting, is given below:

1. LIST OF EQUIPMENT:**1.1. Generator & auxiliaries:**

- 1.1.1. 36 MW, 11 kV Generator
- 1.1.2. Generator Excitation System, including AVR system, Generator Protection System and Protection Panel
- 1.1.3. Generator Control System and Control Desk
- 1.1.4. 11 kV Bus-duct from Generator to 11 kV Switchgear
- 1.1.5. All accessories like CTs, PTs, LAs, Space Heaters, Generator cooler, turning gear, auxiliary etc.

1.2. 11 kV Switchgear:

- 1.2.1. 11 kV Switchgear Panels (08 nos.)
- 1.2.2. 11 kV VCBs (07 nos.)
- 1.2.3. 11 kV Bus PT (01 no.)
- 1.2.4. Protection Relays of all 08 panels
- 1.2.5. Control Systems of all 08 feeders / panels
- 1.2.6. All accessories like CTs, PTs, Space Heaters, etc.

1.3. 6.6 kV Switchgear:

- 1.3.1. 6.6 KV Switchgear Panels (39 nos.)
- 1.3.2. 6.6 KV Cabling Panels (02 nos.)
- 1.3.3. 6.6 KV VCBs (37 nos.)
- 1.3.4. 6.6 KV Bus PTs (02 nos.)
- 1.3.5. Protection Relays of all 39 panels
- 1.3.6. Control Systems of all 39 feeders / panels
- 1.3.7. All accessories like CTs, PTs, Space Heaters, relays, contactors, fuses, transducers, meters, switches, MCBs, ROTs, etc.

1.4. LT PDBs, MCCs, Control Desks, Control Panels, etc.

- 1.4.1. Main Plant Sub-station, DM Plant Sub-station, WCTP Sub-station & ERS Sub-station:
 - 1.4.1.1. All PDBs, MCCs, ACDBs & Aux. ACDBs, DCDBs & Aux. DCDBs, LDBs, etc., at the above sub-stations.
 - 1.4.1.2. ACBs installed in the above.
 - 1.4.1.3. ACB installed in LT Reserve Supply Panel (powered from 50T) at existing WCTP which serves as reserve supply feeder to WCTP Sub-station LT PDB.
 - 1.4.1.4. Protection systems & Relays associated with the above.
 - 1.4.1.5. All accessories like CTs, PTs, Contactors, Aux. Relays, Fuses, Transducers, Meters, Switches, MCBs, MCCBs, MPCBs, ROTs, Control Transformers, etc., installed in the above.
- 1.4.2. Switchgear Building:
 - 1.4.2.1. All PDBs, MCCs, ACDBs & Aux. ACDBs, DCDBs & Aux. DCDBs, MLDBs & LDBs, etc.
 - 1.4.2.2. ACBs installed in the above
 - 1.4.2.3. Protection systems & Relays associated with the above
 - 1.4.2.4. All accessories like CTs, PTs, Contactors, Aux. Relays, Fuses, Transducers, Meters, Switches, MCBs, MCCBs, MPCBs, ROTs, Control Transformers, etc., installed in the above
- 1.4.3. Pump House # 3&Auxiliary of Cooling Water System, Booster Pump House:
 - 1.4.3.1. Star-Delta Motor Starter Panels.

- 1.4.3.2. All PDBs, MCCs, ACDBs & Aux. ACDBs, DCDBs & Aux. DCDBs, LDBs, etc., in the above areas.
 - 1.4.3.3. ACBs installed in the above.
 - 1.4.3.4. Control Desk in the above areas.
 - 1.4.3.5. Protection systems & Relays associated with the above.
 - 1.4.3.6. All accessories like CTs, PTs, Contactors, Aux. Relays, Fuses, Transducers, Meters, Switches, MCBs, MCCBs, MPCBs, ROTs, Control Transformers, Battery & Charger etc., installed in the above.
- 1.4.4. Main Control Room, Switchyard Control Room (at ECR – II Extension Building)
 - 1.4.4.1. Remote Control Panel at Main Control Room
 - 1.4.4.2. Remote Control Panel at Switchyard Control Room
 - 1.4.4.3. Aux. ACDB, Aux. DCDB & LDB, Emergency Lighting DB at Switchyard Control Room
 - 1.4.4.4. RTCC Panels at Main Control Room & Switchyard Control Room
- 1.5. Motors:**
- 1.5.1. All 6.6 kV Motors (13 nos.) in BTG
 - 1.5.2. All LT AC Motors & drives in BTG, Cooling Water Pump House & Cooling Towers, DM Water Pump House, Booster Pump House for Fire Fighting System, etc.
 - 1.5.3. All DC Motors & drives in BTG portion (DC Scanner Air Fan, DC Start Up Oil Pump & DC Jacking Oil Pump)
 - 1.5.4. All accessories like CTs, Space Heaters, LPBSs, etc.
- 1.6. UPS System with auxiliary:**
- 1.6.1. 02 nos. UPS Systems for BTG portion
 - 1.6.2. 02 nos. Battery Banks for BTG UPS Systems
 - 1.6.3. Control Systems for the above UPS Systems.
 - 1.6.4. 02 nos. UPS system along with battery bank of CHP & AHP.
- 1.7. DC Charger System:**
- 1.7.1. 04 nos. Battery Chargers in BTG portion
 - 1.7.2. 04 nos. Battery Banks for BTG DC Charger System
 - 1.7.3. Control Systems for the above DC Charger Systems
- 1.8. Valves & Dampers:**
- 1.8.1. All electrically operated Valves & Dampers in BTG area, Ash Handling Plant, Cooling Water System, Cooling Towers, DM Water System, Ash Water System and Fire Fighting System.
- 1.9. Transformers, Bus ducts & Isolators:**
- 1.9.1. Oil Filled Transformers:
 - 1.9.1.1. Unit Auxiliary Transformer: 12.5 MVA, 11 kV/6.6 kV – 01 no.
 - 1.9.1.2. DM Plant Sub-station: 1 MVA, 6.6 kV/415 V – 02 nos.
 - 1.9.1.3. Ash Handling Plant Sub-station: 1 MVA, 6.6 kV/415 V – 02 nos.
 - 1.9.1.4. WCTP Sub-station: 630 KVA, 6.6 kV/415 V – 01 no.
 - 1.9.1.5. Earthing Transformers: 6.6 kV, 150 A, Zig Zag Connected – 02 nos.
 - 1.9.2. Dry type Transformers:
 - 1.9.2.1. Main Plant Sub-station: 2 MVA, 6.6 kV/415 V – 02 nos.
 - 1.9.2.2. ESP Sub-station: 2 MVA, 6.6 kV/415 V – 02 nos.
 - 1.9.2.3. Lighting Transformers: 350 KVA, 6.6 kV/415 V – 02 nos.
 - 1.9.3. Neutral Grounding Transformer – 01 no.
 - 1.9.4. 6.6 kV Isolator at WCTP Sub-station
 - 1.9.5. Associated Bus-ducts of all the above transformers

