



ಭಾರತ್ ಹೆವಿ ಎಲೆಕ್ಟ್ರಿಕಲ್ಸ್ ಲಿಮಿಟೆಡ್
भारत हेवी इलेक्ट्रिकल्स लिमिटेड

BHARAT HEAVY ELECTRICAL LIMITED
(A GOVERNMENT OF INDIA UNDERTAKING)

ELECTRONICS DIVISION

P.B. NO.: 2606, MYSORE ROAD, BANGALORE-560 026.

NOTICE INVITING TENDER (NIT)

TWO PART OPEN TENDER

TENDER REF NO: CE/ES/2019-20/01/CSPGCL KORBA (W)/E&C/SJDB Date: 14/06/2019

Name of Work: Material Shifting, Dismantling and Erection and Commissioning for Renovation & Augmentation / Upgradation of existing C& I system for Unit-1 and Unit-2 at 4 x 210 MW (STAGE-I) CSPGCL Korba (West) HTPS at Korba, Chattisgarh.

Scope of Work:- **Material Handling and Dismantling of Existing Control & Instrumentation Equipment And Receipt of BHEL supplied Control and Instrumentation equipment from BHEL Stores, Verification/ Identification, Shifting to place of Installation, Erection(Including C&I and Impulse Piping Work), Laying of Cables, Termination of Cables, Loop Checking and Commissioning of Station Control & Instrumentation Package**

BHEL EDN GST NO: 29AAACB4146P1ZB

TENDER DOCUMENT TO BE DOWNLOADED FROM WEBSITES, www.bhel.com, www.eprocure.in

All corrigendum, addendum, amendments, time extensions, clarifications, etc. (if any) to the tender will be hosted on www.bhel.com, www.eprocure.in websites only. Bidders should regularly visit websites to keep themselves updated.

Total Number of pages including Cover page. 111

Bid Submission from : 14/06/2019, 13:00 Hrs.

Due Date and Time for Bid Opening : 28/06/2019, 13:30 Hrs.

IMPORTANT NOTE

BIDDER IS ADVISED TO CHECK AND ENSURE COMPLETION OF ALL PAGES OF TENDER DOCUMENT AND REPORT ANY DISCREPANCIES TIMELY FOR CORRECTIVE ACTION, TO THE ISSUING AUTHORITY, BEFORE THE BIDS ARE SUBMITTED. PRINTED COPY OF TENDER DOCUMENT COMPLETE IN ALL RESPECT MUST BE SUBMITTED BACK AS PART OF THE BID WITHOUT WHICH THE SAME IS LIABLE TO BE REJECTED BY BHEL

<p>Sealed offers under Two part bid system are invited from competent contractors, fulfilling qualifying requirements, with sound financial capacity and experience for undertaking the following work as per detailed schedule of work given in Tender Documents. No sale of Bid documents will be done. The Bidder shall download the Bid document from website: www.bhel.com, www.eprocure.in and shall return the duly filled in Tender Document after affixing Signatures and Seal on all pages.</p>	
TENDER REFERENCE NO & DATE	CE/ES/2019-20/01/CSPGCL KORBA(W)/E&C/SJDB Date: 14/06/2019
Scope of Work	Material Shifting and Dismantling of Existing Control & Instrumentation Equipment And Receipt of BHEL supplied Control and Instrumentation equipment from BHEL Stores, Verification/ Identification, Shifting to place of Installation, Erection(Including C&I and Impulse Piping Work), Laying of Cables, Termination of Cables, Loop Checking and Commissioning of Station Control & Instrumentation Package
Period of Work	Eighteen Months from the date of LOA/WO
Tender Type	Open Tender (Two Part Bid)
PLACE OF WORK	Unit-1 and Unit-2 at 4 X 210 MW STAGE-I TPS CSPGCL HTPS KORBA(W) KORBA CHATTISGARH PIN-495677
Earnest Money Deposit (EMD)	INR 4.77 Lakhs/-
Estimated Value of the Work	INR 238 Lakhs Exclusive of Taxes
DUE DATE & TIME OF TENDER	28/06/2019 (DD/MM/YYYY), 1300 Hrs.
Address for Submission of completed Tender	Submission of EMD including Tender Documents should be sent in original through R.P.A.D / Speed post / hand delivery / Courier, so as to reach the office of Offer inviting Authority: Mr. S Debbarman / Sr. Manager CE- EXTERNAL SERVICES 5TH FLOOR, NEW ENGINEERING BUILDING BHEL – ELECTRONICS DIVISION MYSORE ROAD, BANGALORE KARNATAKA. PIN – 560 026
Contact Details for Queries related to this tender.	Mr. S DEBBARMAN Sr. Manager/ Mobile: +919886128680 Mr. G.G Maurya DGM/ Mobile: +919449869597

Sealed Two-part offer is invited against the subject tender enquiry for the work of Erection and Commissioning of C&I Equipment. The following may be noted.

The Offer may be sent by post/courier to the following address to reach before the tender due date and time: **Mr. S DEBBARMAN / Sr. Manager,**
External services Department, NEB 5TH FLOOR,
BHARAT HEAVY ELECTRICALS LTD
Electronics Division,
P.B. No. 2606, Mysore Road,
Bangalore – 560026.
Phone: 080-26998949, 9886128680

- The offers received in time, will be opened at BHEL EDN P.B. No. 2606, Mysore Road,
1. Bangalore – 560026 on **28/06/2019** at 13:30 hours in the presence of those bidders who wish to be present. Offers received after tender closing date & time will not be considered.
 2. The Duration of Work shall be for a period of 18 (Eighteen) months including 12 Months of Pre-shutdown and Shutdown period for Two Units and AMC
 3. The validity of offer shall be for 120 days from the date of opening of the Technical bid.
 4. The requests for extension of due date will not be considered. The tender will be finalized shortly.

TABLE OF CONTENTS

Sl. No.	CONTENTS	PAGE
1	INDEX	4-5
2	SECTION-I TENDER NOTICE	6
3	SECTION II PROCEDURE FOR SUBMISSION OF TENDER	7-9
4	SECTION III PROJECT SYNOPSIS	10
5	SECTION-IV GENERAL INSTRUCTIONS TO BIDDERS	11-17
6	SECTION V GENERAL CONDITIONS OF THE CONTRACT	18-30
7	ANNEXURE- I AGREEMENT	31-34
8	ANNEXURE –II EFT FORMAT	35-36
9	ANNEXURE – III TERMS AND CONDITIONS OF REVERSE AUCTION	37-38
10	SECTION VI SPECIAL CONDITIONS OF CONTRACT PART-‘A’	39-54
11	SECTION VI SPECIAL CONDITIONS OF CONTRACT PART-‘B’	55-70
12	ANNEXURE I LIST OF T&P & ITEMS REQUIRED FOR WORK	71
13	ANNEXURE II CERTIFICATE OF DECLARATION FOR CONFIRMING KNOWLEDGE OF SITE CONDITIONS	72
14	ANNEXURE III NON DISCLOSURE AGREEMENT (MOU)	73
15	ANNEXURE IV NO DEVIATION CERTIFICATE FORMAT OF UNDERTAKING	74

16	ANNEXURE V CHECK LIST TO BE SUBMITTED ALONG WITH RA BILL	75
17	ANNEXURE A FINANCIAL VIABILITY	76
18	ANNEXURE B MONTHWISE MANPOWER DEPLOYMENT PLAN	77
19	ANNEXURE C MONTHWISE T&P DEPLOYMENT PLAN	78
20	ANNEXURE D ANALYSIS OF UNIT RATE QUOTED	79
21	ANNEXURE E DECLARATION SHEET	80
22	ANNEXURE F CHECKLIST AND SCHEDULE OF GENERAL PARTICULARS	81-82
23	ANNEXURE G BANK GUARANTEE FOR SECURITY DEPOSIT	83-86
24	ANNEXURE – H FORMAT FOR CLAIM FOR REFUND OF SECURITY DEPOSIT	87-88
25	ANNEXURE – I FORMAT OF DECLARATION TO BE GIVEN WITH FINAL BILL	89
26	SECTION-VII SPECIFICATION FOR HEALTH, SAFETY AND ENVIRONMENT (HSE)	90-94
27	ANNEXURE - I RELEVANT IS CODES FOR PERSONAL PROTECTION	95
28	ANNEXURE - II HEALTH, SAFETY & ENVIRONMENT (HSE) PLAN	96-97
29	ANNEXURE – III SAFETY NORMS OF CSPGCL LIMITED	98-101
30	PART-II PRICE BID	102-103
31	RATE SCHEDULE	104-111



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BHARAT HEAVY ELECTRICAL LIMITED
 (A GOVERNMENT OF INDIA UNDERTAKING)

ELECTRONICS DIVISION
 P.B. NO.: 2606, MYSORE ROAD, BANGALORE-560 026.

SECTION - I
TENDER NOTICE

01	Ref.: CE/ES/2019-20/01/CSPGCL KORBA-I RM/E&C/SJDB dated 14/06/2019
JOB	Material Shifting and Dismantling of Existing C&I equipments, Receipt of Instrumentation, Signal, Earthing and Power Cables from BHEL Stores, Verification/ Identification, Shifting to place of erection, Laying of Cables in Trays / Trenches / Ducts, Cable dressing, Fixing cable identification Tags, Fixing of Glands, Crimping of Lugs and Termination of both Ends of Cables as per Cable Schedule, UTP Cat-5E Cable laying and termination with RJ-45 Connectors, Preparation of Protocols, Scrap disposal to Customer designated place, Cable Reconciliation and Handing over of left out Cables to BHEL Stores for Station C&I package of Unit-1, 2 and Common Systems at 4X 210 MW CSPGCL HTPS KORBA(W) TPS KORBA CHATTISGARH PIN-495677
PROJECT SITE	Unit-1 and Unit-2 at 4 x 210 MW CSPGCL HTPS KORBA(W) TPS
TENDER TYPE	TWO PART TENDER
EMD	INR 4.77 Lakhs/-
WEB SITE FOR TENDER DETAILS	www.bhel.com & www.eprocure.in
DUE DATE & TIME FOR SUBMISSION	LATEST BY 13:00 Hrs. on 28.06.2019 OPENING AT 13:30 Hrs. on 28.06.2019
ESTIMATE	RUPEES 238 Lakhs
CONTACT PERSONS	Mr. S DEBBARMAN Sr. Manager/ Mobile: +919886128680 Mr. G.G Maurya DGM/ Mobile: +919449869597
ADDRESS FOR COMMUNICATION	Mr. S Debbarman / Sr. Manager CE- EXTERNAL SERVICES 5 TH FLOOR, NEW ENGINEERING BUILDING BHEL - ELECTRONICS DIVISION MYSORE ROAD, BANGALORE KARNATAKA. PIN - 560 026



SECTION – II PROCEDURE FOR SUBMISSION OF SEALED TENDERS

The Bidders must submit their tenders as required in Two parts in separate sealed covers prominently super scribed as Part-I **Technical bid and EMD** and Part II **Price bid** also indicating on each of the cover tender reference no., due date and time as mentioned in tender notice.

COVER-I: TECHNICAL BID

Complete set of tender document included in Part I of tender consisting of General conditions of Contract, “Technical specification & Special terms and condition” issued by BHEL. All schedules, data sheets and details called for in the specification shall also be submitted along with technical bid. All details / Data / Schedules including offer letter duly signed and stamped are to be submitted. The EMD amount also need to be submitted in this cover

COVER-II: PRICE BID

Bidders may please note that price bid is to be submitted only in original copy of Tender i.e. Part-II **Price Bid** issued by BHEL and no duplicate copy of same is required.

COVER III

These Two separate covers i.e. cover I & II shall together be kept in a Third envelope. (Cover-III) and this sealed cover shall be super scribed with Tender Reference Number, Due date, Time and submitted to Officer inviting tender as indicated in tender notice on or before due date as indicated.

Note: BHEL reserves the right to go for Reverse Auction (RA) instead of opening the sealed envelope price bid, submitted by the bidder. This will be decided after techno-commercial evaluation. All bidders have to give their acceptance for participation in RA. Non-acceptance to participate in RA may result in non-consideration of their bids, in case BHEL decides to go for RA. In case BHEL decides to go for Reverse Auction, only those bidders who have given their acceptance to participate in RA will be allowed to participate in the Reverse Auction. Those bidders who have given their acceptance to participate in Reverse Auction will have to necessarily submit “online sealed bid” in the Reverse Auction. Non-submission of “online sealed bid” by the bidder will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines in vogue. Information and General Terms and Conditions governing RA is provided in Annexure-III of General Conditions of Contract (GCC).



QUALIFYING REQUIREMENTS:

Bidders who wish to participate should fulfill following 'Qualifying Requirements':

1. Bidders should have executed similar nature of work(C&I works consisting of DCS/ DDCMIS/ Station C&I in one unit of at least 200 MW rating) in Power Plants Consisting of Boiler & Steam turbine controls, Balance of plant controls or related field instrumentation works in power projects / Industrial Projects.
2. Average annual financial turnover during the last 3 years ending 31st March 2019 should be not less than Rs 71.64 Lakhs
3. **Experience of having successfully executed similar works(C&I works consisting of DCS/ DDCMIS/ Station C&I in one unit of at least 200 MW rating) during last 7 years ending 31.05.2019 should be either of the following :**

- Three similar completed works each costing not less than an amount equal to RS.95.52 Lakhs for each work. Relevant supporting document shall be submitted

OR

- Two similar completed works each costing not less than an amount equal to Rs. 119.40 Lakhs. Relevant supporting document shall be submitted

OR

- One similar completed work costing not less than an amount equal to Rs.191.05 Lakhs. Relevant supporting document shall be submitted

4. **The Bidder Should Furnish Annual Report (Balance Sheet and Profit & Loss Account), IT Return for Last Three Years, Solvency certificate from Bank and Turnover in Lakhs in certified accounts for last Three Years for the above pre-qualification criteria**
5. **In case the job is under execution, the value of executed portion of the job shall at least correspond to the respective values specified above, even if the contract has not been completed or closed. The term "executed" means installation and commissioning upto Synchronization.**
6. **After satisfactory fulfillment of all the above criteria, offer shall be considered for further evaluation as per this NIT and all other terms of the tender**



Notes:

- I. The Tender Documents comprises of following-
 - a. **PART I –TECHICAL BID**
 - i. **Tender Notice, Procedure for submission of Tender**
 - ii. **Project Synopsis**
 - iii. **General Instruction to Bidder**
 - iv. **General Condition of Contract**
 - v. **Special Conditions of Contract Part-A & Part-B**
 - vi. **ANNEXURE-I to V, ANNEXURE-A to I**
 - vii. **SECTION –VII (HSE)**
 - b. **PART –II PRICE BID**
 - i. **Rate Schedule**
- II. The tender documents with complete details are hosted on BHEL’s web page www.bhel.com and www.eprocure.in
- III. Bidders intending to participate may download the tender document from the web site..
- IV. Tenders must be submitted to the undersigned latest by 13:00 Hrs. on XX.06.2019. Technical bids shall be opened at 13:30 Hrs. on XX.06.2019 at the office of the undersigned. Tenders not accompanied with full Earnest Money Deposit of **INR 477,629** /- by Demand Draft or SBI Collect or Bank Guarantee will not be considered. Tenders received after the due date and time shall be liable to be summarily rejected.
- V. No benefit shall be given to MSME/NSIC regarding waiver of EMD for this tender.
- VI. No Splitting of Work specified in this Tender is allowed.
- VII. All corrigenda, addenda, amendments and clarifications to this tender will be hosted in this web page and not in the newspaper. Bidders shall keep themselves updated with all such amendments.
- VIII. BHEL reserves the right to accept or reject any or all tenders without assigning any reason whatsoever.
- IX. BHEL takes no responsibility for any loss / delay of documents or correspondences sent by courier / post.
- X. Bids once submitted, shall not be returned.
- XI. Unsolicited rebate / discount shall NOT be accepted after bid opening.
- XII. In case BHEL decides not to go for Reverse Auction procedure for this tender enquiry, the Price bids and price impacts, if any, already submitted and available with BHEL shall be opened as per BHEL’s standard practice without seeking anymore price Impacts on account of BHEL not going for Reverse Auction. Hence please quote your best lowest price in first instant itself.**

SECTION-III PROJECT SYNOPSIS

CSPGCL HTPS at Korba, Chattisgarh intends to renovate and Modernize Control and Instrumentation Package of existing System for UNIT-1, 2 at TPS Stage-I.

BHEL is awarded the Design, Engineering, Manufacturing, Supply, Installation and Commissioning of DCS system for SG, TG , OFF Site(AHP, CWP and DMPT) and Unit and Station Electrical Control system for UNIT-1, 2 at TPS Stage-I.

Approach to Site

The power station is located in CSPGCL KORBA(W) HTPS Stage –I

Seismic Design Requirements

The site is at seismic zone III as per IS-1893 and all construction shall conform to IS-1893.

Location of Project Site

Project Site is located at the point marked “A” in map.

Location Details:

- Korba city is in Korba District in the state of Chattisgarh, in India,
- Latitude and Longitude of project location: North :22.35 Deg N , East :82.68 Deg E
- Nearest Railway station : Korba
- Nearest Major Town: Bilaspur , 50 km away from Project site.



Note: Bidders are advised to visit the project / site and collect adequate information regarding the local site conditions.



SECTION- IV GENERAL INSTRUCTIONS TO BIDDERS

1. This tender specification as a whole, furnishing all the details and other documents as required in the following pages, shall be duly signed and sent in a sealed cover (IN DUPLICATE) super-scribing the name of work, tender enquiry number as given in the tender notice.
2. The tender shall be addressed to: OFFICER INVITING TENDER AS INDICATED IN THE TENDER NOTICE.
3. Tenders submitted by post shall be sent as "**REGISTERED/ SPEED / COURIER POST**" and shall be posted with due allowance for any postal delay. The tenders received after the due dates are liable to be rejected. Offers received by Telegram/telex/ Fax/ E-mail/ Internet may be considered as per terms of NIT.
4. Tenders shall be opened at the time and date as specified in the tender notice in the presence of such of those bidders or their authorized representatives who may be present.
5. The bidders shall closely peruse all the clauses, specifications and drawings indicated in the Tender Documents before quoting. Should the bidder have any doubt about the meaning of any portion of the Tender Specifications or find discrepancies / omission in the Drawings or the tender documents issued are incomplete or shall require clarification on any of the technical aspect, scope of work etc., he shall at once contact the authority inviting the tender for clarification before the submission of the tender.
6. Before tendering, the bidders are advised to inspect the site of work and the environments and be acquainted with the actual working and other prevalent conditions, facilities available, position of material and labor. No claim will be entertained later on grounds of lack of knowledge.
7. Bidder must fill up all the schedules and furnish all the required information as per the instructions given in various sections of the tender specification. Each and every page of the Tender Specification must be SIGNED, STAMPED AND SUBMITTED ALONG WITH THE OFFER by the Bidder in token of complete acceptance thereof. The information furnished shall be complete by itself.
8. The bidder shall quote the rates in English Language and international numerals. These rates shall be entered in figures as well as in words. In case of difference in rates between words and figures THE LESSER OF THE TWO will be treated as valid rate. For the purpose of tender, the metric system of units shall be used.
9. All entries in the tender shall either be typed or be written in ink. Erasure and over writings are not permitted and may render such tenders liable to summary rejection. All cancellations and insertions shall be duly attested by the bidder.
10. QUALIFICATIONS OF BIDDERS: Only bidders who have previous experience in the work of this nature and description detailed in this tender specification are expected to quote



for this work. Offers from bidders who do not have proven and established experience in the field are not likely to be considered.

11. DATA TO BE ENCLOSED: Full information shall be given by the bidder in respect of the following. Non submission of this information may lead to rejection of the offer.

11.1 FINANCIAL STATUS: Financial viability as per pro forma enclosed at ANNEXURE-`A`

11.2 PREVIOUS EXPERIENCE: A certificate giving details, particulars (giving documentary evidence) of the various service rendered in progress for each similar works by the bidder indicating the particulars and value of each work, the site location, the duration, date of completion etc., need to be submitted.

11.3 ORGANISATION CHART: The organization pattern that are totally available with him and that will be employed by the bidder for this work in the form of month wise and category wise deployment plan duly indicating the number of Engineers, Supervisors, skilled and unskilled workers etc., as per pro forma enclosed at ANNEXURE-`B`.

11.4 An attested copy of the Power of Attorney, in case the tender is signed by an individual other than the sole Proprietor shall also be attached.

11.5 IN CASE OF AN INDIVIDUAL: His Full name experience, address and nature of business.

OR

IN CASE OF PARTNERSHIP FIRMS: The names of all the partners with addresses and their experience. A copy of the partnership deed/ instrument of Partnership duly certified by a Notary Public shall be enclosed.

OR

IN CASE OF COMPANIES: Date and place of registration including date of commencement certificate in case of public companies and the nature of business carried or by the Company. Certified copies of memorandum and Articles of Association are also to be furnished. Also indicate names, addresses and experience of the Directors.

11.7 A list of tools and tackles (including cranes, tractor-trailers, winches, Derricks, welding sets etc., wherever applicable) that the bidder is having and those that will be deployed on this job as per pro forma enclosed at ANNEXURE-`C`.

11.8 Analysis of unit rate quoted as per pro forma enclosed at ANNEXURE-`D`.

11.9 Declaration sheet as per Pro forma enclosed at ANNEXURE-`E`.

11.10 In additions to the above, the particulars required elsewhere in tender documents.

11.11 Checklist and schedule of general particulars duly filled in, signed and stamped as per ANNEXURE-`F`.



NOTE : In terms of clauses 11.1 to 11.11 above, all the data required to be enclosed with the tender need to be furnished neatly typed, signed and stamped in the given formats only (in the form of separate sheets) failing which the tender may be considered as incomplete and is liable for rejection. Documentary proofs wherever necessary also need to be enclosed.

12. EARNEST MONEY DEPOSIT: Every tender must be accompanied by the prescribed amount of Earnest Money Deposit in any one of the following forms.

NOTE: Cheques, Currency Notes, Money Orders or Postal Orders will not be accepted for EMD.

12.1 Cash (As permissible under Income Tax Act): The amount should be remitted by the party to the Cashier of Bharat Heavy Electricals Limited and cash receipt issued by him shall be enclosed along with the tender.

12.2 Pay Order / Demand Draft in favor of Bharat Heavy Electricals Limited, Bangalore/ SBI Collect Remittance.

SBI E Collect

- 1 Click on the link:
<https://www.onlinesbi.com/prelogin/collecthome.htm>
 - 2 Agree the terms and condition click on proceed
 - 3 Choose State of Corporate : **KARNATAKA**
 - 4 **Type of Corporate** : **INDUSTRY**
 - 5 **Select Industry** : **BHARAT HEAVY
ELECTRICALS**
- LTD**
- 6 Select category : **EMPLOYEES /
OTHERS**
 - 7 Fill the necessary information
 - 8 Make the payment through any net banking/Debit card
 - 9 Download Receipt keep it for reference.

12.3 Tenders received without Earnest Money in full in the manner prescribed above will not be considered.

12.4 The Earnest Money Deposit of the successful bidder will be retained towards part of Security Deposit.

12.5 In the case of unsuccessful bidders, the Earnest Money will be refunded normally within fifteen days of acceptance of award of work by the successful bidder.

12.6 BHEL reserves the right of forfeiture of Earnest Money deposit in case the successful bidder:

(a) After opening of Tender, revokes his tender within the validity period or increases his earlier quoted rates.



(b) Does not commence the work within the period as per LOI/Contract. In case the LOI/Contract is silent in this regard then within 15 days after award of Contract.

12.7 EMD shall not carry any interest.

12.8 Bidders, who so ever desires, may deposit one time Earnest Money Deposit of Rs. **477,629/-** in cash (As permissible under Income Tax Act) /DD/SBI Collect/Bank Guarantee OR **Rs 238,814/-** by DD/SBI Collect and balance amount by way of Bank Guarantee (Refer ANNEXURE-G and Page No. 86) from scheduled banks valid for 6 Months)

No benefit shall be given to bidders with MSME/NSIC Certification regarding waiver of EMD for this tender

13. AUTHORISATION AND ATTESTATION: Tenders shall be signed by persons duly authorized / empowered to do so. Certified copies of such authority and relevant documents shall be submitted along with the tenders.

14. VALIDITY OF OFFER: THE OFFER SHALL BE KEPT OPEN FOR ACCEPTANCE FOR A MINIMUM PERIOD OF THREE MONTHS FROM THE DATE OF OPENING OF TENDERS. In case Bharat Heavy Electricals Limited calls for negotiations, such negotiations shall not amount to cancellation or withdrawal of the original offer which shall be binding on the bidders.

15. EXECUTION OF CONTRACT: The successful bidder's responsibility under this Contract commences from the date of issue of the Letter of Intent by Bharat Heavy Electricals Limited. The successful bidder shall be required to execute an agreement in the prescribed form as per SECTION-V , ANNEXURE- 'I' with the BHEL within a reasonable time after the acceptance of his tender and in any case before submitting the first bill for payment.

16. SECURITY DEPOSIT: Upon acceptance of tender, the successful bidder must deposit the required amount of security deposit within the time specified in the Letter of Intent for satisfactory completion of work.

- 1. The total amount of security deposit shall be 5 % of the contract value + GST**
2. Upon acceptance of tender, the Successful Bidder must deposit at least 50% of the amount of Security deposit (**Contract Value + GST**) within the time specified in the Letter of Award or Work Order before commencement of work.
3. The successful bidder has options to pay the Security Deposit (SD) amount by pay order/ demand draft / Securities like NSC /Bank Guarantee (Refer ANNEXURE-G) / Fixed Deposit Receipt/SBI Collect etc. as per BHEL's policy before commencement of work.



4. Security deposit can also be recovered at the rate of 10% progressively from the running bills. However in such cases, at least 50% of the security deposit should be deposited before the start of the work and balance 50 % will be recovered from the Running Bills.
5. The security deposit shall not carry any interest.
6. If the value of work done at any time exceeds the contract value, the amount of Security Deposit will be correspondingly enhanced and the additional security deposit will be immediately deposited by the successful bidder or recovered from payments due to the contractor from Monthly bills(RAB).
7. **SD REFUND:** 50% of the Security Deposit amount will be returned after 30 days from the date of submission of final bill on certification by BHEL Site Engineer & on receipt of required declaration forms for release of SD. Balance 50% will be refunded after settlement of final bill and production of “No Due/No Demand Certificate” from BHEL Site In-Charge, CSPGCL KORBA HTPS STAGE-I R&M.

NOTE: Acceptance of Security Deposit will be subject to hypothecation or endorsement on the documents in favor of BHEL. However, BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith.