1.10. PLC Systems:

- 1.10.1. PLC panels, work stations, printers, switches etc.
- 1.10.2. General maintenance & power supply restoration of work stations and other accessories installed at Coal Handling Plant.
- 1.10.3. Trouble shooting of PLC & interfacing of drives with PLC for needful monitoring.

1.11. Miscellaneous Electrics:

- 1.11.1. Igniters (entire assembly from Exciter Box to Spark Tip)
- 1.11.2. All metering equipment in the above-mentioned Switchgears, Control Desks, panels, etc.
- 1.11.3. All Indication Lamps in the above-mentioned Switchgears, Control Desks, panels, overhead crane (EOT), compressor motors etc.

1.12. Illumination:

- 1.12.1. Entire illumination of BTG area (Turbine Hall to Chimney, at all levels)
- 1.12.2. Entire illumination of Booster Pump House
- 1.12.3. Entire illumination of Switchgear Building, including cable gallery
- 1.12.4. Entire illumination of DM Water Pump House and sub-station
- 1.12.5. Entire illumination of Cooling Water Pump House, Cooling Towers and sub-station
- 1.12.6. Entire illumination of Switchyard Control Room
- 1.12.7. Entire illumination of Chimney and ERS Area.
- 1.12.8. Area and Street Lighting in the above areas
- 1.12.9. DC Emergency Lighting in the above areas
- 1.12.10. Exhaust Fans, Ceiling Fans, Table Fans, Wall Mounted Fans, Pedestal Fans and air washer etc., installed in the above areas.
- 1.12.11. PDB, Welding sockets, power receptacles, etc. in the above areas.

1.13. Cables & Cable Trays:

- 1.13.1. All HT Cables (6.6 kV & 11 kV) from HT Switchgears to respective equipment.
- 1.13.2. All LT Cables (415 V) from LT Switchgears to respective equipment.
- 1.13.3. All Control wiring associated with the above equipment (1.1 to 1.11)
- 1.13.4. All cabling associated with Illumination (listed under 1.12 above)
- 1.13.5. All cable trays associated with above cabling.

1.14. Earthing System:

- 1.14.1. All Earth Pits (treated as well as untreated) in BTG, Ash Handling Plant, Switchgear Building, Switchyard Control Room Building, DM Plant Substation, WCTP Substation, ESP, ESP Sub-station, Pump House # I, Cooling Towers, Pump House # II, Pump House # III, Booster Pump House, UAT, etc., area.
- 1.14.2. Entire Earthing Grid in the above areas.

2. SCOPE OF ACTIVITIES:

2.1. Generator & auxiliaries:

- 2.1.1. All kinds of preventive, running & breakdown maintenance of Generator, its Excitation System, Busduct and other associated auxiliaries & AVR panel.
- 2.1.2. Fault finding and rectification whenever required.
- 2.1.3. Minor testing activities like IR Testing, Continuity Checking etc., whenever required and as per direction of Engineer In-charge.

2.2. 11 kV, 6.6 kV, 415 V Switchgears, Control Panels, Control Desks, etc.:

- 2.2.1. All kinds of preventive, running & breakdown maintenance of all the above equipment.
- 2.2.2. General preventive & breakdown maintenance of VCBs & ACBs including tightening of contacts, checking & rectification of defects, bus-ducts etc.

- 2.2.3. Fault finding and rectification thereof, whenever required,
- 2.2.4. Minor testing activities like IR Testing, Continuity checking, etc. & minor modification, whenever required as per direction of Engineer In-charge.

2.3. Motors:

- 2.3.1. Mounting/removal of Coupling of motors (HT / LT) for maintenance purposes, whenever required.
- 2.3.2. Connection / disconnection of cables from motors for maintenance purposes, whenever required.
- 2.3.3. Removal / placement of motors from / on foundations for maintenance purposes, whenever required.
- 2.3.4. Replacement of damaged motor with a healthy one, whenever required.
- 2.3.5. Regular greasing / oil top up of motor bearings.
- 2.3.6. Regular cleaning of cooler tubes with compressed air or any other suitable means, whenever found necessary.
- 2.3.7. Repair of cooler tubes, if required,
- 2.3.8. Heating & drying out of motors with suitable means, whenever found necessary and as per direction of Engineer In-charge.
- 2.3.9. Assisting BPSCL in transporting damaged motors to repair facilities.
- 2.3.10. Unloading and storage of motors received after repair at suitable space provided by BPSCL.
- 2.3.11. Minor testing activities like IR Testing, Continuity Checking, etc., whenever required and as per direction of Engineer In-charge.
- 2.3.12. Medium repair of motors including replacement of damaged bearings, fans, fan covers, couplings, etc.
- 2.3.13. Running of decoupled motors, in coordination with operation personnel, checking vibration & noise levels and other relevant parameters.

2.4. UPS and DC Charger Systems:

- 2.4.1. Identification and rectification of faults whenever required with scheduled maintenance on regular basis of Battery Charger systems.
- 2.4.2. Replacement of defective cards / components with healthy ones of Battery Charger systems, whenever required as per direction of Engineer In-charge.
- 2.4.3. Checking of output parameters after repair works.
- 2.4.4. Minor card repair works, to the extent possible, with assistance from C&I Lab of BPSCL.
- 2.4.5. Regular measurement of cell voltages and specific gravity of acid in battery banks for both the UPS and DC Charger Systems.
- 2.4.6. Topping up of DM Water in cells of UPS and Charger Systems, whenever required and as per direction of Engineer In-charge.
- 2.4.7. Assisting BPSCL personnel in Boost / Float Charging of Batteries, whenever required.
- 2.4.8. Regular Inspection & Maintenance of Battery Banks of DC charger, UPS of (Main Plant, CHP, AHP) and applying petroleum jelly on connectors whenever required.

2.5. Valves & Dampers:

- 2.5.1. Opening & closing Limit setting.
- 2.5.2. Torque limit setting.
- 2.5.3. Checking & replacement of various valve components, like cards, micro switches, motor, etc., whenever required.
- 2.5.4. Tuning of inching type valves.

2.6. Transformers & associated Bus ducts, Isolators, etc.:

- 2.6.1. Regular checking for oil leakages, if any, from tank covers, bushings, valves, radiators, etc., and taking necessary action for arresting such leakages as per direction of Engineer In-charge.
- 2.6.2. Regular checking of oil levels in conservator tanks and topping up with fresh oil, whenever necessary, as per direction of Engineer In-charge.
- 2.6.3. Regular inspection of Silica Gel and Oil in Breather. Drying out of Silica Gel and taking other corrective actions, whenever required.
- 2.6.4. Checking of Buchholz Relay for gas accumulation, oil leakage, etc.
- 2.6.5. Taking out oil from transformers and checking their BDV at regular intervals.
- 2.6.6. Monitoring of oil & winding temperatures in case of oil filled transformers and winding temperatures in case of dry type transformers on regular basis.
- 2.6.7. During shutdown of transformers following preventive maintenance activities shall have to be carried out:
 - 2.6.7.1. Checking of control circuitry,
 - 2.6.7.2. Checking of power & control circuit connections for tightness,
 - 2.6.7.3. Overall all checking of various components like explosion vent, bushings, temperature indicators, Buchholz Relay, cooling fans, etc. and rectification of defects, if any,
 - 2.6.7.4. Minor testing activities, like IR Testing, Winding Resistance & Continuity checking, etc., if required,
 - 2.6.7.5. Cleaning & blowing of bushings, control cabinets, fittings, marshalling box etc.
 - 2.6.7.6. Any other job deemed necessary, shall have to be carried out.
- 2.6.8. During shutdowns, following activities shall have to be carried out in Bus ducts:
 - 2.6.8.1. Checking of Inspection opening covers for tightness and proper sealing,
 - 2.6.8.2. Checking of Bus supporting bolts, Insulator fixing bolts, etc., and tightening thereof, if necessary,
 - 2.6.8.3. Inspection, cleaning & tightening of connections, if necessary, of CTs, PTs & other accessories,
 - 2.6.8.4. Testing of Bus before and after maintenance jobs,
 - 2.6.8.5. Rectification of defects, if any.

2.7. PLC System of CHP:

- 2.7.1. Isolation of power supply to PLC system whenever required.
- 2.7.2. Restoring power supply to PLC systems.
- 2.7.3. Regular Cleaning and blowing of PLC panels.

2.8. Illumination:

- 2.8.1. Maintenance of entire illumination (In-house, Area and Street Lighting) system of areas covered under the scope.
- 2.8.2. Maintenance of DC Emergency Lighting System of areas covered under the scope.
- 2.8.3. Maintenance of all Ceiling Fans, Wall Mounted Fans, Exhaust Fans, Pedestal Fans, etc., installed in the areas covered under the scope.
- 2.8.4. Maintenance of all lighting PDB, welding sockets, power receptacles, 1Ø & 3Ø power outlets, etc. installed in areas under the scope.
- 2.8.5. Erection of new items of the above, if required, as per direction of Engineer In-charge.

2.9. Cables & Cable Trays:

- 2.9.1. Checking of tightness of connections of cables (HT, LT, power & control) at both panel and equipment ends and tightening of the same, if necessary,
- 2.9.2. Connection & disconnection of cables at both panel and equipment ends for facilitating maintenance activities,
- 2.9.3. Fixing of lugs through crimping at cable ends, whenever necessary,
- 2.9.4. Removal of damaged cables and laying of new cables, whenever required,

- 2.9.5. Straight through joint and end termination of cables (HT, LT, power & control), whenever required,
- 2.9.6. Sealing of cable entry points in panels, equipment, junction boxes, etc., whenever required,
- 2.9.7. IR & continuity testing of cables (HT, LT, Power & Control), whenever required,
- 2.9.8. Erection / repair / dismantling of Cable Trays along with their supporting structures, if required.