16.4 Security deposit shall not be refunded to the Bidder except in accordance with the terms of the Contract.

16.5 The validity of the Bank Guarantee furnished towards Security Deposit shall be up to the period of completion of work as stipulated in the Letter of Intent + claim period of 6 months and the same will be kept valid by proper renewal till the satisfactory completion of the Guarantee Period.

16.6 If the value of the work done at any time exceeds the accepted agreement value, the Security Deposit shall be correspondingly enhanced and the extra Security Deposit shall be immediately deposited by the Bidder or recovered from payments due to him.

16.7 Failure to deposit the Security Deposit within the stipulated time, may lead to forfeiture of Earnest Money Deposit and Cancellation of the award of work.

16.8 If any part of Security Deposit of the Bidder is held in the form of approved securities, it shall be kept transferred in the name of Bharat Heavy Electricals Limited, in such a manner that the same can be realized fully without referring to the Bidder. BHEL shall not be responsible for any depreciation in the value of the Security while in BHEL's custody or for any loss of interest thereon.

16.9 BHEL reserves the right of forfeiture of Security Deposit in addition to other claims and penalties in the event of the Bidder's failure to fulfill any of the Contractual obligations



or in the event of termination of Contract as per terms and conditions of Contract. BHEL reserves the right to set off the Security Deposit, against any claims of any other Contracts with BHEL.

16.10 RETURN OF SECURITY DEPOSIT : If the Bidder fully performs and completes the work in all respects to the entire satisfaction of BHEL and presents an absolute "No Demand Certificate" in the prescribed form and returns properties belonging to BHEL taken, borrowed or hired by him for carrying out the said works, half the amount of Security Deposit will be released to the Bidder after deducting all costs, expenses and other amounts that are to be paid to BHEL under this or other Contracts entered into with the Bidder.

It may be noted that in no case the Security Deposit shall be refunded / released prior to passing of final bill. Balance half of the amount of Security Deposit will be released only after settlement of final bill and production of "No Due/No Demand Certificate" from BHEL Site In-Charge

NOTE: All the BGs are to be submitted as per BHEL pro forma.

17. **No interest** shall be payable by BHEL on Earnest Money Deposit, Security Deposit or on any moneys due to the Bidder.

18. **REJECTION OF TENDER AND OTHER CONDITIONS:**

18.1 The acceptance of Tender will rest with BHEL which does not bind itself to accept the lowest tender or any tender and reserves to itself full rights for the following without assigning any reasons whatsoever.

- (a) To reject any or all of the tenders.
- (b) To split up the work among two or more Bidders.
- (c) To award the work in part.
- (d) In either of the contingencies stated in (b) and (c) above to modify the time for completion suitably.

18.2 Conditional and un-witnessed tenders, tenders containing absurd or unworkable rates and amounts, tenders which are incomplete or otherwise considered defective and tenders not in accordance with the tender conditions, specifications, etc., are liable to be rejected.

18.3 If a bidder expires after the submission of his tender or after the acceptance of his tender, BHEL may at its discretion, cancel such tender. If a partner of a firm expires after the submission of the tender or after the acceptance of the tender, BHEL may cancel such tender at its discretion unless the firm retains its character.

18.4 BHEL will not be bound by any Power of Attorney granted by the bidder or by changes in the composition of the firm made subsequent to the execution of the Contract. BHEL may, however, recognize such Power of Attorney and changes after obtaining proper legal advice, the cost of which will be chargeable to the Bidder concerned.



18.5 If the bidder deliberately gives wrong information in his tender, BHEL reserves the right to reject such tender at any stage or to cancel the Contract, if awarded and forfeit the Earnest Money/ Security Deposit/ any other moneys due.

18.6 Canvassing in any form in connection with the tender is strictly prohibited and the tenders submitted by the Bidder who resorts to canvassing are liable to be rejected.

18.7 Should a bidder or Bidder or in the case of a firm or Company of Bidders/ one or more of its Partners/ shareholders / Directors have a relation or relations employed in BHEL, the authority inviting tender shall be informed to the fact along with the offer, failing this BHEL may, at its sole discretion reject the tender or cancel the Contract and forfeit the Earnest Money/ Security Deposit.

18.8 The **successful bidder should not sub-Contract** the part or complete work detailed in the tender specification without written permission from BHEL. The bidder is solely responsible to BHEL for the work awarded to him.

18.9 **NO DEVIATIONS** to the tender conditions will normally be accepted. However, if the bidder insists for certain deviations to the conditions, financial implication thereof shall be loaded to the quoted price for evaluating the bidder's offer.



SECTION - V GENERAL CONDITIONS OF THE CONTRACT (GCC)

19. The following terms and expressions shall have the meaning hereby assigned to them except where the context otherwise requires.

19.1 BHEL (or B.H.E Limited.) shall mean Bharat Heavy Electricals Limited, a Company registered under the Indian Companies Act, 1956, with its Registered Office at BHEL HOUSE, SIRI FORT, NEW DELHI-110049 or its authorized officers or its Engineer or other employees authorized to deal with any matters with which these persons are concerned, on its behalf.

19.2 'GENERAL MANAGER' shall mean the Officer in Administrative charge of the Contracting Unit of BHEL.

19.3 'ENGINEER' or 'ENGINEER-IN-CHARGE' shall mean Engineer deputed by BHEL. The terms include Deputy General Manager, Construction Manager, Resident Manager, Site Engineer, Resident Engineer and Assistant Site Engineer of BHEL at the site as well as the officers in charge at BHEL Electronics Division, Bangalore.

19.4 'SITE' shall mean the place or places at which the plants/ equipment are to be erected and services are to be performed as per the specifications of this Tender.

19.5 'CLIENTS OF BHEL' or 'CUSTOMER' shall mean the project authorities to whom BHEL is supplying the equipment – i.e., CSPGCL LIMITED.

19.6 'BIDDER' shall mean the individual, firm or company who enters into Contract with BHEL and shall include their executors, administrators, successors and permitted assigns.

19.7 'CONTRACT' or 'CONTRACT DOCUMENT' shall mean and include the agreement, the work order, the accepted appendices of rates, Schedules 8 of Quantities, if any, General Conditions of Contract, Special Conditions of Contract, Instructions to Bidders, the drawings, the technical specifications, the special specifications, if any. The tender terms stipulated by the bidder in the tender documents or subsequent letters shall not form part of the Contract unless specifically accepted in writing by BHEL in the Letter of Intent and incorporated in the Agreement.

19.8 Acceptance letter issued by BHEL: Any conditions or terms stipulated by the bidder in the tender documents or subsequent letters shall not form part of the Contract unless specifically accepted in writing by BHEL in the Letter of Intent and incorporated in the Agreement.

19.9 'GENERAL CONDITIONS OF CONTRACT (GCC)' shall mean the 'Instructions to Bidders' and 'General Conditions of Contract' pertaining to the work detailed.



19.10 **'TENDER SPECIFICATIONS'** shall mean the Special Conditions, Technical Specifications, appendices, Site information and drawings pertaining to the work for which the bidders are required to submit their offer. Individual Specifications Number will be assigned to each tender specifications.

19.11 **'TENDER DOCUMENTS'** shall mean the General Conditions of Contract (19.8) and Tender Specifications (19.9).

19.12 **'LETTER OF INTENT'** shall mean the intimation by a letter / telegram / telex / fax to the bidder that the tender has been accepted in accordance with provisions contained in the letter. The responsibility of the Bidder commences from the date of issue of this letter and all the terms and conditions of Contract are applicable from this date.

19.13 **'COMPLETION TIME'** shall mean the period by date specified in the Letter of Intent or date mutually agreed upon for handing over the erected equipment/ plant which are found acceptable by the Engineer being of required standard and conforming to the specifications of the Contract.

19.14 **'PLANT'** shall mean and connote the entire assembly of the plant and equipment covered by the Contract.

19.15 **'EQUIPMENT'** shall mean all equipment, machineries, materials, structural, electrical and other components of the plant covered by the Contract.

19.16 **'TESTS'** shall mean and include such test or tests to be carried out by the Bidder as are prescribed in the Contract or considered necessary by BHEL in order to ascertain the quality, workmanship, performance and efficiency of the Contracted work or part thereof.

19.16 **'APPROVED', 'DIRECTED' or 'INSTRUCTED'** shall mean approved, directed or instructed by BHEL.

19.17 **'WORK' or 'CONTRACT WORK'** shall mean and include supply of all categories of labor, specified consumables, tools and tackles required for complete and satisfactory site transportation, handling, stacking, storing, erecting, testing and commissioning of the equipment to the entire satisfaction of BHEL.

19.18 **'SINGULAR' and 'PLURAL' etc.:** Words carrying singular number shall also include plural and vice versa where the context so requires. Words importing masculine gender shall be taken to include the feminine gender and words importing persons shall include any Company or association or Body of Individuals, whether incorporated or not.

19.19 **'HEADINGS'** The headings in these General Conditions are solely for the purpose of facilitating reference and shall not be deemed to be part thereof or be taken into consideration in the interpretation or construction thereof or the Contract.

19.20 **'MONTH'** shall mean calendar month.



19.21 "WRITING" shall include any manuscript, type written or printed statement under the signature or seal as the case may be.

1. For this Procurement, Public Procurement (Preference to Make in India), order 2017 dated 15.06.2017 & 28.05.2018 and subsequent Orders issued by the respective Nodal Ministry shall be applicable even if issued after issue of this NIT before finalization of Contract/WO against this NIT.

20. LAW GOVERNING THE CONTRACT AND COURT JURISDICTION:

The Contract shall be governed by the Law for the time being in force in the Republic of India. The Civil Court at Bangalore, having ordinary Original Civil Jurisdiction shall alone have exclusive jurisdiction in regard to all claims in respect of this Contract.

21. ISSUE OF NOTICE : The Bidder shall furnish to the Engineer, the name, designation and address of his authorized agent and all complaints, notices, communications and references shall be deemed to have been duly given to the Bidder, if delivered to the Bidder or his authorized agent or left at or posted to the address either of the Bidder or his authorized agent and shall be deemed to have been so given in the case of posting on the day on which they would have reached such address in the ordinary course of post or at which they were so delivered or left.

22. USE OF LAND: No land belonging to BHEL or its Customer under temporary possession of BHEL shall be occupied by the Bidder without the written permission of BHEL.

23. COMMENCEMENT AND COMPLETION OF WORK:

23.1 The Bidder shall commence the work within the time indicated in the Letter of Intent and shall proceed with the same with due expedition without delay.

23.2 If the successful bidder fails to commence the work within the stipulated time, BHEL, at its sole discretion, will have the right to cancel the Contract. His Earnest Money and/ or Security Deposit will stand forfeited without any further reference to him without prejudice to any and all of BHEL's other rights and remedies in this regard.

23.3 All the works shall be carried out under the direction and to the satisfaction of BHEL.

23.4 The transported equipment erected /constructed plant or work performed under the Contract, as the case may be, shall be taken over when it has been completed in all respects and/or satisfactorily put into operation at site.



24. MEASUREMENT OF WORK AND MODE OF PAYMENT:

24.1 All payments due to the Bidder shall be made through Electronic Fund Transfer (EFT). For this the Bidder has to submit the EFT form duly signed by their banker (EFT Format is enclosed).

24.2 For progress/ running bill payments, the Bidder shall present detailed measurement sheets in **TRIPLICATE** duly indicating all relevant details based on technical documents and connected drawings for the work done during the month/ period under different categories in line with terms of payment as per Letter of Intent. The basis of arriving at the quantities/ weights shall be the relevant documents and drawings released by BHEL. These measurement sheets shall be prepared jointly with Engineer and signed by both the parties.

24.3 These measurement sheets will be checked by the Engineer and quantities and percentages eligible for payment under different groups shall be decided by him. The abstract of quantities and percentages so arrived at based on the terms of payment shall be entered in the **Measurement Book and signed by both the parties.**

24.4 Based on the above quantities, Bidder shall prepare the bills in the prescribed pro-forma and work out the financial value. These will be entered in the Measurement Book and signed by both the parties. Payment shall be made by BHEL after effecting the recoveries due from the Bidder.

24.5 All recoveries due from the Bidder for the month / period shall be effected in full from corresponding running bills unless specific approval from competent authority is obtained to the contrary.

24.6 Measurement shall be restricted to that quantity for which it is required to ascertain the financial liability of BHEL under this Contract.

24.7 Measurement shall be taken jointly by persons duly authorized by BHEL and the Bidder.

24.8 The Bidder shall bear the expenditure involved, if any, in making the measurements and testing of materials to be used/ used in the work. The Bidder shall, without extra cost to BHEL, provide all the assistance with appliances and other things necessary for measurement.

24.9 If, at any time due to any reason whatsoever, it becomes necessary to re-measure the work done, in full or in part, the expenses towards such re-measurement shall be borne by the Bidder.

24.10 Passing of bills covered by such measurements does not amount to acceptance by BHEL of the completion of the work measured. Any left out work has to be completed by the Bidder, as directed.

24.11 Final measurement bill shall be prepared in the pro-forma prescribed for the purpose, based on the certificate issued by the Engineer that the entire work as



stipulated in the tender specifications has been completed in all respects to the entire satisfaction of BHEL. The Bidder shall give unqualified 'No Claim' and 'No Demand' certificates. All the tools and tackles loaned to him should be returned in condition satisfactory to BHEL. The abstract of final quantities and financial values shall also be entered in the Measurement Book and signed by both the parties. The final bill shall be paid within a reasonable time after completion of the work.

25. RIGHTS OF BHEL

BHEL reserves to itself the following rights in respect of this Contract without entitling the Bidder to any compensation.

25.1 To get the work done through another agency at the risk and cost of the Bidder, in the event of poor progress or the Bidder's inability to progress the work for completion as stipulated in the Contract, poor quality of work, persistent disregard of instructions of BHEL, assignment, transfer, subletting of the Contracted work without written permission of BHEL, non-fulfillment of any Contractual obligations etc. and to claim / recover compensation for such losses from the Bidder including BHEL's supervision charges and overheads from Security Deposit/ other dues.

25.2 To withdraw any portion of work and / or to restrict / alter quantum of work as indicated in the Contract during the progress of work and get it done through another agency and/ or by the departmental labor to suit BHEL's commitments to its Customer or in case BHEL decides to advance the completion due to other emergent reasons / BHEL's obligation to its Customer.

25.3 To terminate the Contract after due notice and forfeit the Security Deposit and recover the loss sustained in getting the balance work done through other agencies in addition to liquidated damages in the event of:

- (a) Bidder's continued poor progress.
- (b) Withdrawal from or abandonment of the work before completion of the work.
- (c) Corrupt act of the Bidder.
- (d) Insolvency of the Bidder.
- (e) Persistent disregard of the instructions of BHEL.
- (f) Assignment, transfer, subletting of the Contract work without BHEL's written permission.
- (g) Non-fulfillment of any Contractual obligations.

25.4 To recover any moneys due from the Bidder from out of any moneys due to the Bidder under this or any other Contract or from the Security Deposit.

25.5 To claim compensation for losses sustained including BHEL's supervision charges and overheads in case of termination of Contract and to levy liquidated damages for delay in completion of work, at the rate of 1/2% of the Contract value per week of delay or part thereof subject to a ceiling of 10% of the Contract value.



25.6 To determine the Bidder to restrict the quantum of work and pay for the portion of work done in case BHEL's Contract with its Customer is terminated for any reason.

25.7 To effect recoveries from any amounts due to the Bidder under this or any other Contract or in any other form the moneys which BHEL is forced to pay to anybody due to Bidder's failure to fulfill any of his obligations.

25.8 To restrict or increase the quantity and nature of work to suit site requirements, since the tender specification is based on preliminary documents and quantities furnished therein are indicative and approximate and the rates quoted shall not be subject to revision.

25.9 To deploy BHEL's skilled and semiskilled workmen in case of emergency / poor progress/ deficiency in skill on the part of the employees of the Bidder and to recover the expenditure on account of the same from the moneys due to the Bidder.

25.10 While every endeavor will be made by BHEL to this end, BHEL cannot guarantee uninterrupted work due to conditions beyond its control. The Bidder will not be entitled to any compensation/ extra payment on this account.

25.11 In the event of any dispute of technical nature, the decision of BHEL shall be final and binding on the Bidder.

26. RESPONSIBILITIES OF BIDDER IN RESPECT OF LOCAL LAWS, EMPLOYMENT OF WORKERS, ETC.

The following are the responsibilities of the Bidder in respect of observance of local laws, employment of personnel, payment of taxes etc.:

26.1 As far as possible, unskilled workers shall be engaged from the local areas in which the work is being executed.

26.2 The Bidder at all times during the continuance of this Contract, shall in all his dealings with the local labor for the time being employed on or in connection with the work, have due regard to all local festivals, religious and other customs. **The minimum wages, Bonus payment, Leave payment as per local procedures to be adopted strictly by the bidder. The P.F even for temporary labors to be paid strictly and document like payment voucher to be produced every month.**

26.3 The Bidder shall comply with all State and Central Laws, Statutory Rules, Regulations, etc., such as The payment of wages Act, The Minimum Wages Act, The workmen's Compensation Act, The Employer's Liability Act, The industrial Disputes Act, The Employees' Provident Fund Act, Employees' State Insurance Scheme, the Contract Labor (Regulations and Abolition Act, 1970) and other Acts, Rules and Regulations for labor as may be enacted by the Government during the tenure of the Contract and having force or jurisdiction at site. The Bidder shall give to the local Governing Body, Police and other concerned Authorities all such notice as may be required under law.



26.4 The Bidder, in the event of his engaging 20 or more workmen, will obtain independent license under the Contract Labor (Regulations and Abolition Act, 1970) from the concerned authorities based on the certificate (Form-V) issued by the principal employer/ Customer.

26.5 The Bidder shall pay all taxes, fees, license charges, deposits, duties, tolls, royalty, commissions or other charges which may be levied on account of any of his operations connected with this Contract. In case BHEL is forced to make any such payment, BHEL shall recover the same from the Bidder either from moneys due to him or otherwise as deemed fit.

26.6. The Bidder will also meet all expenses in connection with his welder's qualification/ requalification tests etc. (Not applicable).

26.7 The Bidder shall be responsible for the provision of health and sanitary arrangements more particularly described in the Contract Labor (Regulations and Abolition Act, 1970) and safety precautions as may be required for safe and satisfactory execution of the Contract.

26.8 The Bidder shall be responsible for proper accommodation including adequate medical facilities for the personnel employed by him.

26.9 The Bidder shall be responsible for the proper behavior and observance of all regulations by the staff employed by him.

26.10 The Bidder shall ensure that no damage is caused to any person / property of other parties working at site. If any such damage is caused, it shall be the responsibility of the Bidder to make good the losses and compensate them.

26.11 All the properties/ equipment/ components of BHEL/ its Customer loaned with or without deposit, to the Bidder shall remain the properties of BHEL/ its Customer. The Bidder shall use such properties for the purpose of execution of this Contract. All such properties/ equipment/ components shall be taken to be in good condition unless notified to the contrary by the Bidder within 48 hours. The Bidder shall return them in good condition as and when required by BHEL/ its Customer. In case of non-return, loss, damage, repairs etc., the cost thereof, as may be fixed by the Engineer, will be recovered from the Bidder.

26.12 It shall not be obligatory on the part of BHEL to supply any tools and tackles or materials other than those specifically agreed to be given by BHEL. However, depending upon availability / possibility, BHEL/ its Customer's equipment and other materials may be made available to the Bidder on payment of hire charges as fixed by them, subject to the conditions laid down by BHEL/ its Customer from time to time. Unless paid in advance, such hire and other charges shall be recovered from out of dues to the Bidder or security deposit in one installment.



26.13 The Bidder shall fully indemnify and keep indemnified BHEL/ its Customer against all claims of whatever nature arising during the course of execution of this Contract.

26.14 In case the Bidder is required to undertake any work outside the scope of this Contract, the amount payable shall be as may be mutually agreed upon.

26.15 Any delay in completion of works or non-achievement of periodical targets, due to reasons attributable to the Bidder, will have to be compensated by the Bidder either by increased manpower and resources or by working extra hours or more than one shift at no extra cost to BHEL.

26.16 The Bidder shall execute the work under the conditions usual to such power plant construction and in conjunction with numerous other operations at site. The Bidder and his personnel shall cooperate and coordinate with other agencies at project site and proceed in a manner that shall help in the progress of work at site as a whole.

26.17 The Bidder will be directly responsible for payment of wages to his workmen. A pay-roll sheet giving details of all payments made to the workmen duly signed by the Bidder's representative should be furnished to BHEL.

26.18 In case of any class of work for which there is no specification laid down in the Contract, such work shall be carried out in accordance with the instructions and requirements of the Engineer.

26.19 No levy, payment or charges made or imposed shall be impeached by reason of any clerical error or by reason of any mistake in the amount levied, demanded or charged.

26.20 No idle labor charges will be admissible in the event of any stoppage of work resulting in the Bidder's workmen being rendered idle due to any reason at any time.

26.21 The Bidder shall take all reasonable care to protect the materials and the work till such time the plant / equipment has been taken over by BHEL / its Customer.

26.22 Bidder shall not stop work or abandon the site for whatsoever reason or dispute, excepting for force majeure conditions. All problems / disputes shall be separately discussed and settled without affecting the progress of work.

Stoppage or abandonment of work, other than under force majeure conditions, shall be treated as breach of work of Contract and dealt with accordingly.

26.23 The Bidder shall keep the area of work clean and shall remove the debris etc. while executing day-to-day work. Upon completion of work, the Bidder shall remove from the vicinity of work, all scrap, packing materials, rubbish, unused and other materials and deposit them in places specified by the Engineer. The Bidder will also demolish all the hutments, sheds, offices, etc. constructed and used by him and shall clean the debris. In the event of his failure to do so, the same will be arranged to be done by the Engineer and the expenses recovered from the Bidder.



26.24 The Bidder shall execute the work in the most substantial and workman like manner in the stipulated time. Accuracy of work and timely execution shall be the essence of this Contract. The Bidder shall be responsible to ensure that the quality, assembly and workmanship conform to the dimensions and clearance given in the drawings and/ or as per the instructions of the Engineer.

26.25 The Bidder shall furnish **daily labor deployment report** indicating the classification and number of workmen engaged, date wise and category wise. Besides, the Bidder shall also furnish daily progress reports on work as required by the Engineer.

27. RESPONSIBILITIES OF BIDDER IN RESPECT OF SAFETY OF MEN, EQUIPMENT, MATERIAL AND ENVIRONMENT.

27.1 All safety rules and codes applied by BHEL and its Customer at site shall be observed by the Bidder and his workmen without exception. The Bidder shall be responsible for the safety of the equipment / material and work to be performed by him and shall maintain all lights, fencing, guards, signs etc. or other protections necessary for the purpose. Bidder shall also take such additional precautions as may be indicated from time to time by the Engineer, with a view to prevent pilferage, accidents, fire hazards etc. Suitable number of clerical staff, watch and ward, store keepers to take care of equipment, materials, construction tools and tackles shall be posted at site by the Bidder till the completion of the work under this Contract.

The Bidder shall arrange for such safety devices as are necessary for this type of work and carry out the requisite site tests of handling equipment, lifting tools, tackles etc. as per usual standards and practices.

27.2 The Bidder shall provide to its work force and ensure the use of the following personal protective equipment as found necessary and as directed by the authorized BHEL officials.

- (a) Safety Helmets conforming to IS-2925
- (b) Safety Belts conforming to IS-3521
- (c) Safety shoes conforming to IS-1989
- (d) Eye & Face Protection devices conforming to IS-8520 and IS-8940
- (e) Hand & body protection devices conforming to IS-2573, IS-6994, IS-8807 & IS-8519.

27.3 All tools, tackles, lifting appliances, material handling equipment, scaffolds, cradles, safety nets, ladders, equipment etc. used by the Bidder shall be of safe design and construction. These shall be tested and certificate of fitness 17 obtained before putting them to use and from time to time as instructed by authorized BHEL official who shall have the right to ban the use of any item.

27.4 All electrical equipment, connections and wiring for construction power, it's distribution and use shall conform to the requirements of Indian Electricity Act and Rules. Only electricians licensed by the appropriate statutory authority shall be employed by the Bidder to carry out all types of electrical works. All electrical



appliances including portable electric tools used by Bidder shall have safe plugging system to source of power and be appropriately earthed.

27.5 The Bidder shall not use any hand lamp energized by electric power with supply voltage of more than 24 volts. For work in confined spaces, lighting shall be arranged with power source of not more than 24 volts.

27.6 Where it becomes necessary to provide and / or store petroleum products, explosives, chemicals and liquid or gaseous fuel or any other substance that may cause fire or explosion, the Bidder shall be responsible for carrying out such provision and/or storage in accordance with the rules and regulations laid down in the relevant Government Acts, such as Petroleum Act, Explosives Act, petroleum and Carbides of Calcium Manual of the Chief Controller of Explosives, Government of India etc. The Bidder in all such matters shall also take prior approval of the authorized BHEL official at the site.

27.7 The Bidder shall arrange at his cost (wherever not specified) appropriate illumination at all work spots for safe working, when natural daylight may not be adequate for clear visibility.

27.8 In case of a fatal or disabling injury / accident to any person at construction sites due to lapses by the Bidder, the victim and / or his / her dependents shall be compensated by the Bidder as per statutory requirements. However, if considered necessary, BHEL shall have the right to impose appropriate financial penalty on the Bidder and recover the same from payments due to the Bidder for suitably compensating the victim and / or his / her dependents. Before imposing any such penalty, appropriate enquiry shall be held by BHEL giving opportunity to the Bidder to present his case.

27.9 In case of any damage to property due to lapses by the Bidder, BHEL shall have the right to recover the cost of such damages from the payments due to the Bidder after holding an appropriate enquiry.

27.10 In case of any delay in the completion of a job due to mishaps attributable to lapses by the Bidder, BHEL shall have the right to recover cost of such delay from the payments due to the Bidder, after notifying the Bidder suitably and giving him opportunity to present his case.

27.11 If the Bidder fails to improve the standards of safety in its operation to the satisfaction of BHEL after being given reasonable opportunity to do so and / or if the Bidder fails to take appropriate safety precautions or to provide necessary safety devices and equipment or to carry out instructions regarding safety issued by the authorized BHEL official, BHEL shall have the right to take the corrective steps at the risk and cost of the Bidder after giving a notice of not less than seven days indicating the steps that would be taken by BHEL.

27.12 The Bidder shall submit report of all accidents, fires, property damage and dangerous occurrences to the authorized BHEL official immediately after such occurrence, but in any case not later than 12 hours of the occurrence. Such reports shall



be furnished in the manner prescribed by BHEL. In addition, periodic reports on safety shall also be submitted by Bidder to the authorized BHEL official from time to time as prescribed.

27.13 During the course of construction, alteration or repairs scrap lumbars with protruding nails, sharp edges etc., and all other debris including combustible scrap shall be kept cleared from working areas, passage ways and stairs in and around site.

27.14 Cylinders shall be moved by tilting and rolling them on their bottom edges. They shall not be intentionally dropped, struck or permitted to strike each other violently. When cylinders are transported by powered vehicles, they shall be secured in a vertical position.

27.16 All the Bidder's supervisory personnel and sufficient number of workers shall be trained for firefighting and shall be assigned specific fire protection duties. Enough number of such trained personnel must be available during the tenure of the Contract.

27.17 Bidder shall provide enough fire protecting equipment of the types and numbers at his office, stores, erection site, other temporary structures, labor colony area etc. Access to such fire protection equipment shall be easy and kept open at all times. Compliance of the above requirement under fire protection shall in no way relieve the Bidder of any of his responsibility and liabilities to fire accident occurring. In the event fire safety measures are not to BHEL's satisfaction, BHEL shall have option to provide the same and recover the cost plus incidentals from Bidder's bills and / or impose penalty as deemed fit by the Engineer.

27.18 Before commencing the work, the Bidder shall appoint /nominate a responsible officer to supervise implementation of all safety measures and liaison with his counterpart of BHEL.

27.19 If safety record of the Bidder in execution of the awarded job is to the satisfaction of Safety Department of BHEL, issue of an appropriate certificate to recognize the safety performance of the Bidder may be considered by BHEL after completion of the job.

28.0 CONSEQUENCES OF CANCELLATION

28.1 Whenever BHEL exercises its authority to terminate the Contract / withdraw a portion of work under clause 25, the work may be got completed by any other means at the Bidder's risk and cost provided that in the event of the cost of completion (as certified by the Engineer which shall be final and binding on the Bidder) being less than the Contract value, the advantage shall accrue to BHEL. If the cost of completion exceeds the moneys due to the Bidder under the Contract, the Bidder shall either pay the excess amount demanded by BHEL or the same shall be recovered from the Bidder. This will be in addition to the forfeiture of Security Deposit and recovery of liquidated damages as per relevant clauses.



28.2 In case BHEL completes the work under the provisions of this clause, the cost of such completion to be taken into account for determining the excess cost to be charged to the Bidder shall consist of cost of materials purchased and / or labor provided by BHEL with an addition of such percentage to cover supervision and establishment charges as may be decided by BHEL.

29. INSURANCE

29.1 BHEL / its Customer shall arrange for insuring the materials / property of BHEL / its Customer covering the risks during transit, storage, erection and commissioning.

29.2 **It shall be the sole responsibility of the Bidder to insure his workmen against risks of accidents and injury while at work as required by the relevant Rules and to pay compensation**, if any, to them as per Workmen's Compensation Act. The Bidder shall also insure his staff against accidents. The work will be carried out in a protected area and all the Rules and Regulations of BHEL / its client in the Project Area which are in force from time to time will be followed by the Bidder.

29.3 If due to negligence and/or non-observance of safety and other precautions, any accident / injury occur to any other persons/ public, the Bidder shall pay necessary compensation and other expenses, if so decided by the appropriate authority.

29.4 The Bidder will take necessary precautions and due care to protect the material, while in his custody from any damage/ loss till the same is taken over by BHEL or Customer. For lodging / processing of insurance claim the Bidder will submit necessary documents. BHEL will reserve the right to recover the loss from the Bidder, in case the damage / loss is due to carelessness / negligence on the part of the Bidder. In case of any theft of material under Bidder's custody, matter shall be reported to police by the Bidder immediately and copy of FIR and subsequently police investigation report shall be submitted to BHEL for taking up with insurance.

29.5 If due to negligence/ carelessness on the part of the Bidder, any material/ equipment gets damaged, the Bidder shall submit necessary documents for lodging insurance claims as required by BHEL Engineer. BHEL shall however reserves the right to recover deductible franchise and also unsettled portion of insurance claim amount from the Bidder.

29.6 If due to negligence/ carelessness on the part of the Bidder, any surrounding properties also get damaged, the Bidder shall submit necessary documents for lodging insurance claims as required by BHEL Engineer. BHEL shall however reserves the right to recover deductible franchise and to unsettled portion of insurance claim amount from the Bidder.

29.7 The Bidder may note that BHEL T&Ps / IMTEs are not insured. The Bidder will take necessary precautions and due care to protect the same while in his custody from any damage/ loss till the same is handed over back to BHEL.

In case the damage / loss is due to carelessness/ negligence on the part of the Bidder, the Bidder is liable to get them repair/ replaced immediately and in case of his failure



to do so within a reasonable time , BHEL will reserve the right to recover the loss from the Bidder.

30.0 STRIKES AND LOCKOUTS

30.1 The Bidder will be solely responsible for all disputes and other issues connected with his workmen. In the event of Bidder's workmen resorting to strike or the Bidder resorting to lockout and if the strike or lockout so declared is not settled within a period of one month, BHEL shall have the right to get the erection work executed by employing its own men or through other agencies or both. The cost incurred by BHEL in this regard shall be recovered from the Bidder.

30.2 For any purpose whatsoever, the employees of the Bidder shall not be deemed to be in the employment of BHEL

31.0 FORCE MAJEURE

31.1 The following shall amount to force majeure conditions. Acts of God, Act of any Government, War, Sabotage, Riots, Civil Commotion, Police Action, Revolution, Flood, Fire, Cyclone, Earthquake and Epidemic and other similar causes over which the Bidder has no control.

31.2 If the Bidder suffers delay in the due execution of the Contract, due to delays caused by force majeure conditions, as defined above, the agreed time for completion of the work covered by this Contract shall be extended by a period of time equal to the period of delay, provided that on the occurrence of any such contingency, the Bidder immediately reports to BHEL in writing the causes for the delay but the Bidder shall not be eligible for any compensation on this account.

32. GUARANTEE

Even though the work will be carried out under the supervision of the Engineer, the Bidder will be responsible for the quality of the workmanship and shall guarantee the work done for a period of twelve months from the date of completion of work as certified by the Engineer, and shall rectify, free of cost to BHEL, all defects arising out of faulty erection during the guarantee period starting from the date of completion of rectification. In the event of the Bidder failing to repair the defective works within the time specified by the Engineer, BHEL may proceed to undertake the repairs of such defective works at the Bidder's risk and cost, without prejudice to any other rights and recover the same from out of any moneys payable to the Bidder or by other legal means.

33.0 ARBITRATION:

All disputes between the parties to the Contract arising out of or in relation to the Contract, other than those for which the decision of the Engineer or any other person is by the Contract expressed to be final and conclusive, shall after written notice by either party to the Contract to the other party, be referred to sole arbitration of the General Manager or his nominee. The arbitration shall be conducted in accordance with the provisions of the Arbitration and Reconciliation Act, 1996. The parties to the Contract understand and agree that it will be no objection that the General Manager or the person nominated as Arbitrator had earlier in his official capacity to deal directly or indirectly with the matters to which the Contract relates or



that in the course of his official duties had expressed views on all or any of the matters in dispute or difference. The award of the Arbitrator shall be final and binding on the parties to this Contract. In the event of the Arbitrator dying, neglecting or refusing to act or resigning or being unable to act for any reason or his award being set aside by the Court for any reason, it shall be lawful for the General Manager or his successor, as the case may be, either to act himself as the Arbitrator or to appoint another Arbitrator in place of the outgoing Arbitrator in the manner aforesaid. The Arbitrator may, from time to time, with the consent of both the parties to the Contract, enlarge the time for making the award. Work under the Contract shall be continued during the arbitration proceedings. The venue of the arbitration shall be the place from which the Contract is issued or such other place as the Arbitrator at his discretion may determine.

- For this Procurement, Public Procurement (Preference to Make in India), order 2017 dated 15.06.2017 & 28.05.2018 and subsequent Orders issued by the respective Nodal Ministry shall be applicable even if issued after issue of this NIT before finalization of Contract/WO against this NIT.

ANNEXURE - I

AGREEMENT

Agreement No. and Date _____

Name of the Work _____

Name of the Bidder with

_____ Full address _____

Value of work awarded

_____ Letter of Intent No. and Date

_____ Scheduled Commencement Date

_____ Scheduled Completion Date

THIS AGREEMENT MADE THIS _____ DAY OF _____ 2019 between BHARAT HEAVY ELECTRICALS LIMITED (A Government of India Enterprise) a Company incorporated under the Companies Act, 1956, having its Registered Office at BHEL House, Siri Fort New Delhi- 110049 (herein after called BHEL) of the ONE PART.

AND



M/S _____

_____ (hereinafter called the 'Bidder') of the SECOND PART.

WHEREAS M/s _____state That they have acquired and possess extensive experience in the field of _____

And whereas in response to an Invitation to Tender No. _____ issued by BHEL for execution of _____ the Bidder submitted their offer No. _____dated _____And whereas BHEL has accepted the offer of the Bidder on terms and conditions specified in the Letter of Intent No.-- _____dated _____read with the references cited therein.

THIS AGREEMENT WITNESSES AND it is hereby agreed by and between the parties As follows:

1. That the Bidder shall execute the work of _____and more particularly described in Tender Specification No _____including Drawings and Specifications (hereinafter called the said works) in accordance with and subject to terms and conditions contained in these presents, instructions to Bidders, General Conditions of Contract, Special Conditions, Annexures, Letter of Intent dated _____and such other instructions, Drawings, Specifications given to him from time to time by BHEL.
2. The Bidder is required to furnish to BHEL Security deposit in the form of cash/ approved securities/ Bank Guarantee valid upto _____ for a sum of Rs. _____ towards satisfactory performance and completion of the Contract.
3. The Bidder has furnished a Bank Guarantee bearing no. _____dated _____ --for a sum of Rs. _____executed by _____ in favor of BHEL towards Security Deposit valid up to _____

OR

The Bidder has furnished to BHEL an initial Security Deposit of Rs. _____ in the form of cash / approved Securities/ B.G No. _____ dated _____ for Rs. _____executed by _____ in favor of BHEL valid upto _____ and has agreed for recovery of the balance security deposit by BHEL @ 10% of the value of work done from each running bill till the entire Security Deposit is recovered.

OR

The Bidder has furnished to BHEL an initial Security Deposit of Rs. _____ (Rs. _____ vide Bank draft No. _____dated _____and by adjusting EMD of Rs. _____submitted vide Bank draft No. SBI Collect No. _____ dated. _____) and has agreed for recovery of balance Security Deposit by BHEL @ 10% of the value of work done from each running bill till the entire security deposit is recovered.

4. The Bidder hereby agrees to extend the validity of the Bank Guarantee for such further period or periods as may be required by BHEL and if the Bidder fails to obtain such extension(s) from



the Bank, the Bidder, shall pay forthwith or accept recovery of Rs.----- from the bills in one installment and the Bidder further agrees that failure to extend the validity of the Bank Guarantee or failure to pay the aforesaid amount in the manner specified above shall constitute breach of Contract. In addition to above, BHEL shall be entitled to take such action as deemed fit and proper for recovering the said sum of Rs. -----.

OR

In case the Bidder furnishes the bank guarantee at a later date the Bidder hereby agrees to extend the validity of bank guarantee for such further period or periods as may be required by BHEL and if the Bidder fails to obtain such extension(s) from the bank, the Bidder shall pay forthwith or accept recovery of the amount of bank guarantee given in lieu of security deposit from the bills in one installment and the Bidder further agrees that failure to extend the validity of bank guarantee or failure to pay the aforesaid amount in the manner specified above shall constitute breach of Contract. In addition to above, BHEL shall be entitled to take such action as deemed fit and proper for recovering the said sum.

5. That in consideration of the payments to be made to the Bidder by BHEL in accordance with this Agreement the Bidder hereby covenants and undertakes with BHEL that they shall execute, construct, Complete the works in conformity, in all respects, with the terms and conditions specified in this Agreement and the documents governing the same.

6. That the Bidder shall be deemed to have carefully examined this Agreement and the documents governing the same and also to have satisfied himself as to the nature and character of the Works to be executed by him.

7. That the Bidder shall carry out and complete the execution of the said works to the entire satisfaction of the Engineer or such other officer authorized by BHEL, within the agreed time schedule, the time of completion being the essence of the Contract.

8. That BHEL shall, after proper scrutiny of the bills submitted by the Bidder, pay to him during the progress of the said works such sum as determined by BHEL in accordance with this Agreement.

9. That this Agreement shall be deemed to have come into force from ----- the date on which the letter of intent has been issued to the Bidder.

10. That whenever under this Contract or otherwise, any sum of money shall be recoverable from or payable by the Bidder, the same may be deducted in the manner as set out in the General Conditions of Contract or other conditions governing this Agreement.

11. That all charges on account of Octroy, Terminal and other taxes including sales tax or other duties on material obtained for execution of the said works shall be borne and paid by the Bidder.

12. That BHEL shall be entitled to deduct from the Bidder's running bills or otherwise Income Tax under Section 194 (C) of the Income Tax Act, 1961.

13. That BHEL shall be further entitled to recover from the running bills of the Bidder or otherwise such sum as may be determined by BHEL from time to time in respect of



consumables supplied by BHEL, hire charges for tools and plants issued (Where applicable) and any other dues owed by the Bidder.

14. That it is hereby agreed by and between the parties that non- exercise, forbearance or omission of any of the powers conferred on BHEL and /or any of its authorities will not in any manner constitute waiver of the conditions hereto contained in these presents and the liability of the Bidder with respect to compensation payable to BHEL or Bidder's obligations shall remain unaffected.

15. It is clearly understood by and between the parties that in the event of any conflict between the Letter of Intent and other documents governing this Agreement, the provisions in the Letter of Intent shall prevail.

16. The following documents

1. Invitation to Tender No-----

And the documents specified therein.

2. Bidder's Offer No-----

Dated-----.

3. _____

4. _____

5. _____

6. Letter of Intent No _____

dated _____.

7. _____

Shall also form part of and govern this Agreement

IN WITNESS HEREOF, the parties hereto have respectively set their signatures in the Presence of

WITNESS

(to be signed by a person holding a valid Power of Attorney)
(BIDDER)

1.

2.

WITNESS

1.

2.

(For and on behalf of BHEL)

Note: Bank Guarantee period shall be for the period of Contract plus claim period of SIX months.



ANNEXURE II
Electronic Funds Transfer (EFT) OR
Pay Link Direct Credit Form

Please Fill up the form in **CAPITAL LETTERS** only.

TYPE OF REQUEST(Tick one): _____ CREATE _____ CHANGE

BHEL Vendor / Supplier Code:	<input type="text"/>
Company Name :	<input type="text"/>
Permanent Account Number(PAN):	<input type="text"/>
Address	<input type="text"/>
	<input type="text"/>

City: <input type="text"/>	PINCODE <input type="text"/>	STATE <input type="text"/>
----------------------------	------------------------------	----------------------------

Contact Person(s)	<input type="text"/>
Telephone No:	<input type="text"/>
Fax No:	<input type="text"/>
e-mail id:	<input type="text"/>

1 Bank Name:	<input type="text"/>
2 Bank Address:	<input type="text"/>
	<input type="text"/>
3 Bank Telephone No:	<input type="text"/>
4 Bank Account No:	<input type="text"/>
5 Account Type: Savings/Cash Credit	<input type="text"/>
6 9 Digit Code Number of Bank and branch appearing on MICR cheque issued by Bank	<input type="text"/>
7 Bank swift Code(applicable for EFT only)	<input type="text"/>
	<input type="text"/>
8 Bank IFSC code(applicable for RTGS)	<input type="text"/>
9 Bank IFSC code(applicable for NEFT)	<input type="text"/>

- A I hereby certify that the particulars given above are true, correct and complete and that I, as a representative for the above named Company, hereby authorize BHEL, Bangalore to electronically deposit payments to the designated bank account.
- B If the transaction is delayed or not effected at all for reasons of incomplete or incorrect Information, I would not hold BHEL / transferring Bank responsible.
- C This authority remains in full force until BHEL, Bangalore receives written notification Requesting a change or cancellation.
- D I have read the contents of the covering letter and agree to discharge the responsibility Expected of me as a participant under ECS / EFT.

Date:

Authorized Signatory:

Designation:

Telephone NO. with STD Code

Company Seal



External Services
BHEL-EDN, BANGALORE

Bank Certificate

We certify that _____ has an Account No _____ with us and we confirm that the bank details given above are correct as per our records.

Date: _____ (.....)
Place: _____ Signature

Please return completed form along with a blank cancelled cheque or photocopy thereof to:
Bharat Heavy Electricals Ltd,
Attn:
Electronics Division, Mysore Road,
BANGALORE - 560 026



Annexure-III

Terms & Conditions of Reverse Auction

Against this enquiry, BHEL may resort to “REVERSE AUCTION PROCEDURE” i.e., ON LINE BIDDING (THROUGH A SERVICE PROVIDER). The philosophy followed for reverse auction shall be English Reverse (No ties).

1. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
2. Those bidders who have given their acceptance for Reverse Auction (quoted against this tender enquiry) will have to necessarily submit “online sealed bid” in the Reverse Auction. Non-submission of “online sealed bid” by the bidder for any of the eligible items for which techno-commercially qualified, will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines in vogue.
3. BHEL will engage the services of a service provider who will provide all necessary training and assistance before commencement of on line bidding on internet.
4. In case of reverse auction, BHEL will inform the bidders the details of Service Provider to enable them to contact & get trained.
5. Business rules like event date, time, bid decrement, extension etc. also will be communicated through service provider for compliance.
6. Bidders have to fax the Compliance form (That shall be furnished later) before start of Reverse auction. Without this, the bidder will not be eligible to participate in the event.
7. In line with the NIT terms, BHEL will provide the calculation sheet (e.g., EXCEL sheet) which will help to arrive at “Total Cost to BHEL” like Packing & forwarding charges, Taxes and Duties, Freight charges, Insurance, Service Tax for Services and loading factors (for non-compliance to BHEL standard Commercial terms & conditions) for each of the bidder to enable them to fill-in the price and keep it ready for keying in during the Auction.
8. In case of any deviation w.r.t terms and conditions mentioned in this N.I.T, found after opening of Part-I Bid, loading criteria shall be framed and shall be informed to the bidder before Price Bid opening.
9. Reverse auction will be conducted on scheduled date & time.
10. At the end of Reverse Auction event, the lowest bidder value will be known on auction portal.



11. The lowest bidder has to fax/e-mail the duly signed and filled-in prescribed format for price breakup including that of line items, if required, as provided on case-to-case basis to Service provider within two working days of Auction without fail.
- 12. In case BHEL decides not to go for Reverse Auction procedure for this tender enquiry, the Price bids and price impacts, if any, already submitted and available with BHEL shall be opened as per BHEL's standard practice without seeking anymore price Impacts on account of BHEL not going for Reverse Auction. Hence please quote your best lowest price in first instant itself.**
13. Bidders shall be required to read the "Terms and Conditions" section of the auctions site of Service provider, using the Login IDs and passwords given to them by the service provider before reverse auction event. Bidders should acquaint themselves of the "Business Rules of Reverse Auction", which will be communicated before the Reverse Auction.
14. If the Bidder or any of his representatives are found to be involved in Price manipulation/ cartel formation of any kind, directly or indirectly by communicating with other bidders, action *as per extant BHEL guidelines*, shall be initiated by BHEL and the results of the RA scrapped/ aborted.
15. The Bidder shall not divulge either his Bids or any other exclusive details of BHEL to any other party.
16. In case BHEL decides to go for reverse auction, the H1 bidder (whose quote is highest in online sealed bid) may not be allowed to participate in further RA process.



SECTION-VI
SPECIAL CONDITIONS OF CONTRACT (SCC)

PART-A

INDEX

Clause	Description
--------	-------------

- General
- Consumables
- Tools & Plants/ IMTE's
- Supervisory staff & workmen
- Material handling and storage
- Progress reporting
- Cable Schedule & documents
- GST
- Extra work
- Price variation
- Rate schedule
- Instructions to Bidder
- Liquidated Damages (LD)
- Security Deposit
- Others



- **GENERAL**
- The Bidder shall submit a certificate to BHEL declaring that the Bidder has complied with all the statutory provisions including and pertaining to Provident fund and ESI during the execution period of the contract and provide relevant documents as proof.
- In addition to the local laws and regulations the bidder shall also comply with the Minimum Wages Act. The Payment of Wages Act and the rules made there under in respect of labour currently employed on or connected with the contract shall be followed.
- A declaration indicating that there is no deviation from the conditions mentioned in tender documents should be given in the format as per (Annexure- 3)
- The work will be taken up immediately and the work shall be completed as per the BHEL's requirement.
- The Bidders shall get themselves familiar with the site and nature of job in advance where the work is to be executed before quoting their rates.
- Apart from Service tax any other govt. taxes as applicable from time to time shall be borne by the Bidder.
- The Bidder shall arrange to obtain valid gate passes for their workmen and equipment from the concerned authorities. The bidder shall furnish documents such as Address proof, police verification certificate etc. for their workmen as needed by CSPGCL. **PF/ESI registration for workmen is essential for CSPGCL KORBA TPS gate pass formalities.**
- No man / material/ equipment not covered by valid gate pass shall be permitted within the power station area and no material / equipment shall be permitted to be taken out of the power station unless authorized by concerned authority. The Bidder shall be held fully responsible for any delays / losses / damages that may result consequent on any lapses that may occur on the part of his employees in this regard.
- Carrying inflammable materials / striking of matches, lighters or smoking or other acts which may cause fire hazards in the area of power station such as Hydrogen plants, Hydrogen storage area, fuel oil plant / storage areas, BHEL stores etc. is strictly prohibited.
- The Bidder shall compulsorily provide personal protective equipment to his employees & in the event of him not providing then it will be provided by BHEL at Bidder's risk and cost of the same will be recovered from the bill/s.



- All necessary personal safety equipment as considered adequate by the BHEL site Engineer should be made available at Bidder's cost for use by the persons employed at the site and be maintained in a condition suitable for immediate use. The Bidder should also give sufficient safety training and instructions to his workmen and ensure proper use of safety equipment by those concerned.
- The Bidder shall obtain permission from appropriate authority / license if required under any applicable law regulations for engaging labors for execution of the work and observe all terms and conditions of the said authorization / license.
- The Bidder shall comply with the provision of all applicable labour legislation / Acts pertaining to payment of wages and shall pay his workers' wages not less than minimum as applicable in CSPGCL KORBA HTPS STAGE-I plant premises.
- The Bidder has to make his own arrangement for T&Ps like Hydraulic Crane (Hydra), Hydraulic Hand Trolley, Slings, Hydraulic jacks, Chain Pulley blocks, D-shackles etc., whenever required as per instructions of BHEL Site Engineers. Apart from this, the bidder shall also arrange safety appliances and consumables required for the job.
- The work shall be executed as per the direction and to the satisfaction of BHEL site Engineer. Decision of BHEL site Engineer will be firm and binding on all matters.
- Any person below the age of 18 years shall not be deployed for the work.
- The Bidder shall be required to pay full wages to the workers as per prevailing rules.
- The Bidder has to comply with the safety requirement of CSPGCL KORBA HTPS STAGE-I plant premises.
- **The Bidder shall possess independent PF code & ESI code. Bidder has to observe all formalities as per PF & ESI act.**
- The Bidder shall be liable to comply with provisions under the various labour legislations. Besides other obligations under the labor legislations he is required to ensure payment of minimum wages as per Minimum Wages Act, grant of leaves, as per the notification of Chief Labour Commissioner, Provident Fund under the Provident Fund Act, compensation under the Workmen Compensation Act, Retrenchment compensation etc. The Bidder shall indemnify M/S BHEL and its Customer M/S CSPGCL against all claims, damages and compensation on account of his failure to comply with statutory provisions.



- If the Contractor or his workmen shall break, deface injure or destroy any part of a building, road, fenced enclosures, water pipes, cables, drains, electric or telephone posts or wires, trees, stored components or any other property or to any part of erected equipment etc., the contractor shall make the same good at his cost or in default the Engineer may cause the same to be made good by other workmen / agency or by other means and deduct the expense (of which the BHEL Engineer's decision is final) from any sum that may be then or at any time thereafter become due to the Contractor or from his security deposit or any other money due.
- The Bidder shall not subcontract, transfer or assign any part or full work of this award without prior written permission from BHEL.
- If any dispute or difference of any kind whatsoever shall arise between BHEL and the Bidder arising out of the contract or with respect to its interpretation, whether during or after its completion or whether before or after its termination, abandonment or breach of the contract, it shall be referred to the sole arbitration of the Unit head of BHEL or any Officer duly authorized by him in this behalf and the decision of the Arbitrator shall be final and binding on the parties.
- As per CSPGCL KORBA STPS STAGE-I plant statutory requirement, the Bidder and their workers shall follow all safety rules while working so that there should not be any accident, which may cause loss of life and damage to Customer's property. **Bidder shall also take insurance cover for workmen compensation for the workers employed by him at his own cost.**
- No complaints from Bidder's workmen with regard to nature of work entrusted or place of work will be entertained.
- The Bidder or his authorized representative shall be available at BHEL Site Office daily for receiving necessary instructions from Engineer-In-Charge, BHEL and to carry out the work accordingly.
- The Bidder is required to carry out the work in controlled conditions so as to contain air pollution, water/land contamination within relevant legislative and statutory requirements.

Note: **The term 'Customer' means, CSPGCL KORBA TPS.**

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- .1. The intent of this specification is to provide services for execution of project according to most modern and proven techniques and codes. The omission of specific reference to any method, equipment or material necessary for the proper and efficient services towards installation of the plant shall not relieve the Bidder of the responsibility of providing such services/ facilities to complete the work or portion of work awarded to him. The quoted/ accepted rates/ price shall deem to be inclusive of all such contingencies.
- .2. The Bidder shall carry out the work in accordance with standard practices/ Codes/ instructions/cable schedules/ documents/ specification/ supplied by BHEL from time to time or BHEL Site Engineers' Instructions.
- .3. The work shall conform to dimensions and tolerances given in various drawings and documents that will be provided during erection. If any portion of work is found to be defective in workmanship, not conforming to drawings or other stipulations, the Bidder shall dismantle and redo the work duly replacing the defective materials at his cost failing which the job will be carried out by BHEL by engaging other agencies/ departmentally and recoveries will be effected from Bidder's bills towards expenditure incurred including BHEL's usual overhead charges.
- .4. Following shall be the responsibility of Bidder and have to be provided within finally accepted rates/ prices:
 - a) Provision of all types of labor, supervisors, Engineers, watch and ward as required, tools & tackles, calibrated inspection, measuring and test equipment as specified and otherwise required for the work and consumable for erection, testing and commissioning including material handling.
 - b) The watch and ward as required for safe guarding materials after withdrawal from BHEL stores.
 - c) Proper out-turn as per BHEL plan and commitment.
 - d) Completion of work as per BHEL Schedule.
 - e) Good quality and accurate workmanship for proper performances of equipment.
 - f) Repair, rectification and modification in electrical circuits/wiring involving removal of connections & redoing as per modification.
 - g) Preservation / Conservation of all components during storage at Bidder's place / erection.
 - h) Housekeeping: The Bidder is supposed to carry out housekeeping of work area on regular basis to keep the work place neat and tidy. The scrap generated during execution activities is to be dumped at designated area as decided by BHEL / its Customer. Compliance report on above shall be submitted by the Bidder to BHEL.