2.10. Earthing System:

- 2.10.1. Regular inspection of Earth pits & Earthing Grid,
- 2.10.2. Regular measurement of earth resistance of individual pits as well as grid,
- 2.10.3. Application of Brine solution, charcoal, etc. to pits, whenever required,
- 2.10.4. Checking of earth connections to different equipment, panels, junction boxes, structures, etc. and rectifying defects, if any,
- 2.10.5. Replacement of damaged earth strips, electrodes, etc., whenever required,
- 2.10.6. Maintenance of Lightning protection system, associated earth pits, other accessories, etc.

2.11. Miscellaneous Electrics:

- 2.11.1. Igniters:
 - 2.11.1.1. Checking of sparks in exciter boxes of all Igniters at regular intervals,
 - 2.11.1.2. General preventive maintenance of all electrics of the Igniter systems,
 - 2.11.1.3. Replacement of components / parts of the Igniter systems or replacement of the entire Igniter system, if required.
- 2.11.2. Metering equipment:
 - 2.11.2.1. Checking of all types of metering devices installed in various Switchgears, Control Panels, etc. for their healthiness.
 - 2.11.2.2. Replacement of defective meters by healthy ones, whenever required.
- 2.11.3. Indication Lamps & Annunciation Systems:
 - 2.11.3.1. Regular checking of Indication Lamps installed in various Switchgears, Control Panels, LPBSs, etc. for their healthiness.
 - 2.11.3.2. Replacement of defective indication lamps with healthy ones, whenever required,
 - 2.11.3.3. Regular checking of Annunciation Windows and Hooters installed in various Switchgears, Control Panels, etc., for their healthiness.
 - 2.11.3.4. Replacement of defective Annunciation Windows or parts thereof and Hooters, whenever required, as per direction of Engineer In-charge.

2.12. General points:

- 2.12.1. Regular Cleaning & Blowing of all equipment, panels, JBs, Lighting Fixtures, etc.,
- 2.12.2. Regular greasing / oil top up in bearings of all rotating electrical equipment,
- 2.12.3. Minor testing activities, like IR Testing, Earth Resistance Testing, Continuity Checking, Winding Resistance & Inductance Measurement, etc., and logging of measured values in a proper manner,
- 2.12.4. Maintaining of record of condition monitoring, all preventive and breakdown maintenance activities.
- 2.12.5. Maintaining equipment wise preventive and breakdown maintenance records for critical equipment.
- 2.12.6. Maintaining record of Cell Voltage & Specific Gravity for all battery Banks of UPS and DC Charger Systems,
- 2.12.7. Maintaining of equipment wise schedule of preventive and breakdown maintenance.

B. CONTROL & INSTRUMENTATION:

Scope of work:

The job under mandatory scope of work is to be carried out during preventive maintenance and as and when required on instruction of engineer in charge. The objectives shall be overall supervision for healthiness of the instruments of above said areas to minimize the breakdown, minimize the down time to avoid generation loss and to ensure maximum availability for the instruments covered under this AMC.

A list of work, which is indicative and not limiting, is given below.

Maintenance Jobs:

A. Boiler

Cleaning/ Checking/servicing/ repairing at site where ever possible/ replacement with new ones after getting it issued from BPSCL site store as and when required, along with their associated cables (including compensating cables) up to Marshalling cabinet in Control room through field JB(s) of the following types of field instruments with their own tools (general and special).

1. RTDs, T/C and temp scanners.
2. All types of Pressure, Temperature, Differential Pressure, Flow, Level, Conductivity, pH, Silica, dissolved oxygen and Position Transmitters.
3. SWAS: Analyzer maintenance & Panel cleaning, checking & maintenance of Leakage in sampling lines and regular monitoring of parameters including all field analyzer instruments like oxygen analyzer, CO analyzer and dust emission analyzer.
4. Air filter regulators, I/P converters, positioners, Position feedback transmitters, Power cylinder and actuators of Pneumatic valves.
5. Solenoid valves.
6. Pressure, Flow, Temperature, level and D. P. Gauges.
7. Copper / SS Tubing.
8. Impulse lines including SS tubing (from root valve up to Instruments). (Purging, arresting of leakage, arresting of passing through drain/ isolation valve etc. including welding wherever required).
9. All types of Gas analyzer including Dust monitoring system.
10. Flame Scanner system, Oil & Coal firing instruments.
11. Hydra step (CTLI): Electrodes change, checking / changing of cables, panel maintenance & cleaning etc.
12. Oil flow meter: Regular maintenance.
13. Gravimetric coal feeder instrumentation system: Feeder calibration, panel maintenance & cleaning, replacement of load cells etc.
14. Radar level Transmitters: Maintenance.
15. Mill DP Level instrumentation system: Maintenance.
16. Purging, draining (both periodical and as & when required) of impulse lines related to the instruments covered under AMC.
17. All field instruments related to VMS (HT drive), regular maintenance.
18. All field instruments and actuators related to Fuel oil System starting from fuel oil-pump house.
19. All field instruments, solenoids, actuators and associated cabling related to main compressor house.

B. Turbine

1. Maintenance of all control panels, JB and cabling associated with turbine instrumentation.
2. All the field C&I items related to HP system (stop valve, control valve, HP units) including servicing/cleaning/ replacement (if required) of servo valves, pressure switches, trip solenoids and calibration of pressure, temp & position feedback transmitters.
3. Maintenance of over-speed protection panel.
4. Maintenance of field instruments related to turbo-Supervisory system and TSI panel.
5. Field instruments and cabling related to lubricating oil system of TG.
6. Field items pertaining to C&I system of Generator Instrumentation panel.
7. Field instruments pertaining to C&I system of BFP area, turbine inlet steam line and cooling water lines.