In case Bidder fails to do so, BHEL shall get the same done at the risk and cost of the Bidder.

- .5. BHEL- is ISO 9001-2000, ISO 14001-1996, OHSAS 18001-1999 certified company. Quality of work to Customer's satisfaction and system requirements is the essence of these certifications.

The Bidder in all respects will organize his work, systems, environment, process control documentation, tools, plant, inspection, measuring and testing equipment's etc. as per instructions of BHEL engineer.

The Bidder shall also comply with applicable legislation and regulations (State / Central)with regards to Health, safety and environmental aspects for minimizing risk arising from occupational health, safety hazards, controlling pollution and wastage and he will be responsible for Health, Safety & Environment management at site for the construction activities to be carried out by them.

- .6. Bidder shall ensure availability of the following

- a) Medicines for normal ailments
- b) First Aid Kit
- c) Sufficient no. of firefighting equipment's in the area of working, i.e. Calibration Lab, and pre fabrication area.

- .7. The Bidder shall comply with following towards Social Accountability

- a) If any child labor were found to have been engaged, the Bidder shall be levied with expenses of bearing his education expenditure which will include stipend to substantiate appropriate education or employ any other member of family enabling to bear the child education expenditure.
- b) The Bidder shall not engage Forced/Bonded Labor and shall abide by abolition of Bonded Labor System (Abolition) Act, 1976.
- c) The Bidder shall maintain Health & safety requirement as stipulated in the Contract and Contract Labor (Regulation& Abolition) Act, 1970.
- d) The Bidder shall abide by UN convention w.r.t Human Rights and shall be liable for Discrimination/Corporal punishment for failure in meeting with relevant requirements.
- e) The Bidder shall abide by the requirement of Contract Labor (Regulation & Abolition) Act, 1970 for working hours.
- f) The Bidder shall abide by the statutory requirement of Minimum Wages Act1948, payment of Wages Act 1936.
- g) The Bidder shall arrange potable drinking water to its employees & workers.



- h) Please refer to clause 26 of GCC. Bidders to ascertain the prevailing local labor rates. The benefits to be considered for Contract labor is indicative only and given as guidance to bidders. The format for wage slip & employment card is for information of bidders.

• **CONSUMABLES**

- .1. The Bidder shall provide within finally accepted rates, all consumables and materials like M.S Welding Rods, Cutting Gas, Teflon Tape, insulation tape, PVC sealing compound, sleeves of all sizes, **Nylon cable ties of all required sizes**, gaskets, cable lugs (up to 2.5 sq.mm cable size) Cable Identification Metal tag plates, cable sleeves, ferrules, anchor bolts and fasteners M 12 size and below, saddles, jumpers etc. **The quoted rate for the work is deemed to have been inclusive of all the above consumables / materials.**
- .2. It shall be the responsibility of the Bidder to plan the activities and store sufficient quantity of erection materials & consumables. Non availability of any materials or equivalent suggested by BHEL cannot be considered as reason for not attaining the required progress or for additional claim.
- .3. BHEL reserves the right to reject the use of any consumable if it is not found to be of the required standard / make / purity or when shelf life has expired. Bidder shall ensure display of shelf life on consumable wherever required & records maintained.
- .4. Storage of all consumables shall be done as per requirement / instruction of the Engineer by the Bidder at his cost.
- .5. In case of improper arrangement for procurement of any consumable, BHEL reserves the right to procure the same from any source and recover the cost from the Bidder's first or subsequent bill at market value plus the departmental charges of BHEL from time to time (30% at present). Postponement of such recovery is normally not permitted. The decision of Engineer in this regard shall be final and binding on the Bidder.

• **TOOLS AND PLANTS / INSPECTION, MEASURING AND TEST EQUIPMENTS**

- .1. T&Ps & IMTEs are to be arranged by the Bidder and the rates quoted are deemed to be inclusive of these charges. List of such T&P and IMTE is indicated separately.
- .2. All T&Ps and IMTEs which are required for successful and timely execution of the work covered within the scope of this tender, shall be arranged and provided by the Bidder at his own cost in working condition (As per Annexure-I, II). In the event of the failure of Bidder to bring necessary and sufficient T&Ps and IMTEs, BHEL will be at liberty to arrange the same at the risk and cost of Bidder and hire charges as applicable shall be deducted from Bidder's bill. Decision of BHEL in this regard shall be final and binding on Bidder.
- .3. All distribution boards, connecting cables, wire ropes, hoses etc. Including temporary air/water / electrical connections etc. shall have to be arranged by the Bidder at his own



cost. Power cables including supply of **the main incomer cable of size 3 ½ core X 35 sq.mm Aluminum conductor (from CSPGCL Provided feeder to Bidders point) and associated MCCB etc.** of sufficient capacity shall be arranged for the construction power supply requirement by Bidder .

- .4. Bidder shall ensure deployment of reliable and calibrated IMTEs (Inspection measuring and Test equipment). The IMTEs shall have test / calibration certificates from authorized / Govt. approved / accredited agencies traceable to National / International standards. Each IMTE shall have a label indicating calibration status i.e. date of calibration, calibration agency and due date for calibration. A list of such instruments deployed by Bidder at site with its calibration status is to be submitted to BHEL Engineer for control.
 - .5. Retesting/ re-calibration (calibration equipment's) shall also be arranged at regular intervals during the period of use as advised by BHEL Engineer within the Contract price.
 - .6. The Bidder will also have alternate arrangements for such IMTE so that work does not suffer when the particular instrument is sent for calibration. Also if any IMTEs not found fit for use, BHEL shall have the right to stop the use of such item and instruct the Bidder to deploy proper item and recall i.e. repeat the readings taken by that instrument, failing which BHEL may deploy IMTEs and retake the readings at Bidder's cost.
 - .7. BHEL shall have lien on all T&PS, IMTEs & other equipment of the Bidder brought to the site for the purpose of erection, testing and commissioning. BHEL shall continue to hold the lien on all such items throughout the period of Contract. No material brought to the site shall be removed from the site by the Bidder and/or his Sub-Bidders without the prior written approval of BHEL Site Engineer.
 - .8. It shall be the Bidder's responsibility to deploy the required T&P, for timely and successful completion of the job.
- **SUPERVISORY STAFF AND WORKMEN**
 - .1. The Bidder shall deploy all the skilled workmen like riggers, electricians, instrument technicians, etc., in addition to other skilled, and unskilled workmen required for all the works of unloading, handling and transporting from site storage to erection site, cable laying, testing and commissioning as contemplated under these specification.
 - .2. Only fully trained and competent men with previous experience on the job shall be employed. They shall hold valid certificates wherever necessary. BHEL reserves the right to decide on the suitability of the workers and other personnel who will be deployed by the Bidder. BHEL reserves the right to ask for removal of any employee workman of the Bidder at any time, if they find him unsuitable and the Bidder shall forthwith remove him.
 - .3. The adequate supervisory staff, including qualified Engineers, shall be deployed by the Bidder to ensure proper out-turn of work and discipline on the part of the labor put on the job by the Bidder and in general see that the works are carried out in a safe and



proper manner and in coordination with other labor and staff deployed directly by BHEL or other Bidders of BHEL or BHEL's client / other agency.

- .4. The work shall be executed under the usual conditions without affecting major power plant construction and in conjunction with numerous other operations at site. The Bidder and his personnel shall cooperate with other personnel / Bidder, coordinating his work with others and proceed in a manner that shall not delay or hinder the progress of work as a whole.
- .5. The Bidder's supervisory staff shall execute the work in the most substantial and workman like manner in the stipulated time. Accuracy of work and aesthetic finish are essential part of this Contract. The Bidder shall be responsible to ensure that assembly and workmanship conform to the dimensions and tolerances given in the drawings /documents/ instructions given by BHEL Engineer from time to time.
- .6. The Bidder shall deploy the necessary number of qualified and approved full time electricians at his cost to maintain his temporary electrical installation till the completion of work.
- .7. During the course of erection, if the progress is found unsatisfactory, or if the target dates fixed from time to time for every mile stones are to be advanced or in the opinion of BHEL, if it is found that the skilled workmen like Electricians , technicians etc. deployed are not sufficient, BHEL after giving reasonable opportunity to the Bidder, will induct on the work the required workmen in addition to Bidder's workmen to improve the progress and recover from the Bidder's bills any charges incurred for engaging the additional workmen with overheads. Decision of BHEL Engineer will be final and binding on the Bidder
- .8. It is the responsibility of the Bidder to engage his workmen in shifts or on overtime basis for achieving the targets set by BHEL and also during the period of commissioning and testing of unit. The Bidder's finally accepted rates / prices shall include all these contingencies.
- .9. If the Bidder or his workmen or employees shall break, deface, injure or destroy any part of a building, road, fence, enclosure, water pipes, cables, drains, electric or telephone posts or wire, trees or any other property or to any part of erected components etc., the Bidder shall make the same good at his own expense or in default, BHEL may cause the same to be made good by other workmen or by other means and deduct the expenses (of which BHEL's decision is final) from any money due to the Bidder.
- .10. The month wise manpower deployment plan to be submitted as per format (at Annexure-B to General Conditions of Contract) is only to assess the capability as well as understanding of the Bidder to execute the work. It shall be the Bidder's responsibility to deploy the required man power, for timely and successful completion of the job, to any extent over and above those indicated in the above deployment plan (including those which are not covered in the plan submitted) without any compensation on this account. Separate persons shall be identified at site for quality control and safety by the Bidder.



• **MATERIAL HANDLING AND STORAGE**

- .1. All the equipment and material furnished under this Contract shall be received from the project stores, sheds/storage yards (any place within site) and transported to erection site and stored (at Bidder's stores) in the storage spaces in a manner so that they are easily retrievable till they are erected by the Bidder. While drawing / cable schedules from BHEL / Customer stores, Bidder shall ensure that the balance / other materials are stacked back immediately.
- .2. While BHEL will endeavor to store/ stack/ identify materials properly in their open / close / semi closed / tarpaulins covered storage yard/ shed (for this separate manpower is sought exclusively for BHEL use), it shall be Bidders responsibility to assist (while withdrawing materials only) BHEL in identifying materials well in time for cable laying, taking delivery of the same, following the procedure indicated by BHEL and transport the material safely to erection site in time, according to program.
- .3. The Bidder shall take delivery of components, equipment from storage area after getting the approval of BHEL Engineer on standard indent forms.
- .4. The Bidder shall identify and deploy necessary Engineers/ supervisors / workmen for the above work in sufficient number as may be needed by BHEL, for areas covering their scope.
- .5. All the equipment shall be handled very carefully to prevent any damage or loss. No untested wire ropes/ slings etc. shall be used for unloading / handling. The equipment shall be properly protected to prevent damage either to the equipment or to the floor where they are stored. The equipment from the stores shall be moved to the actual location at the appropriate time so as to avoid damage of such equipment at site. Test certificates for lifting tackles shall be produced by the Bidder before use.
- .6. Bidder shall ensure that while lifting, slings shall be put over the points indicated on the equipment or as indicated in the manufacturer's drawings. Slings/ shackles of proper size shall be used for all lifting and rigging purposes. All care shall be taken to safe guard the equipment against any damage. In no case piping should be dragged. In case of any damage the cost shall be covered from the Bidder.
- .7. Approach road conditions from the stores / yards to the erection site may not be equipped and ideal for smooth transportation of the equipment. Bidder may have to be adequately prepared to transport the materials under the above circumstances without any extra cost to BHEL.
- .8. Bidder shall be responsible for examining all the plant and material issued to him and notify the Engineer immediately of any damage, shortage, discrepancy etc. before they are moved out of the stores / storage area. The Bidder shall submit to the Engineer every week, a report detailing all the receipts during the week. However, the Bidder shall be solely responsible for any shortages or damages in transit, handling, storage and erection of the equipment once received by him. As the erection work will be spread in different areas / locations of the project, Bidder has to arrange sufficient no.



of watch/ward personal to avoid any pilferage of material. In case any equipment / material is lost / damaged while in the custody of the Bidder, the cost of repair / replacement if any to bring back the equipment in original order shall be deducted from the Bidder's bill.

BHEL's decision in this regard shall be final and binding on the Bidder.

- .9. The Bidder shall maintain an accurate and exhaustive record detailing out the list of all equipment received by him for the purpose of erection and keep such record open for the inspection of the engineer at any time.
- .10. All the material in the custody of Bidder and stored in the open or dusty locations must be covered with suitable weather proof / fire retardant covering material wherever applicable and shall be blocked up on raised level above ground. All covering materials including blocks and sleeper shall be arranged by the Bidder at his cost.
- .11. If the material belonging to the Bidder are stored in area other than those earmarked for his operation the engineer will have the right to get it moved to the area earmarked for the Bidder at the Bidders risk and cost.
- .12. The Bidder shall ensure that all the packing materials and protective devices used for various equipment during transit and storage are removed before the equipment are installed.
- .13. The Bidder shall be responsible for making suitable indoor storage facilities to store all equipment (drawn by the Bidder from BHEL / Customer stores) which require indoor storage till the time of their installation. The Engineer will direct the Bidder in this regard, which item in his opinion will require indoor storage and the Bidder shall comply with Engineer's decision.
- .14. The Bidder shall ensure that all surplus / damaged / scrap / unused material, packing wood / containers/ special transporting frames etc. are returned to BHEL / CSPGCL at a place in project area identified by the Engineer. An account will be maintained by the Bidder for all such items received and returned to BHEL and duly reconciled before closing of the Contract.
- .15. The Bidder shall hand over all parts / materials remaining extra over the normal requirement with proper identification tags to the concerned BHEL / Customer or at a place in project area as directed by BHEL Engineer.

Note: Any failure on the part of Bidder to carry out works according to above clauses will entail BHEL to carry out the job from any other party and recover the cost from Bidder.



• **PROGRESS REPORTING**

- .1. Bidder is required to draw mutually agreed monthly cable laying programs in consultation with BHEL well in advance. Bidder shall ensure achievement of agreed program and shall also timely arrange additional resources considered necessary at no extra cost to BHEL
- .2. Weekly progress review meetings will be held at site during which actual progress during the week vis-a-vis scheduled program shall be discussed for actions to be taken for achieving targets. The program for subsequent week shall also be presented by Bidder for discussions. The Bidder shall constantly update/revise his work program to meet the overall requirement. All quality problems shall also be discussed during above review meetings. Necessary preventive and corrective action shall be discussed and decided upon in such review meetings and shall be implemented by the Bidder in time bound manner so as to eliminate the cause of non-conformities.
- .3. The Bidder shall submit compulsorily daily, weekly and monthly progress reports, man power reports, materials reports, and other reports as per pro-forma considered necessary by the Engineer.
- .4. The progress report shall indicate the progress achieved against planned, with reasons indicating delays, if any, and shall give the remedial actions which the Bidder intends to take to make good the slippage or lost time, so that further works again proceed as per the original program and the slippages do not accumulate and effect the overall program.
- .5. The daily manpower reports shall clearly indicate the manpower deployed, category wise specifying also the activities in which they are engaged.

• **CABLE SCHEDULE AND OTHER DOCUMENTS**

- .1. The detailed cable schedule available with BHEL engineers will form part of this tender specification. These documents will be made available to the Bidder during execution of work at site. The Bidder will also ensure availability of all necessary drawings / cable schedule/documents at work place.
- .2. The Bidder shall maintain a record of all drawings, cable schedules and documents available with him in a register as per format given by BHEL Engineer. Bidder shall ensure use of pertinent drawings / data / documents and removal of obsolete ones from work place and returning to BHEL.
- .3. The data furnished in various Annexure enclosed with this tender specification are only approximate and for guidance. However, the change in the design and in the quantity may occur as is usual in any such large scale of work.



- .4. Should any error or ambiguity be discovered in the specification or information the Bidder shall forthwith bring the same to the notice of BHEL before commencement of the work, BHEL's interpretation in such cases shall be final and binding on the Bidder.
- .5. Deviation from design dimensions should not exceed permissible limit. The Bidder shall not correct or alter any dimension / details, without specific approval of BHEL.

- **GST**

BHEL EDN GST NO: 29AAACB4146P1ZB

BHEL NODAL AGENCY GST NO: 22AAACB4146P1ZP

- a. Income tax & surcharge, if any at prevailing rates shall be deducted on gross invoice value from the running bills unless Exemption Certificate from appropriate Income Tax Authority is furnished.
- b. The GST, as legally levied & payable by the Bidder under the provisions of applicable law/act, shall be paid by BHEL as per Bidder's bill. However, Bidder shall have to submit proof of GST deposited by them immediately after the deposit but not later than the next bill submitted after the due date of deposit. The Bidder shall furnish proof of GST registration with covering the services covered under this Contract and indicate HSN/SAC Code in the prescribed format enclosed in the Tender.
- c. Invoice submitted should be in the format as specified under GST Laws viz. All details as mentioned in Invoice Rules like GSTN registration number, invoice number, quantity, rate, value, taxes with nomenclature – CGST, SGST, IGST mentioned separately, HSN Code / SAC Code etc.
- d. Bidder has to make his own arrangement at his cost for completing the formalities, if required, with Tax Authorities, for bringing their materials, plants, and equipment at site for the execution of the work under this Contract.
- e. TDS shall be deducted on taxable value of services where the contract value exceeds Rs 2,50,000/- Rate of TDS is: 1% CGST+1%SGST(Intra State) and 2% IGST(Inter State)

- **EXTRA WORK:**

- .1. BHEL may consider for **payment of extra works on man hour basis @ prevailing minimum wage applicable at CSPGCL KORBA for such of those works which:**
 - a) Require major revamping or rework and which are totally unusual to normal erection work.
 - b) Require rectification / modification for improvement in the design during commissioning,
 - c) Requiring fresh fabrication of components in place of rejected / replaced components.



However reworks carried out by a gang of one technician, two helpers for less than 4 (FOUR) hours will not be considered for extra work.

- .2. The rates indicated as above, shall include over time, if any, consumables, supervision, use of tools and tackles and other site expenses and incidentals.
- .3. The extra works, if any, shall be carried out by a separate gang or beyond working hours which can be identified for certification of man hours. Log book should be maintained and should be signed (within a week's time) jointly by the Bidder's site in charge and the BHEL Engineer on day to day basis. However, signing of the log book does not necessarily mean acceptance of the extra works which would be identified by Engineer whether work is covered in one of the above categories. Only those works and man hours which are certified by the BHEL Engineer-in-charge may only be considered for payment. The decision of BHEL in this regard shall be final and binding on the Bidder.

- **PRICE VARIATION**

The finally accepted rates for scope of work as defined in this tender shall be **FIRM for the entire Contract** period. No price variation on accepted unit rates is allowed.

- **RATE SCHEDULE**

- .1. Bidder shall fully understand equipment description and scope of work before quoting. The scope of work and responsibility of the Bidder as mentioned under these specifications shall be covered within the quoted rates / price.
- .2. The Bidder shall quote the rates / Price as per the rate schedule only, in part II price bid (Original). Conditional price bids or price bids with any deviation / clarification etc. are liable to be rejected. No cutting / erasing / over writing shall be done.
- .3. Bidder's total quoted price as per rate schedule will be taken as tentative only.
- .4. The quantities indicated in the rate schedule against each item may vary as per the actual engineering / requirement to complete the work. The upward / Down ward revision in quantity is without any limit.

Some of the items may be added or deleted which shall have to be executed by the Bidder within his scope of work and shall be paid as per the rates awarded in the Contract. The Bidder undertakes to erect / commission actual quantities as per advice of BHEL Engineer and accordingly the final Contract price shall be worked out on the basis of quantities actually erected at site and payments will also be regulated for the same on the basis of unit rates.



- **INSTRUCTIONS TO BIDDER**

1. Offers to be submitted under tender clauses-11.1 to 11.11 of GCC are to be furnished by the bidder. All these data / information should be duly supported by documentary evidences No deviations to the tender conditions will normally be accepted.
2. The bidders are advised to actually visit the site and fully acquaint themselves with site conditions, location of stores, transportation routes, quantum of work etc. before quoting their rates for this work. BHEL shall not be responsible in any way for non-familiarization of site conditions. Once the bidder has quoted for the work, it is implied that he has ascertained various site condition and NO CLAIM whatsoever will be entertained by BHEL on any such account.
3. The Bidder in the event of this work awarded to him, shall establish a site office at site and keep posted an authorized responsible officer who should hold a valid power of attorney for the purpose of the Contract. Any order or instruction of the Engineer or his duly authorized representative shall be communicated to the Bidder's representative at site office and the same will be deemed to have been communicated to the Bidder at his legal address.

- **LIQUIDATED DAMAGES**

1. For delay in completion of work attributable to the Bidder, the LD shall be applicable at the rate of 0.5% of the Contract value per week of delay or part thereof limited to a ceiling of 10% of the Contract value (excluding the safety penalty if any levied) as mentioned under the **clause 25.5 of GCC** of the tender.
2. **PENALTIES:** If the Bidder fails in providing safe working environment as per the safety rules of CSPGCL or continues to work even after being instructed to stop the work by the Engineer in charge / Safety co-coordinator the Bidder shall be penalized at a cumulative limit of 1.0 % of Contract Value + GST till the instructions are complied with and so certified by the Engineer in charge.

- **SECURITY DEPOSIT**

The Bidder shall submit Security Deposit within 15 days from the date of issue of LOA/WO as per the General Conditions of Contract (GCC) or before commencement of work whichever is earlier. In case the Bidder opts to furnish Bank Guarantee as a part Security Deposit, the BG shall be issued as per the Pro forma enclosed as per Annexure-G of the SCC Part- B and also that the BG should be issued preferably through any of the Member Banks listed in the SCC.

For BG through any other Nationalized Bank (Not covered in the list of Member Banks of SCC), the discretion of its acceptance shall lie solely with BHEL.

The security deposit BG value will be calculated based on the Contract value including GST



The Security deposit BG will be valid for the time schedule period indicated in the GCC / SCC plus additional **claim period of Six months**. The BG format will be as per format to be approved by BHEL.

- **OTHERS**

- .1. In case of any contradiction between General Conditions of Contract (GCC) and Special Conditions of Contract (SCC), the latter shall prevail.
- .2. The bidder shall specifically confirm he has inspected the site of work and is fully conversant with the prevailing conditions under which work is to be executed and will not raise claim of any nature due to lack of knowledge of site condition. He will also confirm that local taxation laws at the site have been clearly understood by him.
- .3. For price bid opening, only those bidders will be considered who will be qualified for the subject job on the basis of pre-qualification evaluation/ techno commercial bids. BHEL reserves the right to reject the bidders with unsatisfactory past performance in the execution of the Contract. BHEL's decision in this regard shall be final & binding.



SECTION VI
SPECIAL CONDITIONS OF CONTRACT (SCC)

PART-B

INDEX

Sl. No.	Description
•	Scope of Work
•	Time Schedule
•	Cable Laying
•	Cable Termination
•	Calibration, testing and Assistance to BHEL in Pre-commissioning, Commissioning and Post- commissioning
•	Over run Charges
•	Terms of Payment



16. SCOPE OF WORK

Dismantling of existing C&I equipments, Receipt of BHEL supplied C&I equipments from BHEL stores (Closed shed / Open yard / Container etc.), shifting to place of Erection, installation, alignment , welding, Cable Laying and Termination, Mechanical work inside boiler Water wall area including arrangement for scaffolding, Cutting existing water wall, High Pressure welding, Conducting NDT and radiography. Loop Checking, signal conditioning, pre-commissioning and commissioning assistance to BHEL. For SOME of the bought out items, the erection to be carried out will be under the supervision of respective vendor. Only manpower assistance to be provided by the bidder during commissioning & up to defect liability period. Scope of work also includes Cable Reconciliation, Handing over of left out Cables to CSPGCL designated Area.

- It shall be the responsibility of the Contractor to keep in touch with BHEL Engineer at site and find out the arrival of consignments. For this, the contractor or his authorized agent shall contact the BHEL Site Office. The contractor or his authorized person should be available at work spot.
- The contractor has to use his own equipment/Tools and Plants or arrange suitable equipment for safe handling and shifting of materials, including all necessary Tools & Plants required for the above work.

Bidder to ensure services of qualified and experienced Degree / Diploma Electronics / Instrumentation Engineer having experience in Power plant Control and Instrumentation work, entirely for Erection and commissioning activities from the First day of mobilization till contract completion of all Four Units. This shall be indicated separately in man power deployment plan to be submitted by Bidder. The rates quoted in the rate schedule applies to the present requirement. These Engineers shall be reporting directly for Technical matters to BHEL Engineers at Site and will carry out works in areas as per the work schedule. Engineers shall be supported by other workmen like Electrician, Technicians, helpers etc. Sufficient manpower along with supervisory staff for carrying out work will be ensured at all costs. Bidder to ensure minimum qualified man power availability during the entire contract period as deemed fit by BHEL for AMC periods as defined in the contract between BHEL and CSPGCL

Bidder shall dismantle, erect, test, commission all the field equipment, cabinets, panels, instruments etc. as per sequence prescribed by BHEL Engineer at site. The sequence of dismantling / erection / commissioning methodology will be decided by the BHEL Engineer depending upon the availability of materials / work fronts in consultation with CSPGCL. **No claim for extra payment from the Bidder will be entertained on the grounds of deviation from the methods of erection / commissioning adopted in Dismantling / erection / commissioning of jobs elsewhere or for any reasons whatsoever.** For some of the equipment, Erection supervision or Commissioning expertise will be arranged by BHEL. The details against such item are indicated in the BOQ (Annexure-1). However all assistance with sufficient manpower, required tools and facilities (like temporary power supply, Lighting, Scaffolding) required shall be provided



by the Bidder. The Bidder under this contract shall also provide services of Semi-skilled/ Unskilled manpower exclusively for use by BHEL where ever necessary. No separate payment shall be made for providing the services as per this clause. This Manpower requirement may vary depending on the activities at site.

BHEL customer may depute their representative for checking and supervision of important stages of work. The Bidder shall be required to provide all facilities for inspection of works, without any cost implications to BHEL.