C. Control Room Instruments (Day to day maintenance including cleaning.)

1. Indicators at UCP. (All types)
2. Cleaning of UCD, UCP, DDCMIS panels, LVS, Different PLC panel and other instrument panels in control rooms.
3. Regular cleaning of different OWS, EWS, Bentley system 1 others servers.
4. LVS, DDCMIS panels & Different DDCMIS server: cleaning including work assistance to BPSCL Engineers during troubleshooting.
5. PLC system under the compressor house area.
6. Maintenance of Modbus and OPC servers along with cables up to client system and other accessories.

D. Others:

1. Scope of work also included the work assistance to BPSCL Engineers during Simulation checking for Healthiness of HT/LT drives inter-lock and protection logic, OLCS, CLCS etc pertaining to C&I system of boiler and turbine.
2. Shifting of the materials / spares from main store to site store is also included in the scope of work.
3. Short term overhauling work assistance is also included in the scope of work.
4. All electrical accessories / cabling/ wiring associated with C&I system including Distribution panel, earthing of various equipment / desks/ panels / cabinets / JB's /etc as when require

Note:

1. All the above jobs carry a defect liability period of 3 months based on nature of jobs. Any fault arising during this period will have to be rectified by the contractor at no extra cost to BPSCL.
2. The bidder has to arrange any specialized /additional manpower to execute the job.

C. TROUBLE SHOOTING IN ALL THE THREE SHIFTS: If any trouble arises in the electrical equipment of boiler areas, it is to be solved immediately. Readiness for taking up a job should always be there round the clock. Hence, working-personnel will have to be posted by the contractor in all the three shifts covering 24 hours on all days including Sundays & holidays so that, the defect-rectification job could be started immediately as soon as the problem arises. A back-up group will always be ready even in odd hours to tackle the problem, if the front-line repair- man feels any difficulty in solving the problem.

D. ATTENDING TO BREAKDOWNS:

- i. If a breakdown occurs, the expert attending-group will have to be present at the occurrence- site and report to the control engineer (electrical section) within half an hour.
- ii. The affected portion is to be isolated under the guidance of control engineer (electrical section) and breakdown-repair-work is to be started immediately after receiving work-permit.
- iii. After attending to the breakdown, the system is to be normalized back again under the guidance of control engineer (electrical section)
- iv. During breakdown, the repair-job is to be continued round the clock until the affected part is attended and normalized back.

E. RECORD-KEEPING & REPORT-MAKING

- i. The contractor will maintain job-progress record on daily, monthly and annual basis.
- ii. Drawing development of spare parts of electrical drives like end shield, etc. in CAD software.
- iii. Check-list will have to be filled- up pertaining to each equipment as and when the equipment is taken for maintenance and repair.
- iv. Maintenance and repair record of all the equipment of indoor switchgear system along with their technical specifications will have to be maintained. Logging of operation & maintenance records in log books / sheets as per instruction of BPSCL engineers.
- v. An updated record of spares requirement and their available stock will have to be maintained and also their consumption-pattern.
- vi. All the records must be systematic and computerized so that, it may be retrieved and presented any time on demand.
- vii. All items required to maintain computerized records and reports (like stationary items, printing papers and printer cartridge) is in your scope.

Note: The above is only an indicative list and is not exhaustive. Any other equipment which is not covered in the above list but which is an integral part of the BPTG shall be in your scope.

F. Exclusion:

- a) Overhauling / Major repair of drives.
- b) Expert services of equipment manufacturer on specialized job and emergency.
- c) Any testing of materials, arranging of scaffolding materials.
- d) All spares and consumables, like Lubricants and Special Electrodes (like SS, Hand Facing Electrodes, etc.). However, industrial gases and general welding Electrodes shall be in contractor's scope.
- e) Overhauling / re-winding of motors, transformers, etc.

SPECIAL TERMS & CONDITIONS:

1. Minimum indicative manpower to be deployed on daily basis excluding weekly off (i.e. for 313 days) :

Sl No.	Type of Manpower	Electrical	C&I
1	Site-in-charge	1	1
2	Diploma Supervisor	1	4
3	Non – Diploma Supervisor	4	2
4	Skilled Worker	7	3
5	Un-skilled Worker	4	2
Total Manpower		29	

2. Quality of manpower to be deployed by the contractor :

Sl No.	Type of Manpower	Qualification & Experience required	Field of Experience
01	Site In charge	BE / B.Tech in Electrical with 05 years experience for carrying out work as mentioned in Electrical Scope.	He should have prior experience of working in a DCS based Power Plant (consisting high pressure boilers and turbines).
		BE / B.Tech in Electronics/ Instrumentation with 05 years experience for carrying out work as mentioned in C&I Scope.	He should know statutory and safety of Electrical and C&I equipment of a Thermal Power Plant.
02	Supervisors	Diploma (Electrical/ Electronics / Instrumentation) with minimum 2 (two) years of experience in relevant field.	He should know statutory and safety of Electrical and C&I equipment of a Thermal Power Plant.
		Non-Diploma (ITI in Electrical/ Electronic/ Instrumentation trade with 05 (five) years of experience)	He should have prior experience of working in a DCS based Power Plant with pneumatic actuation systems (consisting high pressure boilers and turbines).
03	Skilled Technician	ITI in electrical trade with 02 (two) years of experience OR Matriculation with 5(five) years of experience in Power Plant Electrical Equipment	Experience in power plant electrical drives maintenance jobs. Electrical license holders will be preferable.
		ITI in electronics/ Instrumentation trade with 02 (two) years of experience OR Matriculation with 5(five) years of experience in Power Plant Instrumentation	Experience in power plant C&I maintenance /commissioning jobs.

3. **VDA Clause:** During operation of the contract, if there is an upward revision of minimum wage, VDA by the appropriate Government, contractor shall be entitled to reimbursement of such additional amount (wherever applicable) on actual basis subject to production of documentary evidence.
The base date for such reimbursement shall be Bid Opening Date or RA Date or Revised Offer Date (in case of negotiated prices), whichever is later.
4. Type of manpower mentioned above is to be deployed in adequate no. round the clock (including Sundays & Holidays) as per the job requirement.
5. All consumables like general electrodes, industrial gases, PVC tapes etc. and field testing and measuring equipment like Multimeters, Field Calibrators, Tongue Testers, High voltage tester, Digital Vernier caliper, Digital screw gauge etc. will have to be provided by the contractor.
6. All lifting tools & tackles, slings, etc., to be provided by the contractor, must have proper and valid test / safety certificates and the same shall be submitted to the engineer in charge before start of work.
7. The Site In-charge, Site Engineers & Supervisors, once deployed, shall not be changed / replaced / withdrawn from the site by the contractor during the currency of the contract. Under unavoidable circumstances, they can be replaced by some other suitable candidate with prior permission of the engineer in charge of the job.

8. Daily, weekly, monthly and other reports are to be maintained, generated and submitted by the contractor to the engineer in charge, as per requirement of the engineer in charge.
9. As the area of work is highly sensitive with respect to safety hazards, the contractor shall have to obtain proper work permits, shutdown clearance and other instructions from the engineer in charge prior to start of work.
10. Contractor shall be fully responsible for any sort of unsafe activity of their personnel and contractor shall produce medical fitness certificate for their personnel prior to start of job.
11. Contractor & the workmen employed by him will have to follow and observe all the safety & statutory rules, norms & requirements for electrical and C&I jobs.
12. The portion of the job planned to be completed within a particular time frame of a particular day should not be delayed beyond the stipulated time schedule.
13. Industrial waste & all types of scraps generated by the job are to be removed by the successful bidder to the dumping ground as directed by the engineer-in-charge.
14. The supervision & execution of all jobs and the safety of workmen will solely be the responsibility of the bidding agency. BPSCL will not be responsible in any way in case of any violation of safety or statutory rules, or any illegal / unworthy incident, major or minor, caused by the workmen employed by the successful bidder.
15. The jobs which are not mentioned in area of equipments or scope of work but deemed necessary to carry out the AMC jobs successfully must be treated in the bidder's scope.
16. **Inputs by BPSCL (Free supply):** Following materials / equipment shall be supplied by BPSCL (free supply) as per requirement of job :
 1. EOT crane, Mobile crane, Truck and Fork lift.
 2. Compressed air, electricity and water.
 3. All types of spares needed to be replaced during the repair work of various Electrical and C&I equipment and systems.
 4. Power and control cables, lugs, glands and lug-crimping tools etc.
 5. Welding electrodes (special type).
 6. Lubricants, nuts & bolts, Gaskets, O-ring.
17. **Guidelines regarding performance of work**
 - a. Contractor shall perform the subject work in accordance with the guidelines contained in the Tender Document / work order and the instructions of the Engineer-in-charge keeping in mind the latest technical specifications and IS codes of practice.
 - b. All incidental items of work not shown or specified but reasonably implied are in the scope of work at no extra cost to BPSCL.
 - c. In case of any doubt or contradiction, the decision of BPSCL will be final.
18. **Firmness of price**
 1. Contractor has to perform the job as per the availability of the shutdown and hence, there will be no consideration for idling of manpower.
 2. The quoted rate shall be inclusive of all costs to be incurred by contractor due to tools and tackles, labour, safety equipment, cleaning equipment, instruments, testing kits, calibrators and materials etc. to be supplied by him.
19. **Safety training and safety clearance:** All unskilled and skilled workers, supervisors and engineers deployed by contractor must undergo safety training conducted by Safety Engineering Department of BPSCL and obtain certificates from there, without which they will not be allowed to work.
20. **Supply and use of safety equipment:** All the safety appliances and personal protection equipment are to be provided by contractor to his person at his own cost. Contractor must use the safety equipment as per the requirement without fail.
21. **Preservation and custody:** Dismantled parts of an equipment will have to be kept in a clean container covered properly. Safety against theft and pilferage of all the equipment coming under the job-jurisdiction will be contractor's responsibility.

22. Tools, Tackles, Safety equipment, Instruments & Consumables to be supplied by the contractor

Following materials shall be supplied/ arranged by the contractor at his own cost: -

1. General as well as personal safety wears appliances and equipment to be used by the employees of the contractor.
2. All measuring and testing devices like fluke make multimeters, loop calibrators, megger (1kV& 5kV), High voltage tester, digital Vernier caliper and digital screw gauge etc. needed to carry out given work pertaining to Electrical & C&I section.
3. Electrician hand tools complete set (electrically insulated and tested).
4. Welding machine, welding cables, gas cutters and accessories like welding helmets and heat insulated hand gloves etc.
5. General Electrodes and Industrial gases.
6. Fitter hand tools complete set.
7. Grinding machine with grinding-wheels of different sizes.
8. Drilling machine with full set of drill bits and whole saw cutting blades of different sizes.
9. Soldering and brazing kits with consumables.
10. Hacksaw frame with blades.
11. Special tools like bearing-puller, Hydraulic crimping tool, gauge pointer puller, thread making tapes.
12. General type consumables such as cotton waste, marking cloth, PVC tape, Teflon tape, emery paper, kerosene, petrol, rustoline, on-line contact cleaner and petroleum jelly.
13. Cleaning and dust removing equipment like vacuum cleaner, air blowers, brushes (of different sizes), duster and other supporting accessories.
14. Stationary items for systematic and presentable record-keeping and carrying out routine work on daily basis.