Any defect in quality of work or deviations from drawings / specifications pointed out during such inspection shall be made good by the Bidder in the same way as pointed out by BHEL Engineer, without any cost implication to BHEL.

The purpose of this manpower is for meeting the pre-commissioning, Commissioning, post commissioning upto defect liability period as required by BHEL

In case the manpower is needed by BHEL beyond the contractual schedule, Bidder Shall provide the same and the rates will be mutually decided for the respective Category. Payment will be made by BHEL only for the extended period. Decision of BHEL in this regard is final & binding on the Bidder. It is preferred that the Bidder maintains the same set of manpower as long as the requirement is needed by BHEL.

In case Bidder fails to provide above mentioned manpower, BHEL shall have the Right to hire such services from other agencies at the risk and cost of the Bidder.

EXECUTION METHODOLOGY:

Bidder to note that the activity are to be executed in a project under operation wherein the period of shutdown for each Unit is to be kept at a pre-defined period of 45 Days. In order to achieve this all the activities including cable tray and sub-tray erection, Cable Laying from DDCMIS to Marshalling cabinet to JB to instrument head, JB Erection, Erection of cabinets, Cable termination at One end in JB, New Marshalling Panel and New DDCMIS Panels (as identified by CSPGCL), Inter panel terminations etc. and Power ON and Testing of erected DDCMIS System cabinets under supervision of BHEL Engineer(s) and complete continuity and loop checking from DCS upto marshalling panel end has to be completed during pre-shutdown period.

Only erection of cabinets which cannot be erected during pre-shutdown period, dismantling of existing DDCMIS panels, field termination at marshalling panel end, Installation of new field instruments and termination at instrument head and Local JB, Complete loop checking upto Field end, testing of newly erected field instrument, and Commissioning of complete DDCMIS system as per commissioning protocol is required to be done during Shutdown Period.

TIME SCHEDULE

- a. The Bidder is required to mobilize the manpower and T&Ps and commence the work within 10 days from the date of issue of letter of award or Work Order**



after submission of required security deposit as mentioned in the GCC of this tender unless BHEL decides to fix any other later date. However, the actual date of start of work, to fix up zero date of the Contract, will be certified by BHEL Engineer after adequate mobilization of manpower and T&Ps by the Bidder.

- b. Entire work as detailed in the tender specifications shall be completed within 18 months from the date of start of erection (Zero date) to achieve various Unit Wise milestones. This excludes AMC of 18 Months for each Unit wherein bidder to engage adequate number of skilled manpower of Fitter and Electrician under adequate Supervision.
- c. This is a Shut-Down oriented Job and completion of work within the shutdown schedule is the main essence of this contract. Failing to execute the work within the stipulated shut-down schedule will attract an L.D of 0.5% per week at the maximum of 10% of Order value.

Note:

Depending upon front and material availability above milestones may be required to be pre-poned. Bidder is required to mobilize additional resources to meet above requirement within their quoted price.

Bidder has to mobilize additional resources including manpower to achieve above schedule for which no separate compensation will be payable. The work under the scope of this Contract is deemed to be completed in all respects, only when the Bidder has discharged all the responsibilities laid down in the Contract. The decision of BHEL on completion date shall be final and binding on the Bidder.

In case due to reasons not attributable to the Bidder, the work gets delayed and additional manpower / resources scheduled have to be mobilized so as to meet various mile stones, same shall be done within the quoted rates, at no extra cost to BHEL. In the event the Bidder fails to respond to these requirements, BHEL shall take appropriate actions to meet Customer's commitments in line with provisions of general Conditions of Contract.

DISMANTLING: The bidder's scope shall include dismantling of existing equipments including field instruments/panels/ cabinets/ Control Desk/ Control Panel/ terminal blocks inside JBs/ Damaged or rusted pipes/Impulse pipes bulk heads/ transmitter ends/Cables/ Cable Trays, Battery Banks etc. which are to be replaced with the newly supplied equipments from BHEL and handing over the dismantled materials at a designated place identified by BHEL in consultation with CSPGCL. The quantity of items to be dismantled is indicated in the Rate Schedule/Bill of Material in Part-II Bid. Dismantling of existing field instruments like PT/DPT/FT/LT/RTD/TC being replaced are to be handed over to BHEL after listing out the qty. of items dismantled is "as it is" condition after cleaning at the location identified by BHEL.



17. Instrumentation, Control and Power Supply Cable Laying:

- a) All Power cables from CSPGCL's feeders/ incomers to 24 V DC UPS system,
 - b) All power cables from CSPGCL's feeders/ incomers to newly erected UPS system.
 - c) All power cables from Rectifiers/ Chargers to battery banks
 - d) All cables within the UPS system
 - e) All cables from battery banks to DCDB system
 - f) Power cables for distribution from Bidder's DC power supply system to Bidder's equipment and further sub-distribution wherever required. Power cables for distribution from BHEL's UPS system cabinets/ DC power supply system to CSPGCL's existing AC/ DC loads.
3. All required power/ control cables (1.5 sq mm/ 2.5 sq mm.) for extension of power from Bidder's interface relay cabinets to solenoid valves. All required power cables for connection from starter cubicles (specified under TG system) to the drives shall be included in the scope of the Bidder. All control cables (typically 3 C 2.5 sq. mm cable) to extend the bus/ line from SWGR / MCC/ GRP to electrical synchronizing panel is in Bidder's scope. All cables from electrical synchronizing panel to control desk (for meters/ synchro scope) for synch type breakers are in bidders scope subject to the quantities mentioned in appendix – I to Part – A.
4. All the Earthing and grounding cables including flats for the control system being laid by the Bidder.

General Conditions for Laying of Cable:

a) Laying, dressing & clamping (by Nylon / PVC ties or Aluminum strips or any other method specified by BHEL Engineer) of the cables in the cable trays / angles. The cables shall be terminated in the enclosure through cable glands of appropriate size. The final dressing of all cables laid by the Bidder and in all cable trays erected by the Bidder shall also be done with Nylon Cord / Aluminum strip. Cost of cable laying as per Bill of Quantities Cum Rate Schedule shall include the cost of Nylon / PVC ties & Aluminum strip required for dressing / clamping.



The cables shall be laid in the cable trays and the route as given in the cable schedule. The Bidder shall intimate the BHEL engineer in charge whenever the cable tray is filled. Extra cables if laid by the Bidder due to mistake, the same shall be removed at no extra cost to BHEL.

b) The cable run number shall be provided by punching Aluminum Tag plates and tying suitably with nylon ties (at both ends and **at regular intervals of 5 meters** or as advised by BHEL Engineer) which shall be arranged by Bidder at his cost.

a) While laying cables, existing cable tray covers and false flooring may require removing and re-fixing. The same has to be done within the quoted rates & at no extra cost to BHEL.

b) **Preparation of separate earth pits to the requirement of DCS shall be done by the bidder by laying and connecting the earth cables from different equipment's to the respective earth pit including cabinet earth.**

(While laying the cable, minimum 500 mm separation shall be provided between parallel runs of LT power and signal wiring and minimum of 900 mm separation shall be provided between parallel runs of HT power and signal wiring.

Cable identification tags shall be provided at regular intervals of 10 m)

d) The screen of signal cables shall be run in insulated sleeve (of approved quality to be provided by the Bidder) and shall be terminated as per the instruction of the BHEL Engineer.

e) UTP Cabling: UTP cables are to be laid through separate trays or metallic conduits (Flexible / rigid as the case may be) with complete sealing against exposure to rat bite. 10 mm ferrule sleeve to be supplied by the Bidder for Printed ferruling of both ends of the UTP. Metallic tags shall not be permitted for UTP cables inside the panels.

MEASUREMENT OF INSTRUMENTATION CABLES

The methodology for measurement of instrumentation and control cables laid by the Bidder shall be as under.

1. The lengths shall be measured from terminal to terminal plus height plus depth of the panels. Only one left over cut length of cable from each cable drum shall be acceptable.
2. The Bidder shall hand over cut length of cable from each cable drum and cut pieces / scraps to BHEL stores or any place identified by BHEL.
3. The bidder shall keep a proper record drum wise and submit to engineer in charge periodically the details of cables laid.

The scope of work shall also include but not limited to the following within the quoted item rates:

- Re-rolling of cables on drums as required by site engineer.
- Return of cut pieces & scrap cables to the scrap yard /BHEL stores as directed by BHEL engineer in charge.



- Before erection, all instruments shall be subjected to calibration and other functional checks as per manufacturer's standard at bidder's site laboratory in presence of BHEL/CSPGCL representative. BHEL and bidder shall jointly decide the details and modalities of such checks and calibration.
- Providing supports for impulse lines, instruments, air lines, cable trays wherever required by fabricating at site. Required material for these will be provided by BHEL & all consumables including gas, welding electrodes etc. to be arranged by the Bidder.
- Pre-commissioning check to ensure correctness of erection, Testing and Commissioning including preparation of test reports, Rectifying defects, if any, and making adjustments as necessary and Obtaining BHEL Engineer's approval and written acceptance of satisfactory performance and operation.
- All the field items/ devices, panels, Junction Boxes that are supplied by BHEL are to be installed and commissioned as per attached bill of materials/ Rate Schedule in Part-II Bid. Providing manpower assistance along with testing instruments to BHEL commissioning Engineers for Testing & Commissioning activity also forms part of work scope.
- Printed pipe ferruling to be done at all termination endings. The wire ends to be lugged with suitable sized lugs as per terminal strip. Spare cables to be ferruled and dressed at both ends.
- Any mechanical modification needed to install and commission any field instrument / devices shall have to be carried out by the bidder.
- Bidder shall perform minor repairs, adjustments of the instruments under the supervision of the BHEL's authorized representative. Once the defective instrument has been successfully repaired it shall be subjected to calibration and functional checks, as indicated above.
- The scope of work also covers all performance tests related to pre commissioning and commissioning of the system by BHEL necessary to ensure that workmanship confirms to relevant standards and that such tests are adequate to demonstrate that the installations complies with the requirements of the customer specification.
- All arrangement for conducting these tests are to be made by Bidder within their quoted rates and tests may have to be repeated to satisfy BHEL / BHEL's customer.
- Some instruments may need repeated calibration / replacement. The same will be carried out by the Bidder at no extra cost to BHEL including calibration of instruments needed for replacement, which will be supplied by BHEL. Tags on all the instruments will be provided by the Bidder as directed by BHEL Engineer at no extra cost to BHEL.
- Existing flame scanners are to be dismantled and new flame scanners working on visible flicker principal provided by BHEL to be installed.
- Installation of Furnace and flame viewing system(4 No's minimum) for direct online continuous viewing in the central control room of the coal and oil flame and condition of the furnace internals including slagging of the water walls and any other deterioration in the furnace condition
- The existing field sensors and final control elements are to be retained unless otherwise specified in BOQ cum price schedule in Part-II Bid. While commissioning, if calibration for any of these field instruments is required, then the same shall be carried out by the bidder free of cost as part of scope of work.



- **ACOUSTIC STEAM LEAK DETECTION SYSTEM (ASLD)** Bidder shall install and provide manpower assistance during commissioning of PC based Acoustic Steam Leak Detection system with Air Borne Sensors including all Signal amplifiers, calibrators, signal processing hardware and software, power supply distribution cables, Instrumentation cables for the entire system including special cables. Junction boxes, all erection hardware etc.
- Bidder to provide laying and termination of cable as per cable schedule for interfacing with existing EDLI system with new DDCMIS.

Any specific work, which is not mentioned in the scope of work but, required to be carried out for completion of subject work is in the bidder's scope

IMPULSE LINE (AS / CS / SS)

- The impulse line work comprises of Identifying the proper type (refer specification) of Impulse pipe, cleaning with wire brush and compressed air, edge preparation, cold bending, laying to the required slopes, clamping, installation of isolation / drain valves, condensate pots and other fittings by socket welding, connecting with the process end and to the instruments, carrying out Hydraulic testing the impulse lines, and painting the lines as per requirement of BHEL engineer.
- Proper tagging of valves and impulse lines on both ends shall be done for proper identification. Painting of impulse lines with primer and with final paint of colour as per BHEL'S CUSTOMER standards including supply of paint is in Bidder's scope. Flow elements are provided with SS root valves.
- Welding of these SS root valves with AS /CS impulse pipes is to be carried out within the quoted rates for Impulse pipes. The rate quoted per meter shall include all the above work.
- For steam and liquid measurement, the impulse pipe should be preferably slope downward from source connection to instrument and instrument shall be installed below the source point and for impulse piping for air and flue gas shall slope upwards and instrument shall be installed above source point.
- All impulse piping for shall be installed to permit free movement due to thermal expansion, whenever wherever required expansion loops should be provided
- Pre-Heating, Post weld heat treatment and Non-destructive tests are to be carried out for welding of impulse pipe with specification **ASTM A 335 P91 SCH XXS**

18. CABLE TERMINATION

- a) For Cables, the Cost of Cable Laying as Per Bill of Quantities Cum Rate Schedule shall also include the cost of Termination with Suitable Crimping Type Lugs and Ferrules. Only cable glands shall be issued by BHEL. Drilling of holes in gland plates of HT / LT switchgear, control panels, JB's etc. as per the requirement shall also be part of cabling at no extra cost to BHEL.
- b) The Bidder shall carryout insulation testing, simulation testing etc. as per the instructions of Engineer at site.



- c) Screen of signal cables shall run in insulated sleeve (to be arranged by Bidder at no extra cost) and shall be terminated as per the instructions of the BHEL Engineer.
- d) All cables shall be plainly and durably labeled at both ends with non-conducting material for identification and must conform to wire labeling scheme shown on interconnection / terminal wiring drawings
- e) Marshalling cabinets along with terminal blocks shall be provided to terminate cable from the field as well as from MCC. Separate terminal blocks shall be provided for the Field side and system side in the marshalling cabinet. The marshalling cabinets shall be segregated from DCS cabinets. System cabinet shall house all electronic modules and shall be totally separate from marshalling cabinets. These cabinets shall have front access to system modules and rear access to wiring. The interconnection between marshalling cabinet and DCS cabinet shall be through wires.

19. CABLE TRAY LAYING

Tray work involved is laying of cable main tray, sub-tray/branch tray work of Size 50 mm, 150 mm, 300 mm and 600 mm. Cost of cable tray erection as per BOQ Cum Rate Schedule shall include fabrication of supports to suit site requirement, fixing of support in position by welding / bolting as per Engineers instruction, erection and fixing of cable trays and racks by welding or by bolts and nuts. Joining of trays can be carried out by bolting / welding as per direction of BHEL Engineer. Bidder shall carryout cutting of tray only by Hacksaw for obtaining proper routing from standard lengths supplied. Materials for support fabrication like flats, channels, angles etc. shall be supplied by BHEL free of cost. The cutting & welding joints on trays will be painted by primer & Aluminium paint by the Bidder including supply of paint within the erection price and no extra cost to BHEL. These cable trays may also be required for laying OFC Conduit, PLICKA type / GI flexible conduits, local cabling and metal temperature thermocouples.

STRUCTURAL STEEL FABRICATION-

- Steel fabrication work shall be done from structural steel supplied by BHEL for the fabrication of base frames, support frames for trays, JB's, Impulse Pipes etc.
- Cutting shall be done by grinding machine with proper finishing & measurements. Welding shall be done by qualified welders with suitable rods and after welds shall be properly chipped & finished.
- After erection structure shall be painted with coats of primer & suitable paints.
- Payment for support fabrication / erection shall be released as per BOQ rates for structural steel fabrication work.

Laying of Optical Fibre Cables:

- Laying and dressing of OFC for interconnection of various systems within the power plant area shall be the scope of the Bidder. Cable termination will be carried out by other agencies / cable supplier. However man power assistance for termination, Fibre slicing, Signal Band Width testing and cable joining shall be provided by the Bidder to



the OFC Vendor. The cables shall be laid through cable trays, HDPE conduits OR buried in trenches through rigid conduits as required by the locations / Site conditions.

- Where OFC will be laid outside building area – To be laid necessarily inside GI conduit with support from cable tray OR structure.
- Where OFC will be laid inside building area – To be laid on separate cable sub-trays.
- Where OFC will be buried – It will be in separate buried trench approx. 1.0 meter depth, to be laid in 2” rodent proof HDPE conduits covered with sand, brick laid breadthwise and soil along the pipe line route by contractor. Buried trench is in the scope of Contractor.
- Where OFC is laid crossing roads – to be laid in GI/rodent proof HDPE conduits with sand filling at bottom and sand, soil filling at top with cement concrete.
- During the course of OFC laying civil works including minor excavation, covering with bricks, road cutting etc. shall be carried out by the Bidder.
- After cable laying the excavated area / roads shall be refilled and restored by the Bidder. Supply of all materials for civil works like bricks, sand, cable route markers, preparation of pits shall be carried out by the Bidder within the quoted rate.
- The approval of customer’s field quality department /engineer may be required. The same shall be carried out by the Bidder at no extra cost to BHEL.

MOUNTING OF JUNCTION BOX

- Includes assembly / fabrication, welding of semi-prefabricated limbs of the racks / cable ducts / other related supporting structural parts, chipping of floor and grouting etc. drilling of bottom gland plates for cable entry and earthing with earth pads. For fabrication of steel items Hacksaw cutting or shearing by machine only is permitted.
- Bidder may note that fabrication / fixing / painting of structure including paint and other consumables will be included in the scope of work.

CONDUITS (RIGID G.I/FLEXIBLE/HDPE)

- Conduits shall be used & laid for carrying cables from field instruments to local JB, for UTP cables and for OFC as per the instructions of BHEL Engineer with suitable connectors / union bends etc. (Supplied by BHEL). Flexible conduits will be supplied by BHEL.

UPS & 24 V DC CHARGERS AND BATTERY BANK

- 24V DC Power system including UPS, DCDB, Charger for Unit Control Room and offsite with Battery Bank and BHMS. Unit Charger (7 Panels per Unit with Dimension: 4140x1000x2235 mm and 2 Battery Bank per Unit) FA PH Charger (2 Panels with Dimension: 1000x800x2400 mm and 2 Battery Bank) 5 numbers of Power Distribution Box (800 x 200 x 600) mm shall be erected at various location in Main Plant Area
- Each of the chargers and UPS shall be erected, aligned, welded to the bottom frame at respective locations. Body ground shall be done with GI Strips or suitable size of cable. All incoming and outgoing cable shall be laid, gland, lifted and terminated with proper lugs through crimping tools as per cable schedule (Provided by BHEL) Bidders scope includes complete commissioning



assistance to suppliers representative in charging, Testing, full-load testing, discharging, BHMS and DCS interconnections etc.

- Erection of battery bank involves assembly of battery stands, erection of batteries over stands, interconnection of batteries, electrolyte filling, charger to battery cable connection and all relevant work as per supplier's instruction. Replacement of defective cell with a new one from BHEL stores during the entire contract period including warranty is also in scope of the bidder.
- Bidder to provide manpower assistance during charging and discharging cycle as per BHEL or CSPGCL Requirement.

LOCAL INSTRUMENT ENCLOSURES & RACKS IN BOILER AND TURBINE AREA

Erection and Commissioning shall include erection over fabricated channel frame, alignment, Welding, Connection of drain pipe to main drain line, Impulse Piping to root valves provided by CSPGCL. Connection with purge lines wherever applicable, erection of Transmitter, instrumentation cable lifting gland and termination. Flushing & charging of Impulse lines and final commissioning of instruments/transmitters, Cabling, termination and installation for illumination of LIEs with CSPGCL Provided PDB.

TRANSMITTERS

Pressure Transmitters & DP transmitters shall be erected as per drawing inside LIE/LIRs with pre-fitted assembly. Stand-alone transmitters shall be erected as per drawing with SS Tubing & other Fittings. E&C includes mounting of transmitter with angle/channel support with screwed/welding arrangement, calibration with HART Calibrator, range settings, termination of cable and providing manpower assistance during commissioning.

SS TUBING

Wherever required some length of SS Tubing shall be done along with other mechanical fittings for erection of field instruments like P/DP Transmitters without any extra cost implication to BHEL.

WELDING OF PRESSURE PARTS AND HIGH PRESSURE PIPING:

Qualification of Weld Procedures

Only qualified welding procedures as per ASME Section IX shall be used by contractor at site. Procedure qualification records along with WPS shall be submitted to CSPGCL for review. Welding procedure shall indicate all essential and non-essential parameters as per ASME Section IX. Makes of welding consumables shall be subject to employer's approval.



Welder's Qualification

Only welders who are qualified in accordance with the latest applicable requirements of the Indian Boiler Regulations, shall be permitted to perform any welding work on the pressure parts and its attachment welding. In addition to such statutory qualification requirements, the welders shall also undergo a satisfactory pre-production qualification test to be conducted by the Contractor at site as per ASME Sec IX in presence of employer's representative(s), prior to performing work under these specifications. The services of an independent testing laboratory shall be retained by the Contractor to perform welder qualification tests for welders.

All the welders carrying out welding at site shall carry an identification badge, which shall indicate the category and the grade of welding for which they have been tested and authorized to carry out welding. All such badges shall be countersigned by the Employer.

Records

Welder's performance shall be monitored regularly and record of their performance shall be maintained by contractor in a manner acceptable to the employer. Contractor shall maintain such records including record of procedure qualification & welder qualification and hand-over to the employer at the end of work.

MARKING

On completion of each welded joint, the welder shall mark his regularly assigned identification mark near the joint. The welder's identification numbers, inspection stamps or code symbol stamps and any other information shall not be directly stamped on any alloy steel piping. In alloy steel piping, all such information shall be stamped on separate marking plate which shall be tack welded on pipe near the weld.

20. ERECTION OF DDCMIS

- All works such as cleaning, checking, levelling, aligning, assembling, temporary erection for alignment, dismantling of certain equipment for checking, cleaning, surface preparation, fabrication at site, cutting, grinding, straightening, blue matching, chamfering, filing, chipping, drilling, machining, surface grinding, shaping, fitting up etc. as may be applicable in such erection works are to be treated as incidental to erection and necessary to complete the work satisfactorily and shall be carried out by the bidder as part of the scope of work.



- Any fixtures, scaffolding materials, concrete block supports, steel structures required for temporary supporting, for pre-assembly or checking, welding, lifting and handling during pre-assembly and erection shall be arranged by the bidder at his cost.
- Erection of DDCMIS, Electrical Panels, Energy Metering Panel and Network Panels at site in Unit Control Room and Off-Site Control rooms of CWPH, AHP and DMPT including chipping of floor, fabrication and fixing of base channel frame if required. Levelling & alignment with spirit level, wherever required termination of loose wires, bus wires is to be done. Connecting body earth of the panels with existing earth riser or earth mat. Cleaning of panels has to be done with electrical vacuum cleaner, besides conventional cleaning with brush etc., welding the base channel to the embedded plates / channels, grouting, fixing of anti-vibration pads, termination of inter panel bus bar connections as per Grounding instructions and mounting / connections of loose instruments, commissioning up to Power supply integrity. Power supply connections from DCDB/ACDB to DDCMIS panels, Network panel etc.
- The work is to be carried out in accordance with the recommendations of the equipment manufacturer drawings, documents furnished to the Bidder by BHEL or as directed by BHEL Engineer. The bill of material in Rate Schedule in Part-II Bid with details of supply of Equipment are to be referred.

COMPUTER BASED EQUIPMENTS

- All computer related items / equipment like Operator work station, Engineering station, LVS controller, LAN Server, HART, etc. comprising of CPU, Monitors, printers, key boards, pre-fabricated connecting leads , Mouse , Key board, UPS shall be installed in Unit control room and Off-Site Control rooms on UCD Desk as per direction of BHEL Engineer. The cost of installing a PC set including printer, monitor, UPS, interconnecting leads etc. as per BOQ Cum Rate Schedule shall also include the cost of installation / placement of furniture (to be issued by BHEL) as per requirement / instruction of BHEL Engineer. The Software installation and commissioning is not included in the scope of this contract. However, any assistance required for testing / commissioning have to be provided by the Bidder within the quoted price.

PAINTING

- All structural steel fabricated for support /erection of LIEs, Junction box, Cable Trays, Impulse lines, shall be painted with primer and fresh paint.
- All surfaces are to be thoroughly cleaned and touched up with suitable approved primer and finish paint matching with approved final color. Number of coats shall be decided by BHEL/CSPGCL during the course of work. All tools and consumables required for painting shall be arranged by the bidder within quoted rate. Paints shall be of ISI marked and color scheme approved by BHEL Engineer at Site.

SITE OFFICE CUM STORES

BHEL/CSPGCL shall provide limited open space for bidder's Site office cum Store and the bidder shall be responsible for construction of adequate sheds, provide basic utilities like electricity (From CSPGCL Provided feeder) and water. The bidder to



dismantle and clear the area after completion of work or as and when required by BHEL/CSPGCL

PREPARATION OF EARTH PIT

Work includes procurement of MS-Rod(40 mm) ;; Quantity : 30 m/Pit, 65x8 mm MS-Flat 15m/Pit, 15 m/Pit of 65 mm PVC Pipe, C.I Cover for each Pit, Coke and Salt as per requirement shown in the earth pit drawing and preparing of Pit in the designated location. Earth Pit drawing will be furnished by BHEL before commencement of work. The no. of Earth Pits to be prepared is indicated in the BOQ Cum price schedule.

TIME SCHEDULE

The bidder is required to commence the work within 15 Days from the date of issue of LOA/Work Order or the Date of Submission of requisite Security Deposit as specified in this NIT whichever is earlier. However the actual date of start of work, to fix up Zero Date of the Contract, will be certified by BHEL Engineer at Site after adequate mobilization of man power and Tools and Plants as specified in the NIT.

Entire Erection and Commissioning work as detailed in this tender including pre-shutdown and shutdown work of Unit-1 and Unit-2 shall be completed within 18 (Eighteen) months from the zero Date as decided by BHEL Site Engineer. The bidder shall maintain adequate man power during defect liability and AMC Period. For all contractual obligation completion period of 18 months for Unit-1, Unit-2 shall be considered. Depending upon front and material availability Erection activities may be preponed. The bidder may be required to provide additional resources to meet such additional requirements without any extra compensation.

21. OVER RUN CHARGES (ORC)

In case due to reasons not attributable to the Bidder, the work gets delayed and the project completion gets extended beyond the scheduled completion of 24 Months, the Bidder shall not be entitled for any overrun compensation for a period of first 2 (TWO) months after the Contractual completion date. In case the scheduled completion time gets extended beyond 2 (TWO) months as stated above, the Bidder shall be considered for payment of **fixed Over Run Charges from the third month onwards @ Rs 100,000/- (Rupees One Lakh only) per month** on receipt of advance notice intending to claim over run & on fulfillment of following conditions:-

- (a) The reasons for delay in completion of work are not attributable to Bidder but however subject to the provisions of clause – 31 of Section - I General Terms and Conditions.
- (b) The targets fixed during the overrun period are achieved by Bidder.