23. Payment Terms :

97% of contract value will be paid on pro-rata basis duly certified by Engineer In-Charge and balance **03%** will be retained as security deposit which will be released after six (06) months of successful completion of work.

The expression satisfactory execution of the order shall mean fulfillment of all obligations arising out of and in connection with the Contract. In case of default in satisfactory execution of the order, the security deposit shall be forfeited.

Amount of penalty and/or Liquidated Damages imposed (if any) will be recovered from Bill / Security Deposit. If the amount of Bill / Security Deposit is not sufficient, the bidder will be required to pay the balance amount to BPSCL. If you do not pay the balance amount, the same shall be deducted from any sum or sums which may be due or may become due to you from BPSCL on any account whatsoever.

24. Penalty Clause :

- a. In case of short supply of site in-charge, Rs. 2500/- (Rs. 1500/- as wages & Rs. 1000/- as penalty) will be deducted per day.
- b. For supplying less manpower (*other than site in charge*) than the manpower mentioned above, a penalty of Rs. 200.00 per man day will be imposed in addition to deduction of BPSCL wage rate (as on bid opening date/RA date/Revised offer date (in case of negotiated prices) *whichever is later*) for respective category of manpower.
- c. If work is affected due to shortage of tools, tackles, consumables and safety equipment's Rs. 500/- will be charged as penalty.
- d. If breakdown occurs due to either poor workmanship or some sort of negligence in doing a job properly, a penalty of Rs.2,000/- per incident will be imposed.
- e. If you are found violating the guidelines and polluting the environment, you may be charged Rs. 1000/- per incident as penalty.
- f. If contractor fail to start the job as per the provision of the work order, a penalty of Rs. 5000/- per day will be imposed.

PRICE BID / RA FORMAT

Special Instruction –

1. In the event of L1 Bidder backing out prior to placement of order, the bidder shall be suspended for a period of 01 (one) year from the date of issue of suspension order.
2. **Price Basis: L1 bidder will be decided on mathematically lowest percentage.**

Sl. No.	Description of Job	Duration	Total Estimated Cost (excluding GST)	To be quoted by Bidder
1.	Annual Maintenance (Preventive, Running & Breakdown) and Repair of Electrical and C&I Equipments belonging to BPTG unit # 9 of Power Plant. (As per Scope of work)	12 Months	Rs. 85,07,484.00 (Rupees Eighty Five Lakh Seven Thousand Four Hundred Eighty Four Only) Excluding GST.	Online Price Bid (% above / % below with respect to Total Estimated Cost excluding GST) through URL : http://www.buyjunction.in

Note:

1. Goods & Service Tax: EXTRA as applicable
2. Please provide following details :

1.	GSTIN	
2.	Service Accounting Code No.	
3.	Applicable GST Rate	
	CGST (in %)	
	SGST (in %)	
	IGST (in %)	

Signature with seal of tenderer

Self Declaration

I.....son/daughter of Shri Aged..... years

resident ofPS.....District.....State.....do hereby declare that:

1. I am the authorized representative and signatory of M/s..... (name of the firm/company).

2. All document(s) submitted/ information provided by M/s..... alongwith the Bid Document submitted against Tender No..... dated for..... (Name of work) has/have been submitted under my knowledge and are authentic , genuine and true. No part of the document(s) / information is false, forged or fabricated.

3. The above declaration in respect of genuineness of the documents/ information has been made having full knowledge of provisions of bidding conditions which entitle the Owner/BPSCL to initiate action in the event of such declaration turning out to be a false.

4. I undertake to produce all documents in original for verification as and when asked for the same by BPSCL.

(Name & Signature of Authorized person):.....

Designation:.....

ANNEXURE - VII

CHECKLIST TO BE FILLED BY BIDDER EXCEPT REMARKS:- All documents which are required for fulfillment of the qualifying requirement/ Eligibility criteria are to be submitted along with tender in serial order (clearly mention page no.) and the tenderer must fill the checklist.

CHECKLIST OF DOCUMENT SUBMITTED BY TENDERER

Sl. No.	Document	Page No.	Remarks by BPSCL
1.	Work Order		
2.	Completion Certificate		
3.	Partnership/ Proprietor		
4.	EPF		
5.	ESIC		
6.	Latest ITR		
7.	* GSTIN		
8.	Turnover/ PL Sheet		
*If the agency is not under the preview of GST then please write Not applicable (N.A.).			
Total numbers of pages in Techno-commercial Bid			

Signature of tenderer with seal

(To be submitted on bidder's Letter Head)

Format for Acceptance of General Terms & Conditions, Commercial Terms and all other Terms of the Reverse Auction

We _____ (Contractor Name) having

PAN _____ & registered office at _____ (Address)

agree to all the Commercial, General & other Terms & Conditions listed in the

NIT No. _____ dated _____

for the work of _____

(Name of work) through Reverse Auction.

We confirm that we are in a position to do the job as per the scope of work given in NIT/RFQ. We agree to participate in the Reverse Auction and abide by the rules.

We nominate an executive, whose details are given below, to put the bids on our behalf.

The details of the person authorized to bid on our behalf is as follows.