- a. Once the claim of overrun charges is admitted, no other compensation whatsoever (like for delays in receipt of materials, availability of fronts etc.) will be entertained.
- b. The Bidder shall maintain sufficient workforce and other resources required for completion of the job expeditiously for the entire Contractual period including total extended period.

22. TERMS AND CONDITIONS OF PAYMENT

- a. The Prices mentioned in the quote shall remain firm (Without escalation) during the entire execution of the order and shall remain valid for ordering of any change in quantity for this project. The prices mentioned are exclusive of Taxes.
- b. The prices are inclusive of charges towards fabrication at site wherever required, supervision, Erection and Commissioning as per standard quality procedures, Testing, submission of necessary test certificate of the bidders bought out items.
- c. BHEL Engineer at Site will certify the actual work executed in the measurement books and bills, which shall be accepted by the Bidder in measurement book.
- d. Bidder shall submit bills for the work completed under the specification, once in a month (for the period 25th to 24th of calendar month) preferably in the last week, detailing work done during the previous month. The format for billing shall be approved by BHEL SITE ENGINEER before raising invoices.

All payments shall be released progressively on pro-rata basis as per the work completion and certified by BHEL Engineer at Site. The process of certification at site and forwarding the bill to BHEL Finance and clearance for payment to Bidder is expected to take 15 Days after the bills are received at BHEL Bangalore with all the statutory Documents. Bidder is advised to take note of this and ensure labor payments in time (by 10th of every month) without fail. **Non - receipt of payment /delay in getting payment from BHEL cannot be the reason for Bidder to delay in making payment of wages to workers.**

The Bidder has to submit his running bills in printed format with serial numbers and mentioning the registration numbers for service tax, TIN, sales tax etc.

- e. Subject to any deduction which BHEL may be authorized to make under the Contract, the Bidder on the certificate of the BHEL Engineer at site be entitled for payment as explained here under:

For Equipment Erection and Commissioning Work:

1. **80 % on completion of Erection and Pre-Commissioning of new C&I Equipment.**



2. **10 % on completion of Commissioning (Synchronization) of new C&I Equipment.**
3. **10% on receipt & Processing of Final Bill.**

Dismantling Work:

1. **80% on Removal of Old C&I equipment/Panels/Instruments/Cables etc.**
2. **10% on Handing over of dismantled C&I equipment / Panels, Instruments/Cables Etc. at BHEL/ CSPGCL Designated Place.**
3. **10% on Receipt of Final Bill.**

The bills with all enclosures shall be submitted in triplicate and made separately for each Unit. The checklist is to be submitted as per Annexure VI. Attendance certification by BHEL Site in charge is to be furnished for manpower provided under free of cost basis along with each RAB.

- Certified Measurement sheets for completed portion of work duly signed by BHEL Engineer is to be furnished along with the monthly bill.
- Wage Sheet, Muster Roll and ESI premium for the previous month along with PF Deposit challan.
- GST Paid details for the present RA Bill which is being submitted.
- ❖ The payment for the First running bill will be released only after production of copies of following certificates:
 - PF Registration /membership certificate
 - Labor License(Form V till license is obtained)
 - Workmen COMPENSATION Insurance policy
 - Work Permit/Gate Pass for entry into CSPGCL KORBA STPS Premises.
 - GST Paid challan
- ❖ The following shall be furnished along with the bill.
 - Daily Cable laying progress report
 - Protocols for Cable Laying completion duly signed by BHEL and CSPGCL Limited are to be furnished along with the monthly Bill.
 - Material receipt details with RIV copy
 - Wage sheet of the previous month along with Provident fund deposit challan



ANNEXURE-I
LIST OF T&Ps AND ITEMS REQUIRED FOR WORK

SL No.	EQUIPMENT	QTY
1.	Roller	01 No.
2.	Continuity and LAN tester	10 No. s
3.	Electrical tool kit with ISI quality Digital multi meter Of reputed make	10 No. s
4.	Milliamp Source	03 No. s
5.	Ferruling machine	02 No. s
6.	Megger kit	01 No.
7.	Hand lamp with necessary cable	05 No. s
8.	Tube bending machine	01 No.
9.	Grinding and Rigging Machine	03 No. s
10.	Welding Machine	05 No. s
11.	G.I Pipe Threading Machine	02 No. s
12.	Blower (For cleaning purpose)	01 No. s
13.	Cable Tracer	02 No. s
14.	Pneumatic Fork Lift/Hand Trolley	03 No. s
15.	Cable Termination Kit including crimping and wrapping tools, strippers, Cutters of various types, Hacksaw, Precision Tweezer	3 Sets
16.	Pipe wrench set, Slide wrench set, Torque wrench Set, Allen Key Set	3 Sets
17.	Marking Punches	03 sets

Notes:

1. The above list of testing instruments/equipment required for testing / commissioning is only for guidance to Bidder and not complete. Any other / additional testing instruments



External Services
BHEL-EDN, BANGALORE

- / equipment required for timely and satisfactory completion of job will also be arranged by Bidder at his own cost.
2. Bidder must re-ascertain /recheck range and accuracy of each IMTE from BHEL Engineer well in advance before arranging calibration / deployment of IMTE's.
 3. Other terms and conditions regarding above items shall be as per clause no. 4 (tools & plants / testing & measuring instruments)



ANNEXURE-II
(To be submitted in Bidder's Letter head)

**CERTIFICATE OF DECLARATION
FOR CONFIRMING THE KNOWLEDGE
OF SITE CONDITIONS**

We hereby declare and confirm that we have visited the project site under the subject namely
.....
.....

.....and acquired full knowledge about the site conditions,
wage structure, Industrial climate and total work involved.

We further confirm that the above information is true and correct and we will not raise any
claim of any nature due to lack of knowledge of site condition.

Bidder's Name and Address.

Place: (Signature of the Bidder With stamp)

Date:



ANNEXURE-III

NON DISCLOSURE AGREEMENT

(To be submitted on Bidders Letter Head)

Memorandum of Understanding

BHEL is committed to Information Security Management System as per Information Security Policy.

M/s....., providing.....service to BHEL hereby undertake to comply with the following in line with Information Security Policy of BHEL.

To maintain confidentiality of documents & information which shall be used during the execution of the Contract.

The documents & information shall not be revealed to or shared with third party which shall not be in the business interest of BHEL.

(Signature, date & seal of authorized
Representative of the bidder)



External Services
BHEL-EDN, BANGALORE

**ANNEXURE IV
NO DEVIATION CERTIFICATE**

(To be submitted on Bidders Letter Head)

FORMAT OF UNDERTAKING

REF:

Date:

To
Bharat Heavy Electricals Limited
Electronics Division
Mysore Road
Bangalore 560 026

TENDER Ref. No.: CE/ES/2018-19/02/ CSPGCL KORBA-I RM/E&C/SJDB dated
xx/12/2018

Dear Sir,

With reference to above, this is to confirm that as per tender conditions, we have visited site before submission of our offer and noted the job content and site conditions etc. We also confirm that we have not changed / modified the tender documents as appeared in the website and in case of observance at any stage, it shall be treated as null & void. We hereby confirm that we have not taken any deviation from tender clauses together with other references as enumerated in the above referred NIT and we hereby confirm our unqualified acceptance to all terms and conditions as stipulated in the tender and NIT. In the event of observance of any deviation in any part of our offer at a later date whether implicit or explicit, the deviations shall stand null & void. We confirm to have submitted our offer in accordance with tender instructions.

Thanking you

Yours Faithfully

Authorized

(Signature, date & seal of

Representative of the bidder)



ANNEXURE V

CHECK LIST TO BE SUBMITTED ALONG WITH EVERY RA BILL

NAME OF THE BIDDER

RAB NO:

RAB DATE:

LOI /WO No. & DATE

DESCRIPTION OF WORK

SL. NO.	PARTICULARS	YES	NO	REMARKS
1	ALL T&PS AND OTHER INSTRUMENTS REQUIRED AS PER CONTRACT HAVE BEEN DEPLOYED AT SITE AND ARE AVAILABLE IN GOOD WORKING CONDITION & UTILISATION REPORT HAS BEEN SUBMITTED.			
2	LABOUR LICENSE FOR THE WORKMEN ENGAGED AND IS VALID UPTO			
3	WCI POLICY FOR THE WORKMEN ENGAGED ARE AVAILABLE & VALID UPTO			
4	COPIES OF THE ABOVE HAVE BEEN SUBMITTED TO BHEL			
5	WORKERS WAGES FOR THE PREVIOUS MONTH HAVE BEEN DISBURSED AND PAID ACQUITTANCE ROLL SUBMITTED TO BHEL			
6	PF HAS BEEN DEDUCTED AS PER RULES AND PAID CHALLAN SUBMITTED TO BHEL			
7	PLEASE QUOTE YOUR PAN NO.			
8	PLEASE QUOTE YOUR GST REGN. NO.			
9	GST FOR THE PREVIOUS MONTH HAS BEEN REMITTED AND PROOF OF PAYMENT HAS BEEN ATTACHED WITH THE CURRENT BILL			
10	BANK GUARANTEE FOR SECURITY DEPOSIT/ADVANCE PAID ARE VALID UPTO			
11	PROOF OF GST REGISTRATION SUBMITTED			
12	PERIODICAL REPORTS AS PER CONTRACT HAS BEEN SUBMITTED			
13	"QUALITY ASSURANCE LOG SHEETS, PROTOCOLS & OTHER DOCUMENTS AS REQUIRED UNDER SECTION 8 OF THE CONTRACT HAS BEEN SUBMITTED AND NECESSARY APPROVAL OBTAINED.			
14	LOG SHEETS FOR EXTRA / ADDITIONAL WORK CARRIED OUT AS PER CONTRACT HAS BEEN SUBMITTED TO BHEL			

BIDDER

BHEL

DATE:

PLACE:



ANNEXURE-A

FINANCIAL VIABILITY

1. Owner's capital in the business (in case of Partnership, please mention percentage shares and amount).

2. Quantum of business done during last three financial years
 - i) Rs..
 - ii) Rs.
 - iii) Rs.

3. Value of fixed Assets of the business in last three YEARS
 - i) Rs.
 - ii) Rs.
 - iii) Rs.

4. Guarantee limits (if any) enjoyed by the firm:

5. Over draft limits (if any enjoyed by the firm:

6. Please enclose audited profit and loss Account and balance sheet for last 3 years :
(Indicate no. of sheets).

7. Certificate from Scheduled Bank to prove Bidder's financial capacity to undertake the work duly indicating the financial Limit the bidder enjoys:

NOTE:

All the above documents should be duly certified by auditors/ Bank as may be Applicable.



ANNEXURE – B

MONTHWISE MANPOWER DEPLOYMENT PLAN

Manpower	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Site-In Charge																		
Engineer																		
Supervisor																		
Fitter																		
Welder																		
Electrician																		
Instrument Technician																		
Helpers																		
Store Keepers																		
Office Assistant																		



ANNEXURE – C

MONTHWISE T&P DEPLOYMENT PLAN

TOOLS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
ROLLER																		
Continuity and LAN Tester																		
Electrical Tool Kit																		
Milliamp Source																		
Ferruling M/C																		
Megger Kit																		
Hand Lamp with Cable																		
Tube Bending M/C																		
Grinding and Rigging M/C																		
Welding M/C																		
G.I Pipe Threading M/C																		
Blower																		
Cable Tracer																		
Pneumatic Fork Lift/Hand Trolley																		
Cable Termination Kit, Wrench Set, Punchers etc.																		



ANNEXURE -D
ANALYSIS OF UNIT RATE QUOTED

S.NO.	DESCRIPTION	PERCENTAGE OF UNIT RATE QUOTED	REMARKS
1	Site Establishment and Administration Expense		
2	Salary & Wage for Staff & Workers		
3	Consumables(Refer Note)		
4	Depreciation & Maintenance for T&P		
5	Overheads		
6	Profit		
	TOTAL		

Note:

- (a) Cutting Gas
- (b) Welding Electrodes
- (c) Lugs, Ferrules, Insulation and Teflon Tapes
- (d) Identification Tag Plates

(SIGNATURE OF BIDDER)
WITH STAMP



ANNEXURE - E
DECLARATION SHEET

I, -----hereby certify that, all the information and data furnished by me with regard to this Tender Specification No.----- are true and complete to the best of my knowledge. I have gone through the specification, conditions and stipulations in detail and agree to comply with the requirements and intent of specification.

I, further certify that I am the duly authorized representative of the under mentioned bidder and a valid power of attorney to this effect is also enclosed.

Bidder's Name & Address

Bidder's representative's signature with name and address.



ANNEXURE - F

CHECKLIST AND SCHEDULE OF GENERAL PARTICULARS

CHECKLIST OF DETAILS AND ENCLOSURES.

Note: Please fill up the list with details OR select the option with tick mark appropriately. No column should be left blank.

1.	Name and Address of the Bidder	
2.	Contact Details	Phone No: Mobile no: Fax No.: Email address:
3.	EMD payment details:	Mode of payment:
4.	Name & designation of the official of the bidder to whom all the references shall be made.	
5.	Bidder's proposal No. & date	
6.	Whether EMD submitted (By Cash/ Pay Order/ Bank Draft/ SBI Collect)	YES / NO
7.	Validity of offer / rates quoted for 90 days from the date of opening of Tender: mentioned in tender document	YES / NO
8.	Offer Forwarding Letter (Annexure-2) enclosed.	YES / NO
9.	No Deviation Certificate (Annexure-3) enclosed	YES / NO
10.	Declaration confirming knowledge about site conditions (Annexure-4) enclosed	YES / NO
11.	Declaration on relations in BHEL (Annexure-5) enclosed	YES / NO
12.	Non-disclosure agreement (Annexure-6) enclosed	YES / NO



External Services
BHEL-EDN, BANGALORE

13.	Format For Claim For Refund Of Security Deposit (Annexure-7) enclosed	YES / NO
14.	Declaration sheet as per Annexure-8 enclosed	YES / NO
15.	Copy of PAN No of Tender (Copy of the same to be enclosed)	YES / NO
16.	EFT Form as per Annexure-9 enclosed	YES / NO
17.	GST Registration no (if applicable)	
18.	GST rate Applicable: - (%) Same as quoted in PART-II Bid	
19.	Tax quoted in price bid, Tick as applicable with %	IGST Or SGST + CGST Or UTGST + CGST
20.	HSN Code SAC Code	

NOTE: Bidders are requested to fill in the above details and no column should be left blank

Date _____

(SIGNATURE OF BIDDER WITH STAMP)

WITNESS

(SIGNATURES WITH FULL PARTICULARS)

1.

2.



ANNEXURE - G

BANK GUARANTEE FOR SECURITY DEPOSIT and EMD

B.G. NO.

Date

This deed of Guarantee made and executed on this ----- day of -----two thousand by ----- (Bank Name & Address) registered under the Companies Act 1956/Nationalized Bank constituted under the banking companies (acquisition and transfer of undertakings) Act -----having its registered/ head office atrepresented herein by its branch manager or authorized representative Sri. And Sri. (here in after called the "The Guarantor" which expression shall unless repugnant to the context or meaning thereof be deemed to include its successors and assigns):

IN FAVOUR OF

M/s Bharat Heavy Electrical Limited (A Govt. of India Undertaking) a company incorporated under the Companies Act, 1956, having its registered office at BHEL House, Siri Fort, Asiad, New Delhi – 110049 through its unit at **Electronics Division** , P.B No. 2606, Mysore Road ,Bangalore 560 026 hereinafter called "The Company" (which expression shall unless repugnant to the context or meaning thereof by deemed to include its successors and assigns)

WHEREAS -----(hereinafter referred to as the Bidder which term shall mean and include its liquidators, successors and assigns) have entered into a Contract arising out of Letter of Intent no.----- date.----- (hereinafter referred to as "the Contract") for the work of ----- with the company.

And the Bidder has agreed to carry out the works as detailed and in accordance with the terms set out in the said Letter of Intent.

AND WHEREAS the Contract inter-alia provides that the Bidder shall furnish the Bank Guarantee in favor of the company for a sum of Rs.----- (Rupees-----) towards security deposit for service rendered to them and for due and faithful performance of the Contract in the manner and form specified therein.

AND WHEREAS the Bidder is a customer of the “Guarantor” and has approached the Guarantor to furnish on their behalf an irrevocable Guarantee for a sum of Rs. (Rupeesonly) in favor of the Company for a period ofyears commencing from to as security for the services to be issued by the Company to the Bidder during the currency of this guarantee.

AND Whereas the Guarantor has agreed to furnish a guarantee for the said sum of Rs. (Rupeesonly) for a period of years commencing from to In favor of the Company subject to the terms and conditions stated below:



Now this deed witnesses that in pursuance of the above said agreement, the Guarantor hereby agrees and covenants with the Company is as follows:

That during the period this Contract of guarantee remains effectual, the Guarantor shall be liable with respect to the amount due and owing to the Company in respect of the payments to the extent of Rs.(Rupees only) against any claim by the company on them for any loss, damage, costs, charges and expenses caused to or suffered by the company by reasons of the Bidder making any default in the performance, observance or discharge of the terms, conditions, stipulations or undertakings or any of them as contained in the Contract.

The decision of the company whether any default has occurred or has been committed by the Bidder in the performance, observance or discharge of any of the terms, conditions, stipulations or undertakings or any one of them as contained in the Contract and / or as to the extent of loss, damage, costs, charges and expenses caused to or suffered by the company by reason of the Bidder making any default in the performance, observance or discharge of any of the terms, conditions, stipulations or undertakings or any one of them shall be conclusive and binding on the Guarantor irrespective of the fact whether the Bidder admits or denies the default or questions the correctness of any demand made by the company in any Court, Tribunal or Arbitration proceedings or before any other Authority.

The company shall have the fullest liberty without affecting in any way the liability of the Guarantor under this Guarantee, from time to time to vary any of the terms and conditions of the Contract or extend time of performance by the Bidder or to postpone for any time and from time to time any of the powers exercisable by it against the Bidder and either enforce or forebear from enforcing any of the terms and conditions governing the Contract or securities available to the company and the Guarantor shall not be released from its liability under these presents by any exercise by the company of the liberty with reference to the matters aforesaid or by reasons of time being given to the Bidder or any other forbearance, act or commission on the part of the company or any indulgence by the company to the Bidder or any other matter or thing whatsoever which under the law relating to sureties would, but for this provision have the effect of so releasing the Guarantor from its liability under this guarantee.

The Guarantor further agrees that the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the Contract and its claim satisfied or discharged and till the company certifies that the terms and conditions of the Contract have been fully and properly carried out by the Bidder and accordingly discharges this Guarantee, subject however, that the company shall have no claim under this Guarantee after ----- i.e. (the present date of validity of Bank Guarantee unless the date of validity of this Bank Guarantee is further extended from time to time, as the case may be) unless a notice of the claim under this Guarantee has been served on the Guarantor before the expiry of the said period in which case the same shall be enforceable against the Guarantor notwithstanding the fact that the same is enforced after the expiry of the said period.

The Guarantor undertakes not to revoke this Guarantee during the period it is in force except with the previous consent of the Company in writing and agrees that any liquidation or winding up or insolvency or dissolution or any change in the constitution of the Bidder or the Guarantor shall not discharge the Guarantor's liability hereunder.



It shall not be necessary for the company to proceed against the Bidder before proceeding against the Guarantor and the Guarantee herein contained shall be enforceable against them notwithstanding any security which the Company may have obtained or obtain from the Bidder shall at the time when proceedings are taken against the Guarantor hereunder be outstanding or unrealized.

Notwithstanding anything contained herein before, our liability under the Guarantee is restricted to Rs.----- (Rupees-----) Our guarantee shall remain in force until -----, i.e. (the present date of validity of Bank Guarantee unless the date of validity of this Bank Guarantee is further extended from time to time) unless a claim or demand under this guarantee is made against us on or before ----- we shall be discharged from our liabilities under this Guarantee thereafter.

Any claim or dispute arising under the terms of this documents shall only be enforced or settled in the courts of Bangalore only.

The Guarantor hereby declares that it has power to execute this guarantee and the executant has full powers to do so on behalf of the Guarantor.

IN WITNESS whereof the ----- (Bank) has hereunto set and subscribed its hand the day, month and year first, above written.

Signed for and on behalf of the Bank

Signatory No.-----)

WITNESS:

- 1. Name & Address
- 2. Name & Address

Notes :

- 1. The above BG shall be executed on the non-judicial stamp papers of adequate value procured in the name of the bank in the state where the bank is located.
- 2. The above BG is required to be sent by the executing bank directly to BHEL at the address where tender is submitted / accepted under seal cover.
- 3. Six months Claim period from the date of expiry of validity should be given



LIST OF MEMBER BANKS

1. State Bank of India CAG Branch, 10th Floor, Vijaya Building, Barakhamba Road, New Delhi – 110001	8. Deutsche Bank, Tolstoy Marg, New Delhi – 110001
2. Canara Bank 74, Janpath, New Delhi – 110001	9. Citi Bank N A JeevanVihar Building, SansadMarg, New Delhi – 110001.
3. Punjab National Bank, 74, Janpath, New Delhi – 110001.	10. Standard Chartered Bank, H2 Block, Connaught Place, New Delhi – 110001.
4 State Bank of Hyderabad, Surya Kiran Building, K.G. Marg, New Delhi – 110001.	11. ICICI Bank Ltd., ICICI Tower, BishamPitamahMarg, PragatiVihar, New Delhi – 110003.
5. State Bank of Mysore, AntrikshBhawan, K.G. Marg, New Delhi – 110001.	12. IDBI Bank Ltd., 19, K.G. Marg, Surya Kiran Building, New Delhi.
6. State Bank of Mysore, Industrial Finance Branch, 18, Ramanashree Arcade, M.G. Road, Bangaloe – 560001.	13. HSBC Ltd., ECE House, 28 KG Marg, New Delhi – 110001.
7. State Bank of Travancore, Travancore House, IF Branch, K.G. Marg, New Delhi – 110001.	14. Bank of Baroda, Corporate Banking Branch, 11th Floor, BOB Building, SansadMarg, New Delhi – 110001.
BGs from any other branches of above mentioned banks are acceptable.	



ANNEXURE-H
FORMAT FOR CLAIM FOR REFUND OF SECURITY DEPOSIT

- Ref: _____ Date: _____
1. Name of Contract _____ :
 2. W.O. No & Date _____ :
 3. Contract Agreement & Date _____ :
 4. Name of the work undertaken _____ :
 5. Date of Commencement of Work _____ :
 6. Date of Completion of work _____ :
 7. Period of maintenance _____ :
 8. Date of which Final bill was paid _____ :
 9. Last date of making good the defect during _____ :
maintenance period
 10. Expenditure incurred by BHEL during the _____ :
maintenance period, if any recoverable
 11. Date on which security Deposit falls due as per :
Contract
 12. Amount deposited or recovered _____ :
 13. Less Amount recoverable (with details) _____ :
 - 13.01 Amount Spent by BHEL on _____ :
 - 13.02 Payment made on behalf of Bidder _____ :
 - 13.03 Court dues / penalties / compensation _____ :
 - 13.04 Other recoveries for services _____ :
 - 13.05 Security Deposit released with final bills _____ :
 14. Net Amount recommended for release (12-13) _____ :



CERTIFICATE TO BE FURNISHED BY BIDDER

Ref. Work Order No. dated

I / We have no claim of demand outstanding against BHEL, Bangalore 560026 for the work done or materials supplied or on any account arising out or connected with the work order mentioned above and the payment of this bill is in full & final settlement of all my/our claims and demands including the deposits in respect of the Contract agreement referred to.

Date:

Signature of Bidder

CERTIFICATE TO BE FURNISHED BY ENGINEER

Certified that

The payment recommended for release is in order and that there are no demands other than those included in the claim outstanding from the Contract.

The maintenance period as per the Contract agreement is over and the Bidder has carried out the works required to be carried out by him during the period of maintenance to our satisfaction and all expenses incurred by the company on carrying out such works have been included for adjustment.

All other objections raised so far have been settled.

A note of refund of security deposit has been made in the measurement book and Contract agreement / work order.

Date:

Signature of Engineer

FOR USE OF ACCOUNTS DEPARTMENT

Passed for Rs...../- (Rupees _____ only)
Accountant Accounts officer

ACKNOWLEDGEMENT BY THE BIDDER

Received Rs...../- (Rupees _____ only) in full and final settlement of my / our claim.

Date:

Signature of Engineer



ANNEXURE - I

**FORMAT OF DECLARATION (ON BIDDER'S LETTER HEAD) TO BE GIVEN WITH
FINAL BILL**

Ref:

Date:

To:

BHEL - Electronics Division,
PB.No.2606,
Mysore Road
Bangalore – 560026

Dear Sir / Madam

Ref: Your W.O NO..... Date:

This is to certify that

1. We have made full & final payment (Retrenchment Compensation, One month notice / notice pay in lieu thereof, payment for un availed portion of EL etc. as applicable) to all our workers and as on today nothing is pending / payable to any worker on account of wage & other benefits.
2. We have complied with relevant provisions of employees provident fund and misc. provisions Act 1952 and rules made there under and we have deposited up to date PF contribution under PF code No:.....
3. No one was injured / died due to accident during the period of Contract in the execution of the work and hence no compensation payment is applicable.
4. No labour payment is pending with us.
5. We hereby certify that the work was completed in accordance with terms and conditions of the said work order / award letter and all the particulars as declared above are true to the best of my knowledge & belief.
6. That in case principal employer is held responsible / liable to pay any amount/penalty charge by an order of the court, arbitrator or authority due to acts or omissions of the Bidder M/shereby undertakes to indemnify the principal employer to deduct that amount from our bills payable by you in any other Contract.
7. No other claims against this Contract / work order will be made by..... on BHEL Bangalore.

Thanking You,

Yours Sincerely
Signature of the Bidder



SECTION – VII SPECIFICATION FOR HEALTH, SAFETY AND ENVIRONMENT (HSE)

1.0 SCOPE

This specification establishes the Health, Safety and Environment (HSE) management requirement to be complied with by the Bidders during construction. Requirements stipulated in this specification shall supplement the requirements of HSE Management given in relevant Act (s) /legislations, General Condition Contract (GCC). Special Conditions of Contract (SCC) and job specification where different documents stipulates different requirements, the most stringent is to be adopted.

1.0 REFERENCES

This document should be read in conjunction with following:

- General Conditions of Contract (GCC)
- Special Conditions of Contract (SCC)
- Scope of work
- Relevant IS Codes (refer Annexure-I)

3.0 REQUIREMENTS OF HEALTH, SAFETY & ENVIRONMENT (HSE) MANAGEMENT SYSTEM TO BE COMPLIED BY BIDDERS.

3.1 MANAGEMENT RESPONSIBILITY

3.1.1 The Bidder to comply with HSE requirement at Construction sites as enclosed to cover commitment of their organization to ensure health, safety and environment aspects in their line of operations.

3.1.2 The HSE management system shall cover the HSE requirements including but not limited to what is specified under Para 1.0 and para 2.0 above.

3.1.3 Bidder shall be fully responsible for planning and implementing HSE requirements. Bidder as a minimum requirement shall designate/deploy the following to co-ordinate the above

No. of workers deployed up to 250	- Designate one safety Supervisor
Above 250 & up to 500	- Deploy one qualified and experienced safety Engineer/ Officer
Above 500 for every 500 or less	- One additional safety engineer / officer, as above.

Bidder shall indemnify & hold harmless Owner/BHEL & their representatives free from any and all liabilities arising out of non-fulfillment of HSE requirement.



3.1.4 The Bidder shall ensure that the Health, Safety and Environment (HSE) requirements are clearly understood & faithfully implemented at all levels at site.

3.1.5 BHEL shall promote and develop consciousness for Health, Safety and Environment among all personnel working for the Bidder. Regular awareness programs and work site meetings shall be arranged on HSE activities to cover hazards involved in various operations during construction.

3.1.6 The Bidder shall arrange suitable first aid measures such as First Aid Box, trained personnel to give First Aid and install fire protection measures such as adequate number of steel buckets with sand and water to the satisfaction of BHEL/Owner.

3.1.7 Non-Conformance on HSE by Bidder (including his Sub-Bidders) as brought out during review / audit by BHEL/Owner representative shall be resolved forthwith by Bidder. Compliance report shall be provided to BHEL.

3.1.8 The Bidder shall ensure participation of his Resident Engineer / Site-In- Charge in the Safety Committee / HSE Committees meetings arranged by BHEL / Owner. The compliance of any observations shall be arranged urgently. He shall assist BHEL / Owner to achieve the targets set by them on HSE during the project implementation.

3.1.9 The Bidder shall adhere consistently to all provisions of HSE requirements. In case of non-compliance or continuous failure in implementation of any of HSE provisions, BHEL / Owner may impose stoppage of work without any Cost & Time implication to BHEL / Owner and / or impose a suitable penalty for noncompliance with a notice of suitable period, up to a cumulative limit of 1.0% (one percent) of Contract value. This penalty shall be in addition to all other penalties specified elsewhere in the Contract. The decision of imposing stoppage of work, its extent & minority penalty shall rest with BHEL / Owner & binding on the Bidder.

3.1.10 all fatal accidents and other personnel accidents shall be investigated by a team of Bidder's senior personnel for root cause & recommended corrective and preventive actions. Findings shall be documented and suitable actions taken to avoid recurrences shall be communicated to BHEL / Owner. BHEL / Owner shall have the liberty to independently investigate such occurrences and Bidder shall extend all necessary help and co-operation in this regard.



3.2 HOUSE KEEPING

3.2.1 Bidder shall ensure that a high degree of housekeeping is maintained and shall ensure interlay; the following whichever is applicable to his nature of work:

- a) All surplus earth and debris are removed / disposed off from the working areas to identified locations (s).
- b) Unused/Surplus Cables, Steel items and steel scrap lying scattered at different places within the working areas are removed to pre-identified location (s).
- c) All wooden scrap, empty wooden cable drums and other combustible packing materials, shall be removed from work place to identified location(s).
- d) Roads shall be kept clear and materials like pipes, steel, sand boulders, concrete, chips and brick etc., shall not be allowed on the roads to obstruct free movement of men & machineries.
- e) Fabricated steel structural, pipes & piping materials shall be stacked properly for erection.
- f) Water logging on roads shall not be allowed.
- g) No parking of trucks/trolleys, cranes and trailers etc., shall be allowed on roads which may obstruct the traffic movement.
- h) Utmost care shall be taken to ensure over all cleanliness and proper upkeep of the working areas.
- i) Trucks carrying sand, earth and pulverized materials etc., shall be covered while moving within the plant area.

In case of non-compliance of any of above, BHEL shall have the liberty to get it done from some other agency at this risk and cost.

3.3 HEALTH, SAFETY AND ENVIRONMENT

3.3.1 The Bidder shall provide safe means of access to any working place including provisions of suitable and sufficient scaffolding at various stages during all operations of the work for the safety of his workmen, and BHEL / Owner.

Bidder shall ensure deployment of appropriate equipment and appliances for adequate safety and health of the workmen and protection of surrounding areas.

3.3.2 The Bidder shall ensure that all their staff and workers wear Safety Helmet and Safety shoes. Bidder shall also ensure use of safety belt, protective goggles, gloves etc., by the personnel as per job requirements. All these gadgets shall conform to relevant IS specifications or equivalent.

3.3.3 The Bidder shall assign to his workmen, tasks commensurate with their qualification, experience and state of health for driving of vehicles, handling and erection of material and equipment's. All lifting equipment's shall be tested certified for its capacity before use. Adequate and suitable lighting at every work place and approach there to, shall be provided by the Bidder before starting the actual operations at night. It is mandatory for Bidder to get his work men medically examined / checked for fitness of work assigned once a year and furnish the certificate to that effect from RMP / Govt. Hospital.



3.3.4 Hazardous and / or toxic materials such as solvent, coating or thinners shall be stored in appropriate containers.

3.3.5 All hazardous materials shall be labeled with the name of the materials, the hazards associated with its use and necessary precautions to be taken.

3.3.6 Bidder shall ensure that during the performance of the work, all hazards of the health of personnel, have been identified, assessed and eliminated.

3.3.7 Chemical spills shall be contained and cleaned up immediately to prevent further contamination.

3.3.8 All personnel exposed to physical agents such as ionizing or non-ionizing radiation, ultraviolet rays or similar other physical agents shall be provided with adequate shielding or protection commensurate with the type of exposure involved.

3.3.9 Where contact or exposure of hazardous materials could exceed limits or could otherwise have harmful effects, appropriate personnel protective equipment such as gloves, goggles, aprons, chemicals resistant clothing and respirator shall be used.

3.3.10 All persons deployed at site shall be knowledgeable of and comply with the environmental laws, rules & regulations relating to the hazardous materials substances and wastes. Bidder shall not dump, release or otherwise discharged or disposed off any such materials without the express authorization of BHEL Site Office/ CSPGCL KORBA STPS.

4.0 DURING JOB EXECUTION

4.1 Implement Health, Safety and Environment requirements including but not limited to as brought out under para 3.0. Bidder shall ensure to :

- Arrange workmen compensation insurance, registration under ESI Act, third party liability insurance etc., as applicable.
- Arrange all HSE permits before start of activities (as applicable) like hot work, confined space, work at heights, storage of chemical / explosive materials and its use and implement all precautions mentioned therein.
- Submit timely the completed checklist on HSE activities, Monthly HSE report, accident reports, investigation reports etc., as per requirement of BHEL Site Office/ CSPGCL KORBA STPS. Compliance of instructions on HSE shall be done by Bidder and informed urgently to BHEL / Owner.
- Ensure the Resident Engineer / Site-In charge of the Bidder shall attend all the Safety Committee / HSE meetings arranged by BHEL/CSPGCL. In case of his absence from site that a second senior most person shall be nominated by him in advance and communicated to BHEL/Owner.



External Services
BHEL-EDN, BANGALORE

- Display at site office and work locations caution boards, list of hospitals, emergency services available.
- Display posters, banners made available by BHEL for safe working to promote safety consciousness.
- Assist in HSE audits by BHEL / Owner and submit compliance report.
- Generate and submit HSE records / report as per HSE plan.
- Appraise BHEL / Owner on HSE activities at site.

5.0 The Bidder shall also adhere to the Safety Norms of BHEL's Customer 4 X 210 MW CSPGCL KORBA HTPS that is provided in Annexure - II



ANNEXURE - I

RELEVANT INDIAN STANDARDS (IS) – CODES FOR PERSONAL PROTECTION

IS: 2925-1984	Industrial Safety Helmets
IS: 4770-1968	Rubber gloves for electrical purposes
IS: 6994, 1973 (Part-I) Gloves)	Industrial Safety Gloves (Leather & Cotton
IS: 1989-1986 (Part I & III)	Leather safety boots and shoes
IS: 3738-1975	Rubber knee boots
IS: 5557-1969	Industrial and Safety rubber knee boots
IS: 6519-1971	Code of practice for selections, care and repair of Safety footwear
IS: 11226-1985	Leather Safety footwear having direct molding sole
IS: 5983-1978	Eye protectors
IS: 9167-1979	Ear protectors
IS: 3521-1983	Industrial Safety belts and harness



ACCIDENT CUM FIRE REPORT

(To be submitted by Bidder after every accident within 24 hours of accident)

Report: _____

Date: _____

Name of Site: _____

BIDDER _____

NAME OF THE INJURED _____

FATHER'S NAME _____

SUB-BIDDER M/S _____

DATE & TIME OF ACCIDENT _____

LOCATION _____

BRIEF DESCRIPTION OF ACCIDENT

CAUSE OF ACCIDENT

NATURE OF INJURY/DAMAGE

MEDICAL AID PROVIDED/ACTIONS TAKEN

INTIMATION TO LOCAL AUTHORITIES

DATE:

SIGNATURE OF BIDDER
WITH SEAL

TO: SITE-IN-CHARGE/BHEL 1 COPY



SUPPLEMENTARY ACCIDENT & INVESTIGATION REPORT

Project: _____ Supplementary to Report No. _____
(Copy enclosed)

Site: _____ Date: _____

BIDDER _____

NAME OF THE INJURED _____

FATHER'S NAME _____

SUB-BIDDER M/S _____

DATE & TIME OF ACCIDENT _____

LOCATION _____

BRIEF DESCRIPTION & CAUSE OF ACCIDENT

NATURE OF INJURY/DAMAGE

COMMENTS FROM MEDICAL PRACTITIONER, WHO ATTENDED THE
VICTIM / INJURED

SUGGESTED IMPROVEMENT IN THE WORKING CONDITION, IF ANY

LOSS OF MANHOURS AND IMPACT ON SITE WORKS

ANY OTHER COMMENT BY SAFETY OFFICER

DATE:

SIGNATURE OF BIDDER
WITH SEAL

TO: SITE-IN-CHARGE/BHEL 1 COPY



Annexure – II

Safety Norms at CSPGCL KORBA HTPS

The Successful Bidder / Bidder should adhere to the following Safety Norms (and also any other safety Norms that may be communicated in future) of BHEL's Customer FSTPS.

1. The Bidder shall submit a Safety Policy and safety action plan for safe execution of the scope of contract in line with the "Health & Safety Manual of CSPGCL. The same need to be approved by CSPGCL Safety dept. **at CSPGCL KORBA HTPS**. The Bidder will be allowed to mobilize after obtaining "safety clearance" from CSPGCL safety dept.
2. The bidder shall provide minimum one safety officer in each shift during pre-shutdown Erection Work and Commissioning work during Shut Down period.
3. The Bidder shall submit the organization structure for the site. The Bio-data of the nominated safety officer including Name, Qualification and Experience shall be submitted to CSPGCL safety dept. in advance for approval of the same.
4. The Bidder shall submit Review of Accident Analysis Method, Method to ensure Safety and Health.
5. The Bidder shall submit to the CSPGCL safety dept. list of Employees trained in Safety before executing the Job and List of Construction Equipment, Lifting Appliances, Machineries, etc. to be deployed.
6. Bidder must ensure safety induction training, all kind of requisite training viz. working at height, operation of fire extinguishers, dealing with all kinds of fire etc. & issue identity card to all its employees before engaging them in the work. The identity card issued by Bidder will be treated as temporary gate pass till obtaining gate passes from CSPGCL security dept.
7. The Bidder shall ensure all necessary care taken along with safety precaution, adequate supervision in order to do the job safely & without damage to any property and environment. He shall furnish details of checklist for different jobs/work and responsible person to ensure compliance.
8. The Bidder shall arrange for all kind of medical checkup at Local Facility available within CSPGCL premises.
9. Unless mentioned otherwise, the Bidder shall provide the necessary Personal Protective Equipment (PPEs) including safety Helmet and Safety Shoes to all workmen and supervising staff at his own cost. The PPEs should be in good condition and conform to relevant national or international standards/code.
10. The Bidder shall submit the fitness certificate, Insurance Copy, Road Challan for all Construction Equipment, Lifting Appliances, Machineries, etc. to CSPGCL.
11. Bidder shall ensure that all the Lifting Appliances and Lifting Tools & tackles have the valid load test certificates issued by a third party competent authority, approved by



Directorate of Factories & Boilers, West Bengal. The certificate of competent authority should be submitted to BHEL/ CSPGCL.

12. All electrical appliances, hand tools, cables, distribution boards, etc. should be in good working condition and confirm to be IS standard and connected in such a manner, which is safe with respect to overload, electrical shock and short circuit.
13. Electrical equipment used in Plotline should not have earth connection. This is to be checked and specially marked by the Pot room Electrical In-Charge.
14. The Bidder shall ensure that the safety of other workmen working nearby is not endangered due to the work execution.
15. The Bidder shall obey the safety signage and safety instructions displayed inside the premises and must not alter in anyway.
16. The Bidder shall abide by the existing “permit to work system” and the revisions / amendments as notified from time to time.
17. The Bidder shall abide by the notifications, circulars, resolutions, etc. issued by CSPGCL from time to time.
18. The Bidder shall abide by the provisions of Factories Act, West Bengal Factories Rules, Workmen Compensation Act, Payment of wages Act, Contract Labor (Regulations) Act, etc. and keep the principal employer indemnified of provisions of the above acts & rules.
19. In case of Injury to persons, the Bidder shall administrate the necessary first aid and then take to the Plant First Aid Centre.
20. All the accident / incident / near miss case shall be reported to CSPGCL along with the investigation report , corrective and preventive measures
21. The Bidder shall be fully responsible for accidents caused due to negligence or carelessness in regard to the observances of the safety requirements and shall be liable to pay compensations for injuries.
22. If required the executing department of CSPGCL would take the necessary shutdowns where there are hazards of gases, electricity, moving machineries, etc. The Bidder shall ensure that the shutdown / clearance are taken appropriate clearance/permit are to be taken for working at height, confined space welding & cutting in fire prove area, deep excavation before sending workmen to such locations and also ensure that the equipment’s are under the state of Zero energy. After completion of the work the clearances shall be returned to the issuing department.
23. In case of violation of safety norms with reference to the Health & Safety Manual of CSPGCL and instructions given time to time the penalty clauses as mentioned in the H&S manual- CSPGCL shall come into force. Work stoppage order may be issued in addition to the imposing of penalty. The contract may be terminated for severe breach of contract clause/ clauses or any such violation which has very severe impact in terms of Health, Safety and Environment.
24. The Bidder & his workmen will extend full support to the internal and external safety audit team member from CSPGCL during audit/inspection/check.



25. Bidder to specify safety for round the clock working (especially during night) whenever it is required and take necessary permit from CSPGCL Safety before start of Work.
26. **No bill will be passed by the Finance Dept., if safety clearance (in the sample format provided here) duly certified by the HTPS Safety Dept. is not enclosed with bill.**

CSPGCL Safety Clearance Form

Safety Clearance for the Month of DATE

1. Name of Bidder
2. Address (Present)
-
- Address (Permanent)
-
-
3. Work Order No. with date
4. Department Location & Nature of Work
5. Name of the (Bidder/ Sub-Bidder)
6. Name of the employer
7. Whether Bidder workers are to be engaged in G / A / B / C / Shift
8. Proposed date of starting the work
9. Name & Qualification of Supervisors (Experience certificates..... To be attached for approval)
10. Name, Age, Work Experience, & Voter ID of workers (List to be attached)
11. Name of Electrician, Valid License & Work Experience.....
12. No. of workmen Inducted Safety Training & Date
13. Form 31-A (List to be Attached)
14. H.S. Manual (Attached)

NOTE:

- i) No person below 18 years of age engaged for work inside Plant Premises.
- ii) No Female to be deployed near moving belt conveyors & after 6 pm.
- iii) No loose clothing allowed inside the plant.



15. No. of PPE issued

- | | |
|-------------------|------------------------------|
| i) Safety Shoes- | ii) Safety Helmet- |
| iii) Safety Belt- | iv) F. R. APPRON/DRESS- |
| v) Goggles - | vi) Ear Muff / Ear plug- |
| vii) Face shield- | viii) Nose Mask- |
| ix) Gum boot - | x) Fall Arrester & Lifeline- |

- B) i) No. of persons required to work at a**
 Height of 2 meters & above
- ii) Training for height work (Document to be attached).....
- iii) Height pass issued

16. Certificate by the Bidder

I have understood the safety instructions of Safety & Fire Department and I shall adhere to all the safety precautions / rules as mentioned in the Safety Clauses in the Work order so as to ensure the safety and health of all my workers engaged on the above job. I have also received a copy of the safety instructions for Bidder. I also certify that the information furnished by me is correct.

Date:
Stamp

Signature of the Bidder with

17. Certificate by the Department

Certified that the Bidder M/s..... has been engaged by us for the work described above.

Signature of Deptt. In charge
Name.....
Designation.....

18. Statutory Register

- | | |
|---------------------------------|---|
| i) PPE Register | - |
| ii) Insurance | - |
| iii) Register of Adult Worker - | |
| iv) Form 31- | |
| v) Induction Register | - |
| vi) FIRST AID BOX | - |

19. Fitness certificate of all Lifting Tools, Tackles & Machineries-

20. Certified / Not Certified

The above Bidder has complied statutory requirements as above.

Date:

Head (S, H & F)

Cc: Finance Dept.-For Bill clearance.
Security dept.-For Gate pass



External Services
BHEL-EDN, BANGALORE

PART – II

PRICE BID



RATE SCHEDULE

Scope of Work: Material Shifting and Dismantling of Existing Control & Instrumentation Equipment And Receipt of BHEL supplied Control and Instrumentation equipment from BHEL Stores(Closed shed / Open yard / Container etc.), Dismantling of existing C&I equipments, shifting to place of Erection, installation, alignment , welding, Cable Laying and Termination, Loop Checking, signal conditioning, pre-commissioning and commissioning assistance to BHEL. For SOME of the bought out items, the erection to be carried out will be under the supervision of respective vendor. Only manpower assistance to be provided by the bidder during commissioning & up to defect liability/AMC period. Scope of work also includes Cable Reconciliation, Handing over of left out Cables to CSPGCL designated Area.

SCHEDULE OF PRICE

Notes:

1. The Unit Rates shall be entered in figures as well as in words. In case of difference in rates between words and figures THE LESSER OF THE TWO will be treated as valid.
2. Quantity is indicative only. Rate shall be valid for any upward or downward revision in quantity without any limit.
3. The prices quoted shall be FIRM throughout the period of contract. No escalation in prices will be allowed
4. Adequate No. of Manpower to be provided throughout the Contract Period of 18 months exclusively for assisting BHEL Engineers in Commissioning Activities (in addition to the Manpower employed for regular Erection, Laying and Termination Work during the pre-shutdown and Shutdown period of Work) within the Contract Price.

PROJECT : CSPGCL KORBA (WEST) , CHHATISGARH, STAGE-1, (Rating - 4 x 210 MW), UNIT-1 & UNIT-2							
WORK : R AND M OF ERECTION & COMMISSIONING OF CONTROL & INSTRUMENTATION PACKAGE							
ESTIMATE FOR ERECTION & COMMISSIONING OF CONTROL & INSTRUMENTATION PACKAGE							
Sl. No	ITEM DESCRIPTION	UOM	QTY For Unit -1	QTY For Unit -2	Total Qty.	Unit Rate in Rs. (Exclusive of GST)	Total Value in Rs. (Exclusive of GST)
	DDCMIS PANELS (Panels are in single / two / three / four or five panels per suite formation. Work includes Shifting, minor Civil works like preparation of floor cutouts and foundation pockets for panels, cubicles installation at Control Equipment Room (CER) in Main plant & Off Site location, alignment, welding to the base frame, earthing etc.) This includes Minor civil works for finer / final adjustment of floor cutouts and foundation pockets etc						
1	Suite of One: Cubicle (Dimensions - L X B X H: 750 X 750 X 2100 mm) - Approximate weight = 400 Kg.	No.	16	15	31		
2	Suite of Two: Cubicle (Dimensions - L X B X H: 750 X 1500 X 2100 mm) - Approximate weight = 800 Kg.	No.	18	16	34		
3	Suite of Three: Cubicle (Dimensions - L X B X H: 750 X 2250 X 2100 mm) - Approximate weight = 1200 Kg.	No.	5	5	10		
4	Suite of Four: Cubicle (Dimensions - L X B X H: 750 X 3000 X 2100 mm) - Approximate weight = 1600 Kg.	No.	2	2	4		
	Electrical Control panel (Shifting of panels from stores, Erection of panel, alignment, welding to the base frame,earthing)						
5	Suite of Two: CRE-81 & 82 (Dimensions - L X B X H: 750 X 1500 X 2100 mm) - Approximate weight= 800 Kg.	No.	1	0	1		
6	Generator Relay Panels, Dimension: L X B X H -1000 x 1000 x 2230mm, Weight 660 Kg. approx.	No.	4	4	8		
	HMI ITEMS - Shifting of materials from stores to place to Erection and providing assistance for commissioning.						
7	Work Stations PCs (24 inches) with accessories keyboard and mouse etc.	No.	10	10	20		
8	LVS Operator Station	No.	3	3	6		
9	A4 Color Laser printer	No.	4	4	8		
10	Network Enclosure NWEN-01 (Common for Unit 1 & 2), Dimension: B X D X H : 600 X 600 X 500 Weight: 100 kg. approx	No.	1	0	1		
11	Ethernet Switch	No.	4	4	8		
	Large Video Screens (LVS)- Man power assistance for shifting of materials from stores to place of Erection & also during commissioning.Minor Civil / mechanical works such as grouting, creation of floor openings wherever required related to mounting of LVS, PC racks in unit control room, control equipment room						
12	Large Video Screens(LVS) with other related accessories, Size: 67"	No.	3	3	6		
13	Graphical Controller System for LVS	No.	1	1	2		
	UNIT CONTROL DESK & RACKS - Shifting of material from stores and providing assistance to BHEL's Vendor. Minor Civil / mechanical works such as grouting, creation of floor openings wherever required related to mounting of UCC						
14	Arc shaped Unit Control Desk (L X B X H: 7000 X 1200 X 775 mm) at Main Control Room consisting of 7 sections	Set	1	1	2		
15	Arc shaped Unit Incharge Desk (L X B X H: 2000 X 1050 X 775 mm) at Main Control Room consisting of 2 sections	Set	1	0	1		
	FURNITURE						
16	Printer Rack (L X B X H: 1000 X 950 X 1500 mm) at Main Control Room	Set	2	2	4		
17	Workstation Furniture Rack (L X B X H: 1000 X 950 X 1650 mm) at Main Control Room	Set	1	1	2		
18	Workstation Furniture Rack (L X B X H: 2000 X 950 X 1650 mm) at Main Control Room	Set	2	2	4		
19	Chairs (Normal)	No.	7	7	14		
20	Chairs (High Back)	No.	7	6	13		
	MASTER & SLAVE CLOCK SYSTEM						
21	Scope includes erection of panel (W X D X H - 800 X 800 X 1800 mm). Providing man power assistance during commissioning is in Contractor's scope (Commissioning in vendor scope)	Set	1	0	1	Common for Two Units	
22	Installation of GPS Antenna	No.	1	1	2		
23	Installation of Lightning arrester	No.	1	1	2		

PROJECT : CSPGCL KORBA (WEST) , CHHATISGARH, STAGE-1, (Rating - 4 x 210 MW), UNIT-1 & UNIT-2							
WORK : R AND M OF ERECTION & COMMISSIONING OF CONTROL & INSTRUMENTATION PACKAGE							
ESTIMATE FOR ERECTION & COMMISSIONING OF CONTROL & INSTRUMENTATION PACKAGE							
Sl. No	ITEM DESCRIPTION	UOM	QTY For Unit -1	QTY For Unit -2	Total Qty.	Unit Rate in Rs. (Exclusive of GST)	Total Value in Rs. (Exclusive of GST)
24	Installation of Inline Amplifier	No.	1	1	2		
25	Slave Clock display Units (Location: Control Room, Control Equipment room, HT Switchgear, TG 0 mtr, Other Locations)	No.	4	4	8		
26	Slave Clock for COMMON	No.	0	0	3		
27	Junction Box	No.	5	0	5		
	Interconnection Cables for Master Slave Clock System						
28	GPS Antenna to Receiver Unit (Low Loss Unarmoured Cable)	Mtr.	100	100	200		
29	Flexible Metal Conduit	Mtr.	100	100	200		
30	Cable for IRIG-B Output (Armoured)	Mtr.	3000	3000	6000		
31	Cable for Connecting Pulse Output (Armoured)	Mtr.	250	250	500		
32	Cable for Connecting NTP/SNTP Output (Armoured)	Mtr.	400	400	800		
33	Fiber Optic Cable for connection FO NTP & FO Pulse Output (3C3/ FINOLEX Make)	Mtr.	1250	1250	2500		
	FLAME SCANNERS: Mounting of scanners at Windbox / Burner, racks provided as loose items and Laying of Cable from Scanner to Scanner Racks mounted at Control room- supervision & commissioning by BHEL						
34	Fireball Flame Scanner with Head Assembly, Dimension - Length 72" with Approximate Weight 6 Kgs	No.	28	28	56		
35	Tripple Shielded Cable - F Type	Mtr	9000	9000	18000		
	Instrument Cable - G type						
36	12P X 0.5 sq.mm G Type Unarmoured	Mtr	9500	9500	19000		
37	8P X 0.5 sq.mm G Type Unarmoured	Mtr	4000	4000	8000		
38	4P X 0.5 sq.mm G Type Unarmoured	Mtr	2000	2000	4000		
	Instrument Cable - F type						
39	4P X 0.5 sq.mm F Type Unarmoured	Mtr	1500	1500	3000		
40	12P X 0.5 sq.mm F Type Unarmoured	Mtr	2000	2000	4000		
	LT Power Cable						
41	2C X 2.5 sq.mm	Mtr	1500	1500	3000		
42	5C X 2.5 Sq.mm	Mtr	5500	5500	11000		
43	10C X 2.5 Sq.mm	Mtr	7500	7500	15000		
44	Miniature Junction Boxes	No.	18	18	36		
45	Flame Scanner Amplifier Chasis	No.	7	7	14		
46	Butterfly valve with Limit switch (the work includes installation and cabling)	No.	1	1	2		
	Acoustic Steam Leak Detection system (ASLD) : Mounting of panel at main plant Control room and Sensors at various locations in boiler as per design with associated JB's erection - Supervision and Commissioning of system by BHEL						
47	Single Cubicle of size L X B X H : 800 X 800 X 2315 mm with an Approximate Wt. 300 Kgs	No.	1	1	2		
48	Sensor assembly - Approximate Wt. 22 Kg	No.	18	18	36		
49	48 Way FRP JB's (Size: 420 X 420 X 130 MM)	No.	20	20	40		
50	24 Way FRP JB's (Size: 390 X 310 X 130 MM)	No.	12	12	24		
51	72 Way FRP JB's (Size: 450 X 450 X 130 MM)	No.	23	23	46		
52	Field Amplifier Box - A special Type of 16 Way JB	No.	18	18	36		
53	Desktop PC with Monitor (to be installed in Control Room)	Set	1	1	2		
54	Solenoid Valves for Auto Purging	No.	18	18	36		
55	Air Filter Regulators	No.	18	18	36		
56	Flexible Hose	No.	18	18	36		
	BOILER FIELD INSTRUMENTS						
57	Oil gun with guide pipe	Set	12	12	24		
58	Double coil solenoid valves (24 VDC) for Oil Gun Advance / Retract	No.	12	12	24		
59	Double coil solenoids (24 VDC) for Seal air fan discharge dampers	No.	2	2	4		
60	Single coil solenoid valve (24 VDC) for Emergency suction damper	No.	1	1	2		
61	Double Coil solenoid valve (24 VDC) for Scanner air fan discharge dampers	No.	1	1	2		
62	Double Coil Solenoid valve (24 VDC) for Ignitor Air Fan Discharge damper	No.	2	2	4		
63	Double Coil Solenoid valve (24 VDC) for Hot Air gate	No.	6	6	12		
64	Single coil solenoid Valve (24 VDC) for LOTV	No.	1	1	2		
65	Dual coil solenoid Valve (24 VDC) for Pulvrizer discharge damper	No.	6	6	12		
66	HOTV Single coil solenoid Valve (24 VDC) & HORV dual coil solenoid Valve (24 VDC)	No.	2	2	4		
	SADC system : Erection of power cylinders and SS Tubing wherever necessary. SS tubes and necessary accessories like Nipples, Valves,Hose, Tee etc. will be supplied by BHEL						