Name & Designation :

E-mail ID :

Contact phone nos. :

Address :

(Signature & Seal)

Place :

Date :

Format for submitting last quoted prices*(To be submitted on Company Letter Head of the Bidder)***(To be sent within 30 mins of conclusion of the Reverse Auction)**

To,

mjunction services limited
 1st Floor, Tata Centre
 43, Jawaharlal Nehru Road
 Kolkata – 700 071

Fax: 033 – 2288 3279**Ref: Reverse Auction forfor Bokaro Power Supply Co. (P) Ltd. held on**

Reference above, we hereby confirm our Market wise last quoted prices in the Reverse Auction held on forfor Bokaro Power Supply Co. (P) Ltd., Bokaro Steel City.

Market No.	Last Quoted Percentage
	<i>To be submitted by the L-1 Bidder only after finalization of RA</i>

We also confirm that we will submit item wise price break-up, within two working days from the date of Reverse Auction.

Signature :

Name :

Designation :

Date :

Format for Bid Securing Declaration (In lieu of EMD)

Date: _____

Tender Enquiry no.: _____

To
The GM In-charge (Material Management)
Bokaro Power Supply Company (P) Ltd.
Hall No. – M 01
Old Administrative Building
ISPAT Bhawan, Bokaro Steel City

I/We*, the undersigned, declare that:

I/We* understand that, according to your conditions, bids must be supported by a Bid-Securing Declaration in lieu of Earnest Money Deposit.

I/We* understand that if I/We* withdraw or modify my / our* Bids during the period of validity, or if I am /We are* awarded the Contract and I/We* fail to honour my /our* offer by way of either withdrawing my / our* bid within the bid validity period without assigning any valid reason for the same or refusing to submit Performance Security / Performance Guarantee as per relevant Clause of the tender enquiry or refusing to accept the price quoted by me / us* in Online Price Bid or Reverse Auction within the period of validity of the same or refusing to sign the Contract Agreement, I/We* will be suspended for a period of one year from being eligible to submit Bids for all future Contracts.

I/We* understand that this Bid Securing Declaration shall cease to be valid if I am / We are* not the successful Bidder and I am / We are* not awarded the Order against the tender enquiry.

Signed _____ in the capacity of _____

Name: _____

Duly authorized to sign the Bid for and on behalf of: _____

Dated on _____ day of _____, _____

Corporate Seal (where applicable)

[Note: In case of a Joint Venture, the Bid Securing Declaration must be in the name of all partners to the Joint Venture that submits the Bid.]

* *Please delete as appropriate*

ENVIRONMENT, HEALTH AND SAFETY**EHS (Environment, Health and Safety) Clause for contracts where overall site is under BPSCL control****Your Responsibilities**

You shall during the entire term of contract undertake to perform the following obligations relating to environment, health and safety:-

1. Ensure that your workforce is not exposed to asbestos or asbestos containing atmosphere.
2. Take suitable control measures to ensure that the workers are protected from dust emission.
3. Monitor and ensure that the working area is free from any toxic gas, vapour and fume. Take adequate measures to reduce level of concentration below permissible limit. Exposure to any particular toxic gas, vapour or fume shall not exceed the maximum permissible limit prescribed in local regulation for any particular period of time. Ensure adequate ventilation and no immediate danger to life and health of personnel working at site.
4. Ensure that there is no flammable atmosphere and uncontrolled fire hazard in and around the work place. In case it is required to work in flammable atmosphere, implement safe working procedure and suitable control measures in order to work safely.
5. Ensure that the workers are protected from excessive noise and heat. Take adequate measures to reduce noise/heat level below the permissible limit.
6. Ensure safe access and egress in and around work place. Ensure proper maintenance of platforms, staircases, ramps etc. special care and all safety measures should be taken while working at height. Roof work and access to roofs must not be undertaken without prior permit.
7. All Personal Protection Equipments supplied by you should be of internationally recognized standards. All tools and tackles bought by you for use during the contract period should have proper and valid certification by competent authority.
8. All lifting equipment, tools and accessories provided by BPSCL should be maintained and returned by you in sound condition after the completion of contract period.
9. Ensure that the illumination in and around workplace and access areas are maintained properly. Make sure to switch off the light, fan and air conditioners after use.
10. You must ensure that all machinery and equipment are provided with earth fault circuit breakers at all times when using electrical leads. Use of electrical tape for temporary repair is prohibited.
11. Guards and covers for equipment/machineries are to be provided where ever necessary.
12. Gas cylinders shall be securely stored, transported, identified and used in line with legislation and EHS requirements.
13. Fire extinguishers and other fire fighting equipments provided in different locations should never be misused.
14. You must ensure optimum use of water with minimum wastage.
15. You shall ensure that the work area is kept clean, tidy, & free from debris. You are also fully responsible for protection of ground and underground from pollution.
16. Identify and highlight potential hazards / risks existing.
17. Ensure suitable corrective actions are implemented for identified issues.
18. Provide adequate emergency and first-aid facilities and it should be available in all shifts.
19. All your workers should be trained and communicated about the onsite emergency and evacuation plan.
20. All equipments and plant should be maintained in safe condition.
21. You and your personnel admitted to site must conduct themselves in an orderly and safe manner and conform at all times to the EHS Requirements. Fighting, engaging in horseplay, being under the influence of or possessing alcohol or drugs, gambling, soliciting, stealing, immoral or otherwise undesirable conduct is not permitted and shall not be tolerated. Upon knowledge of such conduct, BPSCL shall exclude the concerned person from the site and take all other appropriate measures as deemed necessary. BPSCL reserves the right to perform random drug and alcohol tests.
22. You shall immediately notify BPSCL of any environmental incident, injury, illness, near-miss, unsafe condition or practice and any loss or damage to property, including incidents related to the your personnel. An investigation report assessing the root cause, corrective action, and preventative action shall be submitted by to BPSCL within 24-hours of the incident's occurrence.