PROJECT : CSPGCL KORBA (WEST) , CHHATISGARH, STAGE-1, (Rating - 4 x 210 MW), UNIT-1 & UNIT-2							
WORK : R AND M OF ERECTION & COMMISSIONING OF CONTROL & INSTRUMENTATION PACKAGE							
ESTIMATE FOR ERECTION & COMMISSIONING OF CONTROL & INSTRUMENTATION PACKAGE							
Sl. No	ITEM DESCRIPTION	UOM	QTY For Unit -1	QTY For Unit -2	Total Qty.	Unit Rate in Rs. (Exclusive of GST)	Total Value in Rs. (Exclusive of GST)
67	SADC Pneumatic Power cylinder / actuator (3" X 5") with Positioners	No.	52	52	104		
68	Air Filter Regulators	No.	13	13	26		
69	Pressure Switches	No.	13	13	26		
70	E/P converters	No.	13	13	26		
71	Pneumatic corner valves	Set	52	52	104		
72	Stainless Steel (SS) Tubes , Size: 1/4" dia OD.	Mtr	50	50	100		
73	Mass Flow Meter for HFO flow measurements in main line and return line with Associated Strainer, Mating Flanges, Pulse Amplifier for F to I Converter with Flame Proof Housing.	Set	2	2	4		
74	Mass Flow Meter for LDO flow measurements in main line and return line with Associated Strainer, Mating Flanges, Pulse Amplifier for F to I Converter with Flame Proof Housing.	Set	1	1	2		
	FIELD INSTRUMENTS						
	TRANSMITTERS: Wherever standalone transmitters mounting is envisaged, fabrication of support in bidder's scope and required structural steel and impulse pipes as per installation scheme will be supplied by BHEL.						
75	Electronic Pressure Transmitters	No.	73	73	146		
76	Differential Pressure Transmitters	No.	24	24	48		
77	Guided Wave Radar type Level Transmitters	No.	30	23	53		
78	Single Input DIN rail mounted Temperature Transmitters	No.	350	350	700		
79	Dual Input temperature transmitters with indicators	No.	127	127	254		
	RTD with Sheath	No.	77	77	154		
	TRANSDUCERS : Mounting of loose Transducers (DIN rail / base plate) inside panels at main plant / remote I/O's						
80	Current Transducers	No.	89	89	178		
81	Voltage Transducers	No.	30	30	60		
82	PF Transducers	No.	1	1	2		
83	Frequency Transducers	No.	2	2	4		
84	Power Transducers	No.	6	6	12		
85	Synch Check Relay	No.	2	2	4		
86	Synch Guard Relay	No.	2	2	4		
87	Aux Relay for Synch check synch	No.	1	1	2		
88	Aux PT 110/110V	No.	2	2	4		
89	Aux PT 63.5/110V	No.	1	1	2		
90	Transducer Cabinet	No.	1	1	2		
91	Position Transmitter for Quick Closing NRV	No.	8	8	16		
92	Electro Pneumatic Smart positioners/position feedback transmitters : Manpower assistance to be provided during installation and commissioning to BHEL Engineers/Vendors. Positioners will be supplied along with mounting and fitment accessories.	No.	55	55	110		
	G.I. PERFORATED CABLE TRAYS: Installation work includes supports using ISMC / ISA and welding on to structure/fixing with fasteners (Supply of Angle / Channel in BHEL Scope). Fasteners in bidder's scope.						
93	CABLE TRAY OF Size: W X H X T - 50 X 50 X 2.5 X 2500 mm	Mtr.	1875	1875	3750		
94	CABLE TRAY OF Size: W X H X T - 100 X 50 X 2.5 X 2500 mm	Mtr.	165	165	330		
95	CABLE TRAY OF Size: W X H X T - 150 X 50 X 2.5 X 2500 mm	Mtr.	840	840	1680		
	G.I. PERFORATED CABLE TRAYS: Installation work includes supports using ISMC / ISA and welding on to structure/fixing with fasteners (Supply of Angle / Channel in BHEL Scope). Fasteners in bidder's scope.						
96	CABLE TRAY OF Size: W X H X T - 150 X 50 X 2 mm	Mtr	625	625	1250		
97	CABLE TRAY OF Size: W X H X T - 100 X 50 X 2 mm	Mtr	125	125	250		
98	CABLE TRAY OF Size: W X H X T - 50 X 50 X 2 mm	Mtr	1400	1400	2800		
	G.I. PERFORATED CABLE TRAYS (BHEL TRICHY SUPPLY)						
99	CABLE TRAY OF Size: W X H X T - 50 X 50 X 2.5 X 2500 mm	No.	250	250	500		
100	CABLE TRAY OF Size: W X H X T - 100 X 50 X 2.5 X 2500 mm	No.	280	280	560		
101	CABLE TRAY OF Size: W X H X T - 150 X 50 X 2.5 X 2500 mm	No.	120	120	240		
	G.I. PERFORATED CABLE TRAYS (EDN SUPPLY): Installation work includes supports using ISMC / ISA and welding on to structure/fixing with fasteners (Supply of Angle / Channel including Fasteners in BHEL's Scope).						
102	CABLE TRAY OF Size: W X H X T - 600 X 100 X 2 mm	Mtr	1750	1750	3500		
103	CABLE TRAY OF Size: W X H X T - 300 X 50 X 2 mm	Mtr	3000	3000	6000		
104	CABLE TRAY OF Size: W X H X T - 150 X 50 X 2 mm	Mtr	2000	2000	4000		
105	CABLE TRAY OF Size: W X H X T - 50 X 25 X 2 mm	Mtr	3000	3000	6000		
	STRUCTURAL STEEL (BHEL TRICHY SUPPLY)						

PROJECT : CSPGCL KORBA (WEST) , CHHATISGARH, STAGE-1, (Rating - 4 x 210 MW), UNIT-1 & UNIT-2							
WORK : R AND M OF ERECTION & COMMISSIONING OF CONTROL & INSTRUMENTATION PACKAGE							
ESTIMATE FOR ERECTION & COMMISSIONING OF CONTROL & INSTRUMENTATION PACKAGE							
Sl. No	ITEM DESCRIPTION	UOM	QTY For Unit -1	QTY For Unit -2	Total Qty.	Unit Rate in Rs. (Exclusive of GST)	Total Value in Rs. (Exclusive of GST)
106	ANGLE (Size: 50 x 50 x 6 mm) - 403 Mtr.	Kg.	1935	1935	3870		
107	CHANNEL (Size: 100 x 50) - 256 Mtr.	Kg.	2458	2458	4916		
108	FLAT (Size: 50mm width x 6 mm) 220 Mtr.	Kg.	660	660	1320		
109	COPPER TUBE, SIZE: 1/4 " OD.	Mtr	1050	1050	2100		
110	COPPER TUBE, SIZE: 8 mm Dia. For Corner Nozzle valves. (Related brass fitting will be supplied by BHEL)	Mtr	150	150	300		
	STRUCTURAL STEEL (EDN SUPPLY)						
111	ANGLE (Size: 50 x 50 x 6 mm)	Kg.	3000	3000	6000		
112	CHANNEL (Size: 100 x 50)	Kg.	4000	4000	8000		
113	PLATE (Size: 1000mm width x 10 mm)	Kg.	1600	1600	3200		
114	SHEET (Size: 2.5 mm Thick)	Kg.	1000	1000	2000		
	Stator Water Conductivity Analyser : Mounting of Assembled unit on 2"/ 3" NB pipe with Sensor. Pipe, U-Clamps, Washers, nuts etc. will be supplied by BHEL. Scope is inclusive of Cabling laying, Erection of Analyser Unit, Erection of Postion Transmitters . Supervision of Erection and Commissioning(Transmitter Calibration) of System by BHEL or its Vendor.						
115	Conductivity Analyser Unit	Set	2	2	4		
116	TSE Thermocouples	Set	1	1	2		
117	Positioner Transmitter of Temp. Control Valve for MOT	No.	1	1	2		
118	Positioner Transmitter for Drain Valve of HPCV-1	No.	1	1	2		
119	Positioner Transmitter for Drain Valve of HPCV-2	No.	1	1	2		
120	Hydraulic Actuator for Seal Steam Valve & Leak Steam Valve	No.	1	1	2		
121	Positioner Transmitter for HP CVS Servo Motor	No.	1	1	2		
122	Positioner Transmitter for IP CVS Servo Motor	No.	1	1	2		
123	Positioner Transmitter for LPBP Control Valve	No.	1	1	2		
124	Positioner Transmitter for Seal Steam Control Valve	No.	1	1	2		
125	Positioner Transmitter for Leak-off Steam Control Valve	No.	1	1	2		
126	Positioner Transmitter for position of EHC in EHG Rack	No.	2	2	4		
127	Positioner Transmitter for position of EHC of LPBP System	No.	2	2	4		
128	Speed/Load Change dev pos & startup/load limit device pos	No.	1	1	2		
129	Electro Hydraulic Controller (EHC)	Set	1	1	2		
130	COAL BUNKER LEVEL MONITORING SYSTEM : - Scope of work includes Erection of Wall Mounted Panel having dimensions 800 mm X 300 mm X 1219 mm (W X D X H) with an Approx. Wt 200 Kg., Strain Guage type Level sensor - 3 No. per bunker, Installation of Junction Boxes made from FRP material of Size W X H X D- 76 x 114 X 68 mm Qty. 3 No. per bunker, Erection of Bar Graph Indicator at CHP Control Room, of Size: W x D x H - 500 X 210 X 520 mm, weighing 50 Kg. each and Qty- 6 No. Also, Laying of cables between sensor and bunker JB, Bunker JB and Main JB, Main JB panel. Tagging to be provided as per BHEL/CSPGCL specifications. Note: Mounting of sensor will be done by the Supplier of the Equipment.	Lump-sum	1	1	2		
	TURBO SUPERVISORY SYSTEM : Erection of panel and making arrangement for mounting of sensors at TG as per erection guidelines & Quality plan of VENDOR and cables laying through conduits, JB mounting and laying of all signal cables including Speed to control room. Sensor mounting to be carried out under supervision of TSI Vendor						
131	Turbo Supervisory System with Marshalling panel - A suite of two panels (Dim 1600 mm X 800 mm X 2100 mm) Approx. Wt - 800 Kg	No.	1	1	2		
132	Sensor with counter mounting pads for Differential expansion (HPT,IPT & LPT), Overall expansion (HP& IP Casing), Phase Mark, Axial Shift, relative vibration, absolute bearing vibration and speed(Key Phasor) for Main turbine.	No.	36	36	72		
133	Junction Boxes -FRP Body 8 way, Dimension:210(L) X 310(H) X 116(D) mm	No.	8	8	16		
134	Erection of Toothed Wheel for Speed sensing and Mounting of Sensor in the Bracket (4+1 Sensor)	Set	1	1	2		
	VIBRATION MONITORING SYSTEM: Providing assistance in Mounting of Pad and Brackets followed by sensors and cable laying through SS conduit upto Local JB to VMS Panel in Control Rooms and assistance to vendor during commissioning. Making of Notch of dimension (30 mm x 15 mm x 3 mm) in ID,FD,PA,BFP,CEP Coupling for mounting of Key Phasor brackets to be carried out by the bidder						
135	Vibration Monitoring System - For IDs,FDs,PAs,BFPs,CEPs: Panel to be Erected at CER (Dim 800mm W x 800mm D x 2000mm H) Approx. wt = 400 Kg	No.	3	3	6		

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WORK : R AND M OF ERECTION & COMMISSIONING OF CONTROL & INSTRUMENTATION PACKAGE							
ESTIMATE FOR ERECTION & COMMISSIONING OF CONTROL & INSTRUMENTATION PACKAGE							
Sl. No	ITEM DESCRIPTION	UOM	QTY For Unit -1	QTY For Unit -2	Total Qty.	Unit Rate in Rs. (Exclusive of GST)	Total Value in Rs. (Exclusive of GST)
135	Sensor mounting pad (Dimension: 40 x 40 x 40 mm) for each pickup as per Drawing.	No.	38	38	76		
	Mounting of Sensors in pad(Two Sensors in each Pad)	No.	76	76	152		
135	Key phasor mounting bracket	No.	20	20	40		
135	12 WAY FRP Body JB Dimension : L X B X H -139 X 119 X 70 mm	No.	20	20	40		
ELECTRICAL POWER SUPPLY SYSTEM							
UPS:Panel Erection, all interconnections within UPS panels, ACDB Battery, etc. Acid / alkali filling for batteries. Providing Commissioning assistance to vendor							
136	UN INTERRUPTED POWER SUPPLY SYSTEM RATING 50 KVA (UPS) COMPRISING 07 PANELS. DIMENSION: (L X W X H) 4140 X 1000 X 2235 MM. WEIGHT: 3000 Kg.	Set	1	1	2		
137	UPS ACDB - Dinmesions - 1200 mm L X 800 mm D X 2235 mm H - Weight - 800 Kg.	Set	2	2	4		
138	BATTERY BANK SYSTEM FOR ABOVE UPS COMPRISING APPROXIMATE 295 CELLS OF 335 AH (KBH330P) WITH MS STAND OF DIMENSION 5015MM (L) X 874 MM (D) X 1625 MM (H). EACH CELL CELL DIMENSION APPROX 268 MM (L)X 195 MM (W)X 349 MM (H) APPROX WT. PER CELL 27 Kg.	Set	1	1	2		
PROCESS CONNECTION AND PIPING							
Local Instrument Enclosure / Racks (LIE/LIR): Installation at various locations /elevations in Boiler/TG as per drawing / instructions of BHEL Engineer. DIMENSIONS in WXDXH. Installation work includes fabrication of base frame using ISMC/ISA and welding on to the boiler structure(Supply of Angle/Channel in BHEL Scope).							
139	Local Instrument Enclosure -TYPE A -1250mm X 800mm X 2200mm WEIGHT 600 Kgs	No.	20	20	40		
140	Local Instrument Enclosure -TYPE B - 930mm X 800mm X 2200mm WEIGHT 450 Kgs	No.	36	36	72		
141	Local Instrument Rack -TYPE A -2050mm X 800mm X 2200mm WEIGHT 450 Kgs	No.	16	16	32		
142	Local Instrument Rack -TYPE B -1730mm X 800mm X 2200mm WEIGHT 350 Kgs	No.	25	25	50		
IMPULSE PIPES: Scope of work :- Identification, marking, stacking, cleaning, shifting to erection location, Erection, socket welding, Hydraulic testing, leak checking, etc primer & final painting (including supply of paints as per colour code of customer). All consumables like welding electrodes, testing materials, tags etc needed for the work to be supplied by vendor within the quoted price. Installation of all impulse line fittings including CONDENSATE POTS are considered as part of impulse line work. Welding allowed only by qualified welders accepted by BHEL/Customer and strictly as per approved welding procedure of BHEL/Customer. Only BHEL / CSPGCL approved welding electrodes to be used. Installation work also includes fabrication of supports using ISMC/ISA and welding (Supply of Angle/Channel etc., in BHEL Scope).							
143	A106 Gr C 1/2" NB SCH 80	Mtr	640	640	1280		
144	A106 Gr C 1/2" NB SCH 160	Mtr	700	700	1400		
145	A106 Gr C 3/4" NB SCH 80	Mtr	665	665	1330		
146	A335 P22 1/2" NB XXS	Mtr	270	270	540		
147	A335 P22 3/4" NB 80 SCH	Mtr	150	150	300		
148	Galvanized Iron (G.I) Pipe , Size: 1/2 " dia.Nb	Mtr	3500	3500	7000		
149	Galvanized Iron (G.I) Pipe , Size: 1 " dia.Nb	Mtr	200	200	400		
150	Galvanized Iron (G.I) Pipe , Size: 2 " dia.Nb	Mtr	100	100	200		
151	Stainless Steel Tube (SS) 3/4" dia. Nb	Mtr	200	200	400		
152	Stainless Steel (SS) Tube for Lube Oil transmitters, Size: 3/8" dia.	Mtr	100	100	200		
CABLES: Meggering, laying of cables on cable trays, through Conduits,Flexibles, dressing, tagging, gland plate drilling, glanding, termination etc. All consumables like lugs, cable tags, Nylon ties, sleeves (SLEEVES OF REQUIRED COLOR & SIZE), Ferruling (with ferrule printing m/c) etc. to be provided by Vendor within the rates quoted. ONLY CABLE GLANDS will be provided by BHEL as free issuse. Shield wire to be sleeved and terminated at panel end.Tagging to be provided as per BHEL/CSPGCL specifications. Preparation of Protocols for every RA Bill and reconciliation of cables to be made by the Contractor.							
INSTRUMENTATION CABLES - F type							
153	F TYPE 4 PAIR 0.5 Sq.mm cable	Mtr	30000	30000	60000		
154	F TYPE 8 PAIR 0.5 Sq.mm cable	Mtr	15000	15000	30000		
155	F TYPE 12 PAIR 0.5 Sq.mm cable	Mtr	12500	12500	25000		
156	F TYPE 24 PAIR 0.5 Sq.mm cable	Mtr	6000	6000	12000		
INSTRUMENTATION CABLES - G type							
157	G TYPE 2 PAIR 0.5 Sq.mm cable	Mtr	15000	15000	30000		
158	G TYPE 4 PAIR 0.5 Sq.mm cable	Mtr	50000	50000	100000		

PROJECT : CSPGCL KORBA (WEST) , CHHATISGARH, STAGE-1, (Rating - 4 x 210 MW), UNIT-1 & UNIT-2							
WORK : R AND M OF ERECTION & COMMISSIONING OF CONTROL & INSTRUMENTATION PACKAGE							
ESTIMATE FOR ERECTION & COMMISSIONING OF CONTROL & INSTRUMENTATION PACKAGE							
Sl. No	ITEM DESCRIPTION	UOM	QTY For Unit -1	QTY For Unit -2	Total Qty.	Unit Rate in Rs. (Exclusive of GST)	Total Value in Rs. (Exclusive of GST)
159	G TYPE 8 PAIR 0.5 Sq.mm cable	Mtr	30000	30000	60000		
160	G TYPE 12 PAIR 0.5 Sq.mm cable	Mtr	10000	10000	20000		
161	G TYPE 24 PAIR 0.5 Sq.mm cable	Mtr	6000	6000	12000		
	POWER / CONTROL CABLES						
162	1C X 630 sq.mm Aluminium, XLPE	Mtr	350	350	700		
163	1C X 35 sq.mm, Aluminium, PVC	Mtr	1000	1000	2000		
164	1C X 120 sq.mm, Aluminium, PVC	Mtr	1500	1500	3000		
165	2C X 6 sq.mm, Copper, PVC	Mtr	1000	1000	2000		
166	2C X 2.5 sq.mm, Copper, PVC	Mtr	5000	5000	10000		
167	2C X 70 sq.mm, Copper, PVC	Mtr	5000	5000	10000		
168	5C X 1.5 sq.mm	Mtr	12000	12000	24000		
169	3C X 1.5 sq.mm	Mtr	15000	15000	30000		
170	2C X 1.5 sq.mm	Mtr	15000	15000	30000		
171	2C X 2.5 sq.mm UNARMoured	Mtr	3000	3000	6000		
172	3C X 2.5 sq.mm UNARMoured	Mtr	3000	3000	6000		
173	5C X 2.5 sq.mm UNARMoured	Mtr	2000	2000	4000		
	OPTICAL FIBER CABLE - Optic fiber cables have to be laid on Cable trays, Conduits.						
174	OFC CABLE 4 CORE ARMoured	Mtr	2500	2500	5000		
	NETWORK CABLE: Laying, dressing using ties and crimping on both ends						
175	UTP CAT 5e CABLE (21 BUNDLES EACH BUNDLE OF 305 MTR.)	Mtr	2500	2500	5000		
	CONDUITS: Installation in trenches,cable trays,along the walls,dressing using saddles,Ties,tag plates etc. All consumables like saddles, mounting hardware, jumpers etc. for conduiting / flexibles to be arranged by contractor within the quoted rates.						
176	G.I. Rigid Conduit 50mm dia. (2")	Mtr	1000	1000	2000		
177	Lead coated Flexible Conduit 25 mm dia. (1")	Mtr	2000	1000	3000		
178	HDPE conduit 50mm dia. (2")	Mtr	2000	1000	3000		

PROJECT : CSPGCL KORBA (WEST) , CHHATISGARH, STAGE-1, (Rating - 4 x 210 MW), UNIT-1 & UNIT-2							
WORK : R AND M OF ERECTION & COMMISSIONING OF CONTROL & INSTRUMENTATION PACKAGE							
ESTIMATE FOR ERECTION & COMMISSIONING OF CONTROL & INSTRUMENTATION PACKAGE							
Sl. No	ITEM DESCRIPTION	UOM	QTY For Unit -1	QTY For Unit -2	Total Qty.	Unit Rate in Rs. (Exclusive of GST)	Total Value in Rs. (Exclusive of GST)
	ERECTION OF JUNCTION BOXES (FRP Body): Installation work includes fabrication of mounting frame using ISMC/ISA and welding on to structure / fixing with fasteners (Supply of Angle / Channel in BHEL Scope). Anchor fasteners in bidder's scope.						
179	12 WAYS	No.	20	20	40		
180	24 WAYS	No.	25	25	50		
181	36 WAYS	No.	20	20	40		
182	48 WAYS	No.	180	180	360		
183	72 WAYS	No.	25	25	50		
184	128 WAYS	No.	30	30	60		
	TT JUNCTION BOXES for Temperature Transmitters: Installation work includes fabrication of mounting frame using ISMC/ISA and welding on to structure/fixing with fasteners (Supply of Angle/Channel in BHEL Scope). Anchor fasteners in bidder's scope.						
185	Type A	No.	1	1	2		
186	Type B	No.	3	3	6		
187	Type C	No.	4	4	8		
	HART MANAGEMENT SYSTEM: Job involved Panel erection and assistance to Vendor during Commissioning						
188	System Comprising of HART Management Panel - 01 No. Single Cubicle., Approx Wt. 400 Kgs and Dimensions 2415(H) X 800(W) X 800(D) mm.	No.	1	1	2		
	CCTV SYSTEM						
189	CCTV SYSTEM: The scope includes shifting from BHEL Stores to place of Erection, and Erection of Panel of Dimension - L X B X H - 800 X 800 X 2400 mm. All other works are under the Vendor's scope who are supplying the system	Set	1	1	2		
	Preparation of earth pit for grounding of DDCMIS Panels. Work includes procurement of MS-Rod(40 mm) Qty: 30 m/Pit, 65x8 mm MS-Flat ;15m/Pit,15 m/Pit of 65 mm PVC Pipe, C.I Cover for each Pit, Coke and Salt as per requirement shown in the earth pit drawing and preparing of Pit in the designated location. Earth Pit drawing will be furnished by BHEL before commencement of work.	No.	1	1	2		
	DISMANTLING OF EXISTING PANELS, CABLES, FIELD INSTRUMENTS, CABLE TRAYS ETC.						
	DISMANTLING WORK:Sub-contractor remove the existing old panels, cut and remove the old cables etc. and to hand over the below dismantled equipment to CSPGCL in " as it is" condition after cleaning at the location identified by BHEL/ CSPGCL, within the plant premises.						
190	Existing / Old Panels	No.	80	80	160		
191	Existing / Old cables, seggregating and shifting	K.M	125	125	250		
192	Existing / Old field instruments, Junction Boxes as identified by BHEL/ Customer.	No.	50	50	100		
193	Existing / Old Cable Trays as identified by BHEL/ Customer.	Mtr	300	300	600		
194	Removal of Battery Bank system for 240V UPS, 120 Cells	set	1	1	2		
195	Removal of Battery Bank system for 24V DC Charger 250 AH, 13 Cells	set	1	1	2		
196	Removal of Battery Bank system for 24V DC Charger 400 AH, 13 Cells	set	1	1	2		
	Total Value for Unit 1 & Unit 2 is Rs. (Exclusive of GST)						
	GST @ 18% (present rate) on Total Value for Unit 1 & Unit 2 in Rs.						
	Total Value for Unit 1 & Unit 2 is Rs. (Inclusive of GST)						
	Bidder to indicate % Age Increase against NIT Value						
	Bidder to indicate % Age Decrease against NIT Value						
	NOTE: % Age Indicated (+/-) is applicable uniformly on each item						
	Bidder to indicate itemized rate OR %Age (+/-) against the NIT Value						
	NIT Value indicated is exclusive of Taxes/GST						